

Sample: Public safety, Chicago: report

Project: Sample: Public safety, Chicago

Goal: Describe the project Sample: Public safety, Chicago: run the analyses that tell the most about its data, draw every result, and write a cited report.

Run: 2e6054ca-62f3-479f-b398-915fe26200ce (running, 19 agent run(s))

Generated: 2026-10-19T04:36:58Z, version 1

Model cost: USD 0.0000 over 0 model call(s)

Data used

Data	Kind	Rows	Time span	Summary	Source
Incidents	vector, Point	1,680	2025-10-01 to 2026-09-30	1,680 point features; dated by 'reported_at' from 2025-10-01 to 2026-09-30; 'category' has 7 values (top: theft 539, battery 286, criminal damage 207); 'location_type' has 6 values (top: street 626, residence 351, business 274); 'severity' 1 to 5 (mean 2.587); extent -87.6800,41.8566 to -87.6078,41.9016. Dated point events by category: where and when Incidents happen.	[2]
Street light outages	vector, Point	420	2025-10-01 to 2026-09-30	420 point features; dated by 'reported_at' from 2025-10-01 to 2026-09-30; 'cause' has 4 values (top: lamp failure 209, cable fault 100, vandalism 64); 'days_out' 1 to 60 (mean 6.95); extent -87.6803,41.8565 to -87.6125,41.9013. Dated point events by cause: where and when Street light outages happen.	[3]
Patrol beats	vector, Polygon	16		16 polygon (area) features; 'district' has 1 values (top: District 12 16); 'population' 11,440 to 33,436 (mean 2.514e+04); 'officers_assigned' 6 to 12 (mean 9.75); named by 'name' (e.g. North River Beat, Market West Beat, Station Quarter Beat); total area 30.02 km2; extent -87.6804,41.8563 to -87.6076,41.9017. Areas (Patrol beats) with population to compare and map.	[145]
Police stations	vector, Point	3		3 point features; 'open_24h' has 2 values (top: False 2, True 1); 'officers' 97 to 139 (mean 124.7); named by 'name' (e.g. Central District Station, Westside Station, Riverside Station); extent -87.6671,41.8744 to -87.6210,41.8881. Point locations of Police stations by open_24h.	[146]
CCTV cameras	vector, Point	60		60 point features; 'ptz' has 2 values (top: False 41, True 19); 'status' has 2 values (top: live 45, fault 15); 'installed_year' 2,012 to 2,025 (mean 2018); extent -87.6796,41.8566 to -87.6139,41.9010. Point locations of CCTV cameras by ptz.	[147]
Transit stops	vector, Point	80		80 point features; 'mode' has 2 values (top: bus 74, rail 6); 'daily_boardings' 48 to 4,542 (mean 311.9); named by 'name' (e.g. Central Transit Center, Stop 002, Stop 003); extent -87.6794,41.8569 to -87.6138,41.9013. Point locations of Transit stops by mode.	[148]
Licensed premises	vector, Point	120		120 point features; 'type' has 4 values (top: restaurant 57, bar 38, liquor store 13); 'closing_hour' 0 to 23 (mean 5.775); 'capacity' 32 to 350 (mean 124.8); extent -87.6794,41.8569 to -87.6140,41.9008. Point locations of Licensed premises by type.	[149]

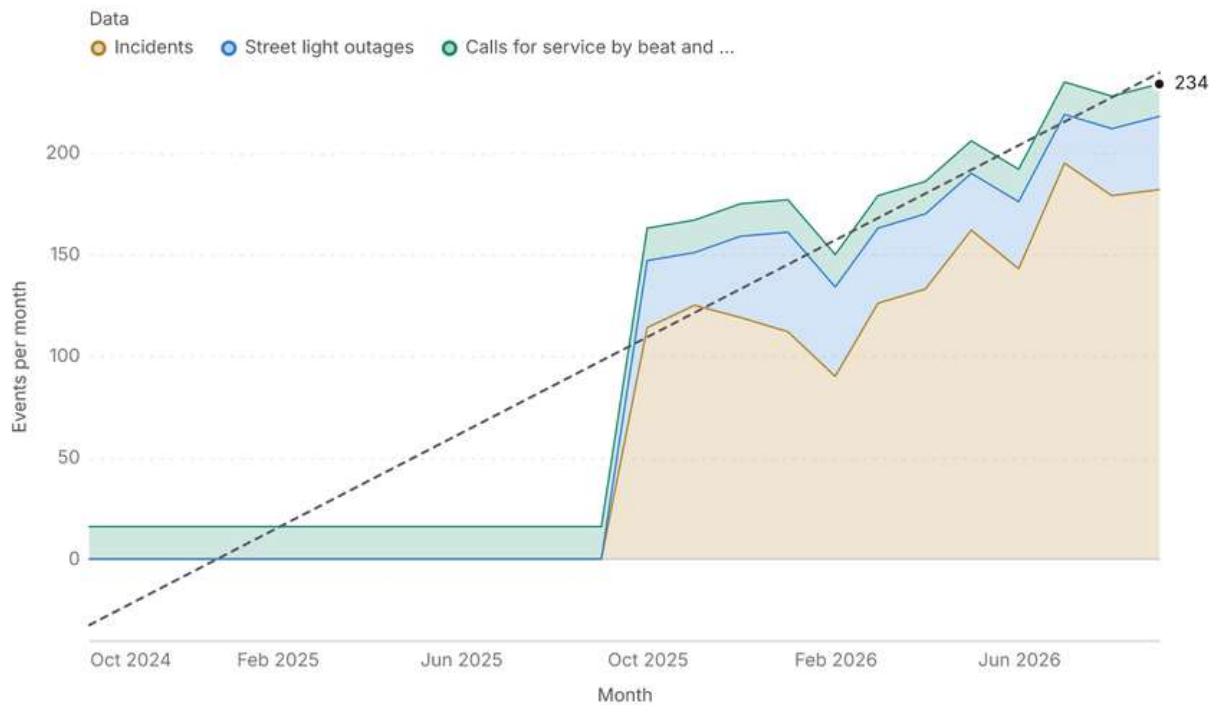
Data	Kind	Rows	Time span	Summary	Source
Roads	vector, LineString	1,033		1,033 line features; 'class' has 4 values (top: local 814, other 181, motorway 25); 'speed_limit_mph' 25 to 35 (mean 25.37); 'lanes' 2 to 4 (mean 2.074); named by 'name' (e.g. Randolph St, W Arcade Pl, Harrison St); total length 509.7 km; extent -87.6804,41.8563 to -87.6077,41.9016. Lines (Roads) such as routes or networks.	[150]
Calls for service by beat and month	table	384	2024-10-01 to 2026-09-01	Table of 384 rows and 6 columns without geometry; dated by 'month' from 2024-10-01 to 2026-09-01; 'calls' 61 to 814 (mean 226.5); 'priority_1_calls' 9 to 139 (mean 35.84); 'median_response_min' 5.7 to 13.9 (mean 9.779). A table of Calls for service by beat and month without locations.	[4]
Beat staffing by shift	table	48		Table of 48 rows and 5 columns without geometry; 'shift' has 3 values (top: day 16, evening 16, night 16); 'officers' 2 to 6 (mean 3.75); 'vehicles' 1 to 3 (mean 1.979); 'overtime_hours' 0 to 59 (mean 28.85). A table of Beat staffing by shift without locations.	[151]
Quarterly crime and safety briefing	document			1-page md document 'Quarterly crime and safety briefing, third quarter 2026'; language en; mentions 7 place(s): Central Transit Center (2), Market West Beat (2), N Elizabeth St (2), Kingsway Beat (2), 41.87815, -87.63532 (1). A document about Central Transit Center, Market West Beat, N Elizabeth St; it names event terms Thefts, Transit, street.	[152]
Hot spot patrol plan	document			1-page pdf document 'Hot spot patrol plan'; language en; mentions 6 place(s): Central District Station (1), Westside Station (1), Riverside Station (1), Central Transit Center (1), Market West Beat (1). A document about Central District Station, Westside Station, Riverside Station; it names organizations Focus; event terms theft, Patrols, Transit.	[153]
Sample: Public safety, Chicago	record				[154]
Hot spot analysis: CCTV cameras	layer, Polygon	36			[98]
Hot spot analysis: Licensed premises	layer, Polygon	112			[155]
Emerging hot spots: Incidents	layer, Polygon	270			[156]
Emerging hot spots: Street light outages	layer, Polygon	47			[157]
Find point clusters: Licensed premises	layer, Point	120			[158]
Find point clusters: cluster hulls	layer, Polygon	3			[81]
Find point clusters: Incidents	layer, Point	1,680			[159]
Find point clusters: cluster hulls	layer, Polygon	3			[160]
Find point clusters: Street light outages	layer, Point	420			[161]
Find point clusters: cluster hulls	layer, Polygon	1			[162]

Data	Kind	Rows	Time span	Summary	Source
Summarize within: Patrol beats	layer, Polygon	16			[163]
Summarize within: Patrol beats	layer, Polygon	16			[164]
Summarize within: Patrol beats	layer, Polygon	16			[88]
Period change: Incidents (week of 2026-06-22 to week of 2026-06-29)	layer, Polygon	16			[8]
Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09)	layer, Polygon	7			[10]
Calculate density: Licensed premises	layer, Polygon	164			[165]
Calculate density: Incidents	layer, Polygon	2,874			[166]
Calculate density: Street light outages	layer, Polygon	848			[93]
Hot spot analysis: Incidents	layer, Polygon	2,912			[80]
Repeat and near repeat classification: Incidents	layer, Point	1,680			[167]
Dense areas of street light outages	layer, MultiPolygon	5			[110]
Hot cells inside each cluster of licensed premises	layer, Polygon	3			[82]
Change beside the counts per patrol beat	layer, Polygon	16			[89]
Change of incidents where density is high	layer, Polygon	16			[94]
Hot cells of CCTV cameras per patrol beat	layer, Polygon	16			[99]
Nearest police station to each cluster of licensed premises	layer, Polygon	3			[104]
Change of street light outages per patrol beat	layer, Polygon	16			[113]

Timeline

Timeline: events per month by dataset

Per month: 24 months from 2024-10-01 to 2026-09-01; trend +11.8 per month; first half 192, second half 2,292 (+1093.8%)

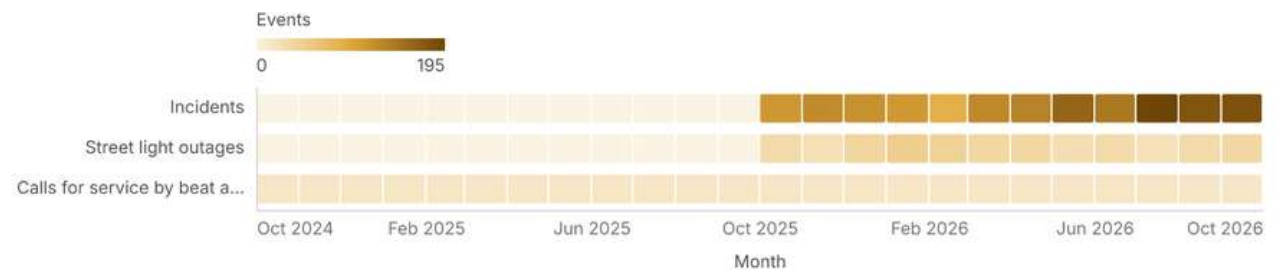


Per month, 2024-10-01 to 2026-09-01. Source: Incidents, Street light outages, Calls for service by beat and month (2,484 features).

Figure 1. Timeline: events per month by dataset [1]. Per month, 2024-10-01 to 2026-09-01. Source: Incidents, Street light outages, Calls for service by beat and month (2,484 features). The data is in the appendix.

Timeline lanes: events per month by dataset

3 lanes, 24 months; darker cells hold more

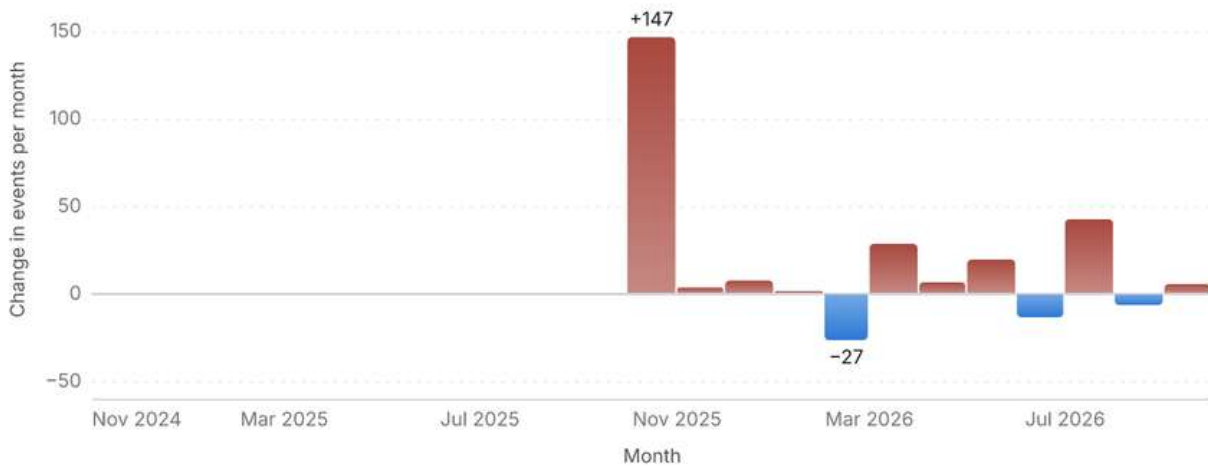


Per month, 2024-10-01 to 2026-09-01. Source: Incidents, Street light outages, Calls for service by beat and month (2,484 features).

Figure 2. Timeline lanes: events per month by dataset [5]. Per month, 2024-10-01 to 2026-09-01. Source: Incidents, Street light outages, Calls for service by beat and month (2,484 features). The data is in the appendix.

Timeline: change from one month to the next

23 changes from one month to the next; largest rise in October 2025 (16 to 163, +147); largest fall in February 2026 (177 to 150, -27)



Per month, 2024-11-01 to 2026-09-01. Source: Incidents, Street light outages, Calls for service by beat and month (2,484 features).

Figure 3. Timeline: change from one month to the next [6]. Per month, 2024-11-01 to 2026-09-01. Source: Incidents, Street light outages, Calls for service by beat and month (2,484 features). The data is in the appendix.

The timeline counts 2,484 dated events in Incidents, Street light outages, Calls for service by beat and month per month, from October 2024 to September 2026 [1][2][3][4]. By dataset: Incidents 1,680; Street light outages 420; Calls for service by beat and month 384 [1][5]. The trend is +11.8 events per month; the second half of the months has 2,292 against 192 in the first (+1093.8%) [1]. Month over month, the largest rise was from September 2025 to October 2025 (16 to 163, +147) and the largest fall was from January 2026 to February 2026 (177 to 150, -27) [1][6]. The count rose from 33 in week of 2026-06-22 to 72 in week of 2026-06-29 (+118.2%), beyond what chance would give ($p = 0.000178$) [7][8]. Between the two, the largest rise was in Market West Beat (7 to 16, +9) and the largest fall in Granary Beat (2 to 0, -2) [7][8]. The count fell from 17 in week of 2026-02-02 to 4 in week of 2026-02-09 (-76.5%), beyond what chance would give ($p = 0.0072$) [9][10]. Between the two, the largest rise was in Parkview Beat (0 to 2, +2) and the largest fall in Market West Beat (9 to 2, -7) [9][10].

Busiest months

- July 2026: 235 events [1]
- September 2026: 234 events [1]
- August 2026: 228 events [1]

Quietest months

- October 2024: 16 events [1]
- November 2024: 16 events [1]
- December 2024: 16 events [1]

Overview

Overview: the top 3 results in the report's order, each in one distinct color, over Patrol beats as context [11].

Overview: the top 3 results

Hot spots: CCTV cameras; Hot spots: licensed premises; Emerging hot spots: incidents



Figure 4. Overview: the top 3 results [11]

Spatial structure

Incidents are clustered (nearest-neighbor ratio 0.73, $z = -21.0$; features lie 48.8 m apart on average against 66.5 m if random) [12]. Incidents are dated by 'reported_at' from 2025-10-01 to 2026-09-30 at a week grain [12]. Over time the pattern changes: the earlier half is clustered (ratio 0.7893) and the later half clustered (ratio 0.7746); the center moved 132 m [12]. Street light outages are clustered (nearest-neighbor ratio 0.88, $z = -4.9$; features lie 113 m apart on average against 129 m if random) [13]. Street light outages are dated by 'reported_at' from 2025-10-01 to 2026-09-30 at a week grain [13]. Over time the pattern changes: the earlier half is clustered (ratio 0.8542) and the later half clustered (ratio 0.8877); the center moved 263 m [13]. Patrol beats are 16 areas of 1.876 km² on average, covering 99 percent of their extent, with no overlap [14]. CCTV cameras are spread at random (nearest-neighbor ratio 0.93, $z = -1.0$; features lie 311 m apart on average against 334 m if random) [15]. Transit stops are spread at random (nearest-neighbor ratio 0.93, $z = -1.2$; features lie 268 m apart on average against 289 m if random) [16]. Licensed premises are clustered (nearest-neighbor ratio 0.85, $z = -3.2$; features lie 199 m apart on average against 234 m if random) [17]. Roads form a connected network: 1033 lines with 120 junctions and 2864 crossings in 98 connected parts, 509.7 km in all [18]. 100 percent of CCTV cameras lie inside Patrol beats (60 of 60) [14][15]. 100 percent of Incidents lie inside Patrol beats (1680 of 1680) [12][14]. 100 percent of Licensed premises lie inside Patrol beats (120 of 120) [14][17]. 100 percent of Police stations lie inside Patrol beats (3 of 3) [14][19]. 100 percent of Street light outages lie inside Patrol beats (420 of 420) [13][14]. 100 percent of Transit stops lie inside Patrol beats (80 of 80) [14][16]. 99 percent of Roads lie inside Patrol beats (1019 of 1033) [14][18]. CCTV cameras lie 2.33 m from the nearest of Roads (median); 100 percent lie within 100 m [15][18]. Street light outages lie 3.89 m from the nearest of Roads (median); 96 percent lie within 100 m [13][18]. Transit stops lie 4.41 m from the nearest of Roads (median); 100 percent lie within 100 m [16][18].

Result	Value
layers profiled	8
clustered point layers	3
random point layers	2

Findings

Evidenced: Incidents are clustered (nearest-neighbor ratio 0.73, $z = -21.0$; features lie 48.8 m apart on average against 66.5 m if random) [12].

Evidenced: Incidents are dated by 'reported_at' from 2025-10-01 to 2026-09-30 at a week grain [12].

Evidenced: Over time the pattern changes: the earlier half is clustered (ratio 0.7893) and the later half clustered (ratio 0.7746); the center moved 132 m [12].

Evidenced: Street light outages are clustered (nearest-neighbor ratio 0.88, $z = -4.9$; features lie 113 m apart on average against 129 m if random) [13].

Evidenced: Street light outages are dated by 'reported_at' from 2025-10-01 to 2026-09-30 at a week grain [13].

Evidenced: Over time the pattern changes: the earlier half is clustered (ratio 0.8542) and the later half clustered (ratio 0.8877); the center moved 263 m [13].

Evidenced: Patrol beats are 16 areas of 1.876 km² on average, covering 99 percent of their extent, with no overlap [14].

Evidenced: CCTV cameras are spread at random (nearest-neighbor ratio 0.93, $z = -1.0$; features lie 311 m apart on average against 334 m if random) [15].

Evidenced: Transit stops are spread at random (nearest-neighbor ratio 0.93, $z = -1.2$; features lie 268 m apart on average against 289 m if random) [16].

Evidenced: Licensed premises are clustered (nearest-neighbor ratio 0.85, $z = -3.2$; features lie 199 m apart on average against 234 m if random) [17].

Evidenced: Roads form a connected network: 1033 lines with 120 junctions and 2864 crossings in 98 connected parts, 509.7 km in all [18].

Evidenced: 100 percent of CCTV cameras lie inside Patrol beats (60 of 60) [14][15].

Evidenced: 100 percent of Incidents lie inside Patrol beats (1680 of 1680) [12][14].

Evidenced: 100 percent of Licensed premises lie inside Patrol beats (120 of 120) [14][17].

Evidenced: 100 percent of Police stations lie inside Patrol beats (3 of 3) [14][19].

Evidenced: 100 percent of Street light outages lie inside Patrol beats (420 of 420) [13][14].

Evidenced: 100 percent of Transit stops lie inside Patrol beats (80 of 80) [14][16].

Evidenced: 99 percent of Roads lie inside Patrol beats (1019 of 1033) [14][18].

Evidenced: CCTV cameras lie 2.33 m from the nearest of Roads (median); 100 percent lie within 100 m [15][18].

Evidenced: Street light outages lie 3.89 m from the nearest of Roads (median); 96 percent lie within 100 m [13][18].

Evidenced: Transit stops lie 4.41 m from the nearest of Roads (median); 100 percent lie within 100 m [16][18].

Hot spots

What this analysis is. Hot spot analysis: Getis-Ord Gi* hot and cold spots with z-scores, p-values and confidence bins [20]. In ArcGIS it is Find Hot Spots or Hot Spot Analysis (Getis-Ord Gi*); in QGIS, qgis:hotspot (plugin) [20].

Why it was run on this data. 60 points: Getis-Ord Gi* tests whether the concentrations in CCTV cameras are statistically significant [21].

What it found. The hot spot analysis tool, `gp\_hot\_spots`, utilized the CCTV cameras layer [15] and returned a result containing 36 features [22].

Result	Value
result, bins	36
result, count	36
result, elapsed ms	3

Result	Value
result, cell size m	1,000
result, incidents used	60
result, distance band m	2,000
billing, cost	0.0512
billing, list price	0.0512
billing, upstream cost	0

Hot spots: CCTV cameras

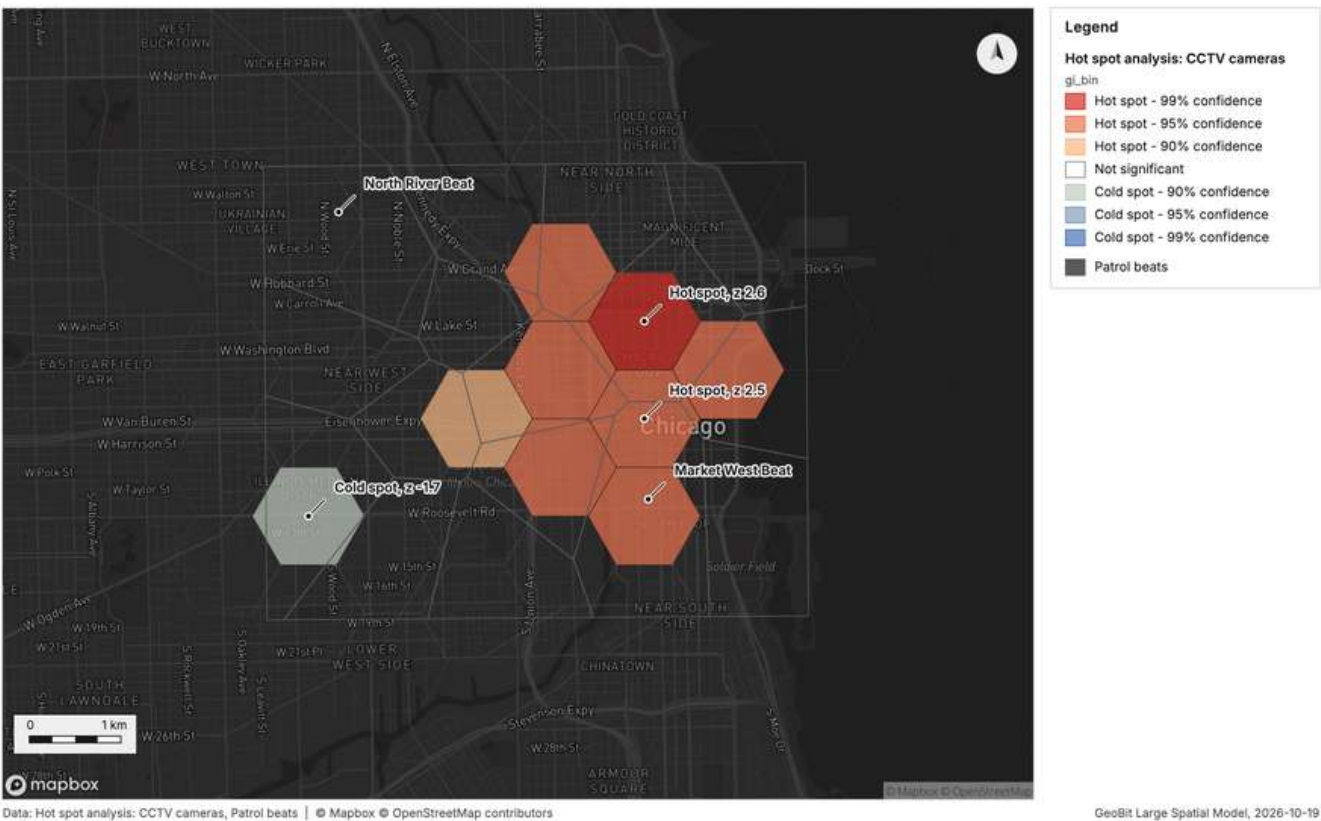


Figure 5. Hot spots: CCTV cameras [23]

What the map shows. The map draws Hot spot analysis: CCTV cameras by gi_bin in 7 classes: Hot spot - 99% confidence, Hot spot - 95% confidence, Hot spot - 90% confidence, Not significant, Cold spot - 90% confidence, Cold spot - 95% confidence and 1 more [23]. The map draws Patrol beats with one symbol [23]. It draws 52 features [23]. It covers longitude -87.715 to -87.578 and latitude 41.838 to 41.917, at about 1:47,468 [23].

Findings

Evidenced: Hot spots on CCTV cameras: Hot spot analysis: 1 layer saved: Hot spot analysis: CCTV cameras (36 features) [15][22].

Evidenced: It reported result, bins 36; result, count 36; result, elapsed ms 3; result, cell size m 1,000; result, incidents used 60; result, distance band m 2,000 [22].

Tool gp_hot_spots; parameters {"project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "CCTV cameras (ad88aaeb)"}, "aggregation": "hexagon", "cell_size_m": 1000.0, "distance_band_m": 2000.0}

Hot spots

What this analysis is. Hot spot analysis: Getis-Ord Gi* hot and cold spots with z-scores, p-values and confidence bins [20]. In ArcGIS it is Find Hot Spots or Hot Spot Analysis (Getis-Ord Gi*); in QGIS, qgis:hotspot (plugin) [20].

Why it was run on this data. 120 points: Getis-Ord Gi* tests whether the concentrations in Licensed premises are statistically significant [24]. Measured: Licensed premises are clustered (nearest-neighbor ratio 0.85, $z = -3.2$), median spacing 121 m [24]. Cells of 500 m and a band of 1000 m from the measured spacing [24].

What it found. Hot spots on Licensed premises: Hot spot analysis: 1 layer saved: Hot spot analysis: Licensed premises (112 features) [17][25]. It reported result, bins 112; result, count 112; result, elapsed ms 5; result, cell size m 500; result, incidents used 120; result, distance band m 1,000 [25].

Result	Value
result, bins	112
result, count	112
result, elapsed ms	5
result, cell size m	500
result, incidents used	120
result, distance band m	1,000
billing, cost	0.0524
billing, list price	0.0524
billing, upstream cost	0

Hot spots: licensed premises

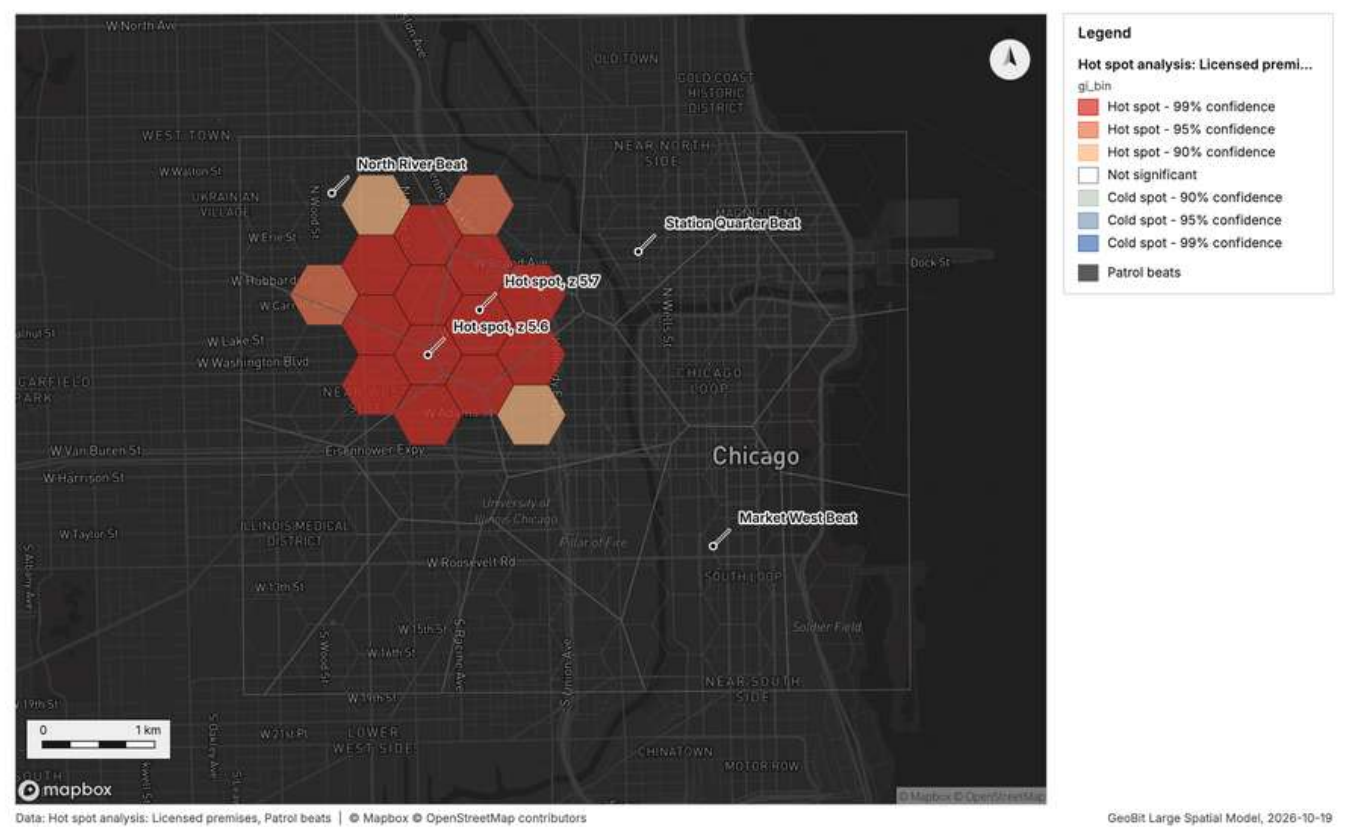


Figure 6. Hot spots: licensed premises [26]

What the map shows. The map draws Hot spot analysis: Licensed premises by gi_bin in 7 classes: Hot spot - 99% confidence, Hot spot - 95% confidence, Hot spot - 90% confidence, Not significant, Cold spot - 90% confidence, Cold spot - 95% confidence and 1 more [26]. The map draws Patrol beats with one symbol [26]. It draws 128 features [26]. It covers longitude -87.705 to -87.593 and latitude 41.847 to 41.911, at about 1:38,555 [26].

Findings

Evidenced: Hot spots on Licensed premises: Hot spot analysis: 1 layer saved: Hot spot analysis: Licensed premises (112 features) [17][25].

Evidenced: It reported result, bins 112; result, count 112; result, elapsed ms 5; result, cell size m 500; result, incidents used 120; result, distance band m 1,000 [25].

A model draft was discarded because a sentence did not cite a source of this section.

Tool gp_hot_spots; parameters {"project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Licensed premises (055b5c2c)"}, "aggregation": "hexagon", "cell_size_m": 500.0, "distance_band_m": 1000.0}

Space time hot spots

What this analysis is. Emerging hot spots: Where hot spots are new, consecutive, intensifying, persistent, diminishing, sporadic, oscillating or historical over time [27]. In ArcGIS it is Emerging Hot Spot Analysis or Create Space Time Cube [27].

Why it was run on this data. Incidents carry dates in 'reported_at': emerging hot spot analysis finds new, intensifying and fading hot spots per week [28]. Measured: the pattern of Incidents changes over time (earlier half clustered, later half clustered; the center moved 132 m) [28].

What it found. The space time hot spots analysis was executed using the Incidents layer [12] and resulted in 270 features saved as "Emerging hot spots: Incidents" [29]. The process was efficient, concluding in an elapsed time of 46 milliseconds [29]. Furthermore, the analysis utilized 1,680 features and incurred a total cost of 0.184 [29].

Result	Value
result, count	270
result, elapsed ms	46
result, resolution	9
result, features used	1,680
result, time neighbors	0
billing, cost	0.184
billing, list price	0.184
billing, upstream cost	0

Emerging hot spots: incidents

2025-10-01 to 2026-09-30

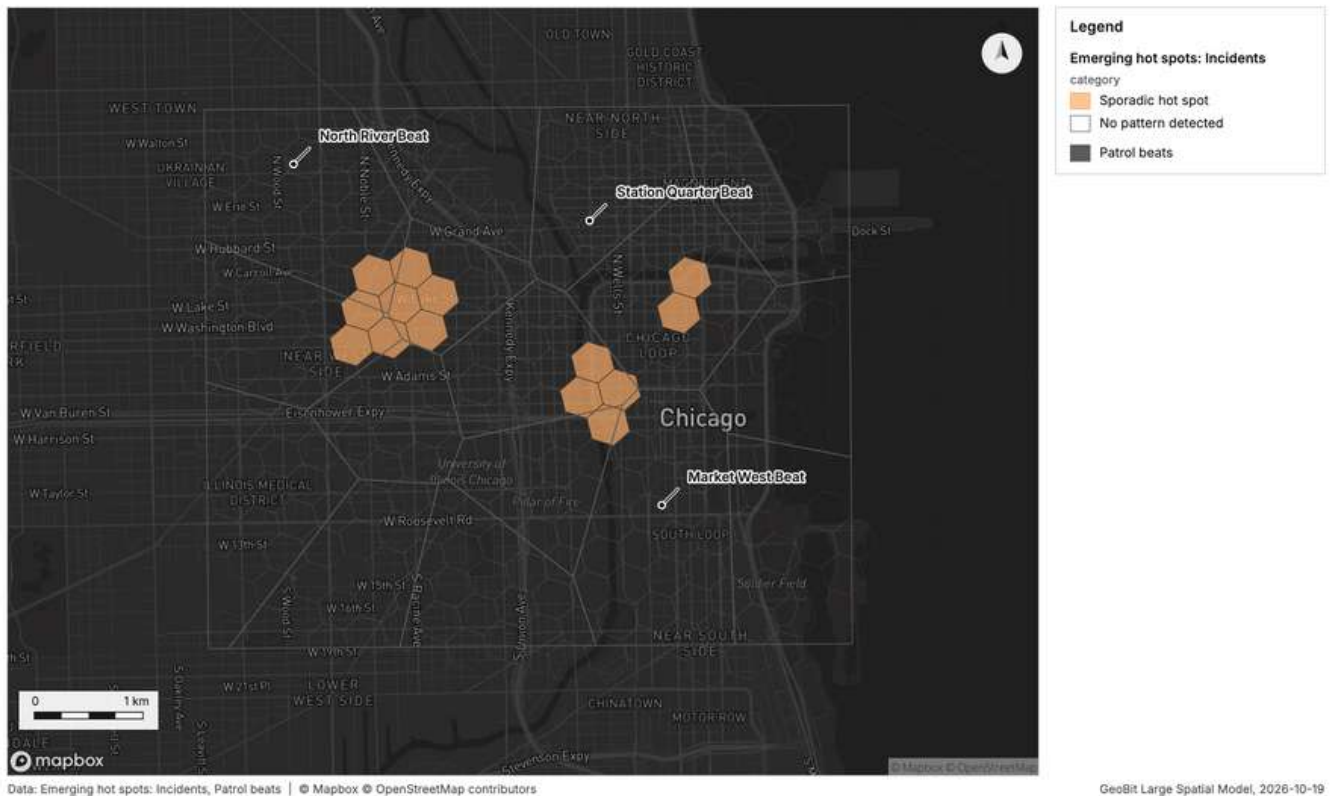


Figure 7. Emerging hot spots: incidents [30]

What the map shows. The map draws Emerging hot spots: Incidents by category in 2 classes: Sporadic hot spot, No pattern detected [30]. The map draws Patrol beats with one symbol [30]. It draws 286 features [30]. It covers longitude -87.702 to -87.587 and latitude 41.846 to 41.91, at about 1:39,916 [30].

Findings

Evidenced: Space time hot spots on Incidents: Emerging hot spots: 1 layer saved: Emerging hot spots: Incidents (270 features) [12][29].

Evidenced: It reported result, count 270; result, elapsed ms 46; result, resolution 9; result, features used 1,680; result, time neighbors 0; billing, cost 0.184 [29].

Tool gp_space_time_hot_spots; parameters {"project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Incidents (36ad5f7c)"}, "interval": "week", "bin_shape": "h3", "resolution": 9, "time_field": "reported_at"}

Space time hot spots

What this analysis is. Emerging hot spots: Where hot spots are new, consecutive, intensifying, persistent, diminishing, sporadic, oscillating or historical over time [27]. In ArcGIS it is Emerging Hot Spot Analysis or Create Space Time Cube [27].

Why it was run on this data. Street light outages carry dates in 'reported_at': emerging hot spot analysis finds new, intensifying and fading hot spots per week [31]. Measured: the pattern of Street light outages changes over time (earlier half clustered, later half clustered; the center moved 263 m) [31].

What it found. Space time hot spots on Street light outages: Emerging hot spots: 1 layer saved: Emerging hot spots: Street light outages (47 features) [13][32]. It reported result, count 47; result, elapsed ms 10; result, resolution 8; result, features used 420; result, time neighbors 0; billing, cost 0.121 [32].

Result	Value
result, count	47

Result	Value
result, elapsed ms	10
result, resolution	8
result, features used	420
result, time neighbors	0
billing, cost	0.121
billing, list price	0.121
billing, upstream cost	0

Emerging hot spots: street light outages

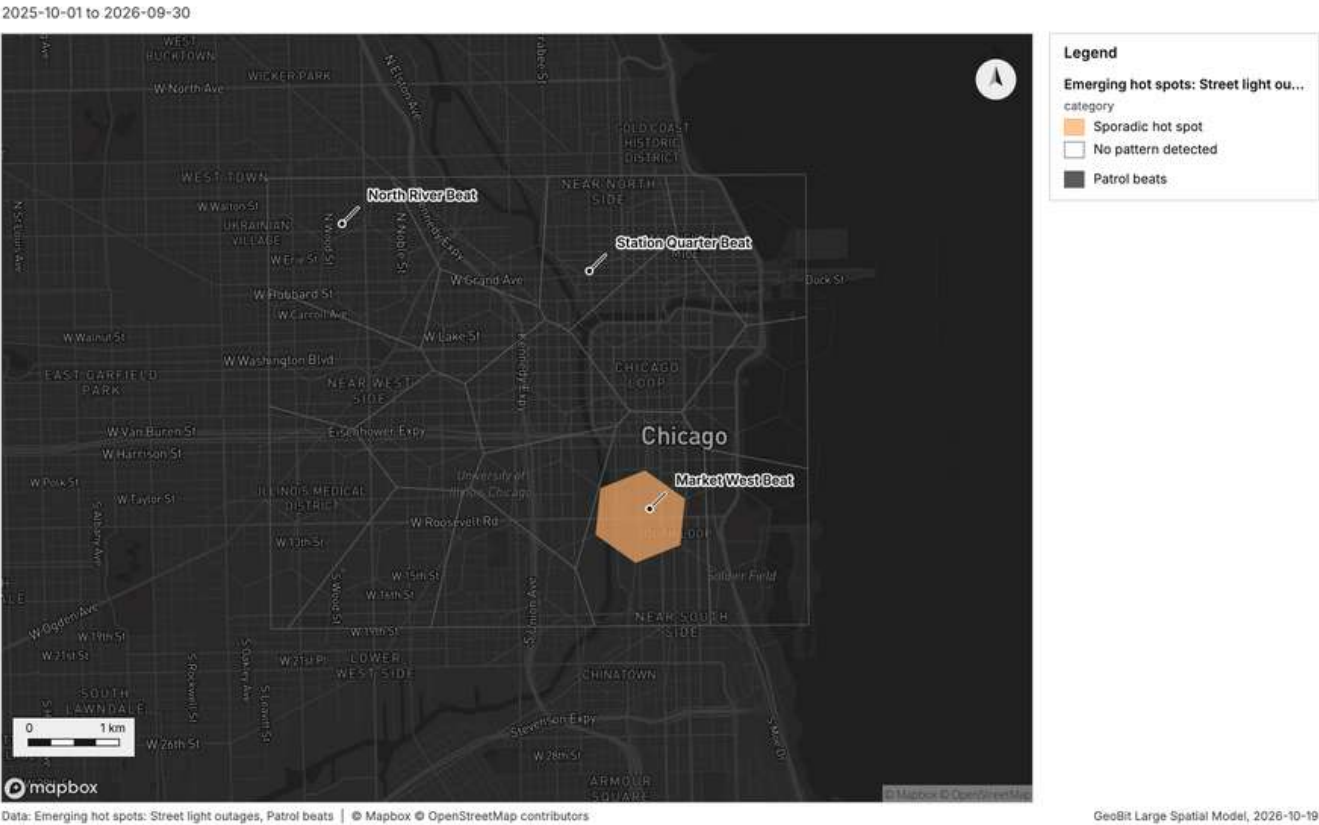


Figure 8. Emerging hot spots: street light outages [33]

What the map shows. The map draws Emerging hot spots: Street light outages by category in 2 classes: Sporadic hot spot, No pattern detected [33]. The map draws Patrol beats with one symbol [33]. It draws 63 features [33]. It covers longitude -87.716 to -87.578 and latitude 41.839 to 41.916, at about 1:47,799 [33].

Findings

Evidenced: Space time hot spots on Street light outages: Emerging hot spots: 1 layer saved: Emerging hot spots: Street light outages (47 features) [13][32].

Evidenced: It reported result, count 47; result, elapsed ms 10; result, resolution 8; result, features used 420; result, time neighbors 0; billing, cost 0.121 [32].

Tool gp_space_time_hot_spots; parameters {"project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Street light outages (a7218535)"}, "interval": "week", "bin_shape": "h3", "resolution": 8, "time_field": "reported_at"}

Find point clusters

What this analysis is. Find point clusters: Density-based clusters (DBSCAN, HDBSCAN or OPTICS, optionally space-time) with hulls and noise [34]. In ArcGIS it is Find Point Clusters or Density-based Clustering; in QGIS, native:dbscanclustering or native:stdbscanclustering [34].

Why it was run on this data. DBSCAN finds dense groups of Licensed premises and separates noise [35]. Measured: Licensed premises are clustered (nearest-neighbor ratio 0.85, $z = -3.2$), median spacing 121 m [35]. DBSCAN at 200 m (twice the measured spacing) [35].

What it found. Find point clusters on Licensed premises: Find point clusters: 2 layers saved: Find point clusters: Licensed premises (120 features); Find point clusters: cluster hulls (3 features) [17][36]. It reported result, count 120; result, noise 61; result, distance m 200; result, elapsed ms 499; result, min points 3; billing, cost 0.0524 [36].

Result	Value
result, count	120
result, noise	61
result, distance m	200
result, elapsed ms	499
result, min points	3
billing, cost	0.0524
billing, list price	0.0524
billing, upstream cost	0

Clusters: licensed premises

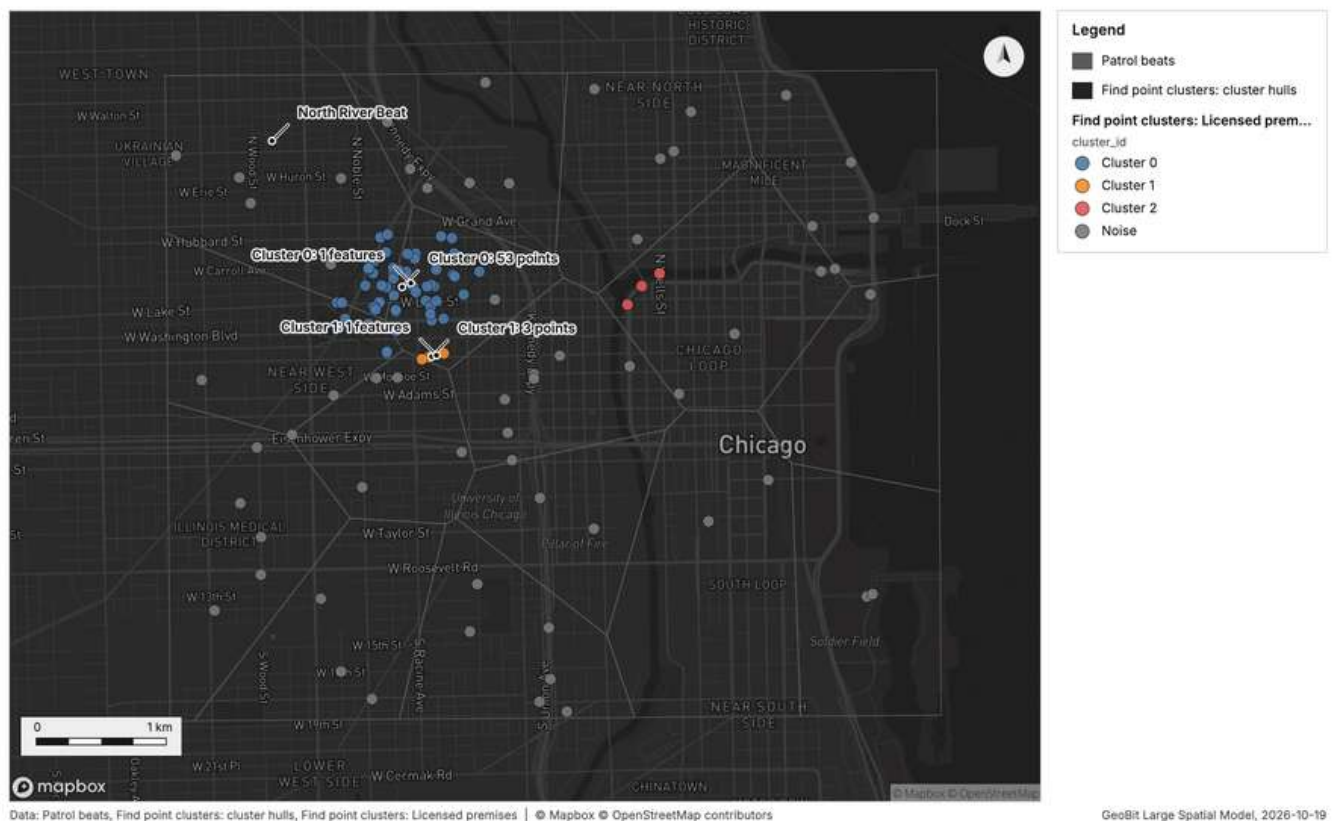


Figure 9. Clusters: licensed premises [37]

What the map shows. The map draws Patrol beats with one symbol [37]. The map draws Find point clusters: cluster hulls with one symbol [37]. The map draws Find point clusters: Licensed premises by cluster_id in 4 classes: Cluster 0, Cluster 1, Cluster 2, Noise [37]. It draws 139 features [37]. It covers longitude -87.695 to -87.598 and latitude 41.851 to 41.906, at about 1:33,333 [37].

Findings

Evidenced: Find point clusters on Licensed premises: Find point clusters: 2 layers saved: Find point clusters: Licensed premises (120 features); Find point clusters: cluster hulls (3 features) [17][36].

Evidenced: It reported result, count 120; result, noise 61; result, distance m 200; result, elapsed ms 499; result, min points 3; billing, cost 0.0524 [36].

Tool gp_find_point_clusters; parameters {"method": "dbscan", "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Licensed premises (055b5c2c)"}, "distance_m": 200.0, "min_points": 3}

Find point clusters

What this analysis is. Find point clusters: Density-based clusters (DBSCAN, HDBSCAN or OPTICS, optionally space-time) with hulls and noise [34]. In ArcGIS it is Find Point Clusters or Density-based Clustering; in QGIS, native:dbscanclustering or native:stdbscanclustering [34].

Why it was run on this data. DBSCAN finds dense groups of Incidents and separates noise [38]. Measured: Incidents are clustered (nearest-neighbor ratio 0.73, $z = -21.0$), median spacing 34.3 m [38]. DBSCAN at 50 m (twice the measured spacing) [38].

What it found. Find point clusters on Incidents: Find point clusters: 2 layers saved: Find point clusters: Incidents (1680 features); Find point clusters: cluster hulls (3 features) [12][39]. It reported result, count 1,680; result, noise 1,609; result, distance m 50; result, elapsed ms 19; result, min points 20; billing, cost 0.0836 [39].

Result	Value
result, count	1,680
result, noise	1,609
result, distance m	50
result, elapsed ms	19
result, min points	20
billing, cost	0.0836
billing, list price	0.0836
billing, upstream cost	0

Clusters: incidents

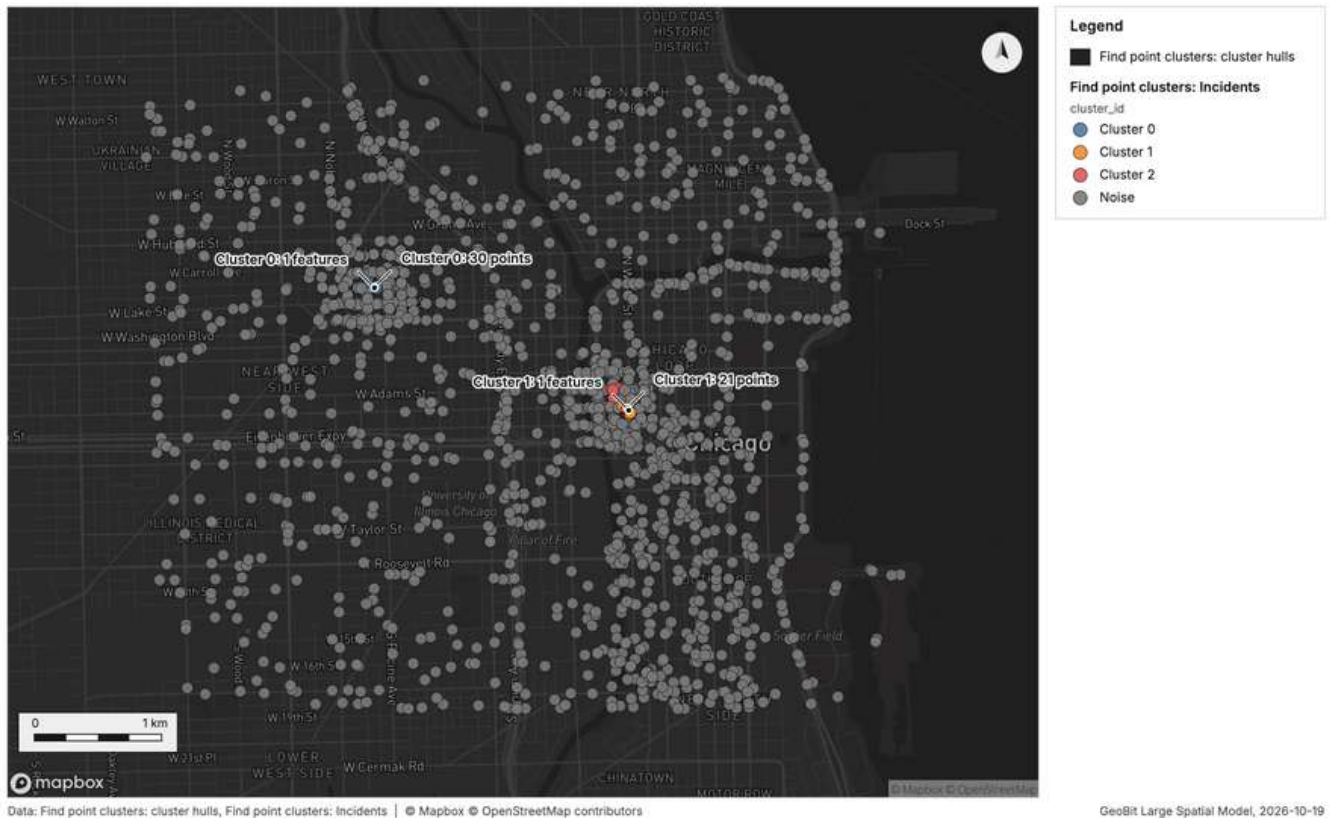


Figure 10. Clusters: incidents [40]

What the map shows. The map draws Find point clusters: cluster hulls with one symbol [40]. The map draws Find point clusters: Incidents by cluster_id in 4 classes: Cluster 0, Cluster 1, Cluster 2, Noise [40]. It draws 1,683 features [40]. It covers longitude -87.693 to -87.595 and latitude 41.85 to 41.907, at about 1:34,033 [40].

Findings

Evidenced: Find point clusters on Incidents: Find point clusters: 2 layers saved: Find point clusters: Incidents (1680 features); Find point clusters: cluster hulls (3 features) [12][39].

Evidenced: It reported result, count 1,680; result, noise 1,609; result, distance m 50; result, elapsed ms 19; result, min points 20; billing, cost 0.0836 [39].

Tool gp_find_point_clusters; parameters {"method": "dbscan", "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Incidents (36ad5f7c)", "distance_m": 50.0, "min_points": 20}}

Find point clusters

What this analysis is. Find point clusters: Density-based clusters (DBSCAN, HDBSCAN or OPTICS, optionally space-time) with hulls and noise [34]. In ArcGIS it is Find Point Clusters or Density-based Clustering; in QGIS, native:dbscanclustering or native:stdbscanclustering [34].

Why it was run on this data. DBSCAN finds dense groups of Street light outages and separates noise [41]. Measured: Street light outages are clustered (nearest-neighbor ratio 0.88, $z = -4.9$), median spacing 74.9 m [41]. DBSCAN at 100 m (twice the measured spacing) [41].

What it found. The `gp\_find\_point\_clusters` tool was utilized against the Street light outages layer [13]. This analysis successfully identified 420 features [42], classifying 410 of the input data as noise [42]. The cluster process was configured with a distance threshold of 100 meters and required a minimum of 10 points [42].

Result	Value
result, count	420

Result	Value
result, noise	410
result, distance m	100
result, elapsed ms	5
result, min points	10
billing, cost	0.0584
billing, list price	0.0584
billing, upstream cost	0

Clusters: street light outages

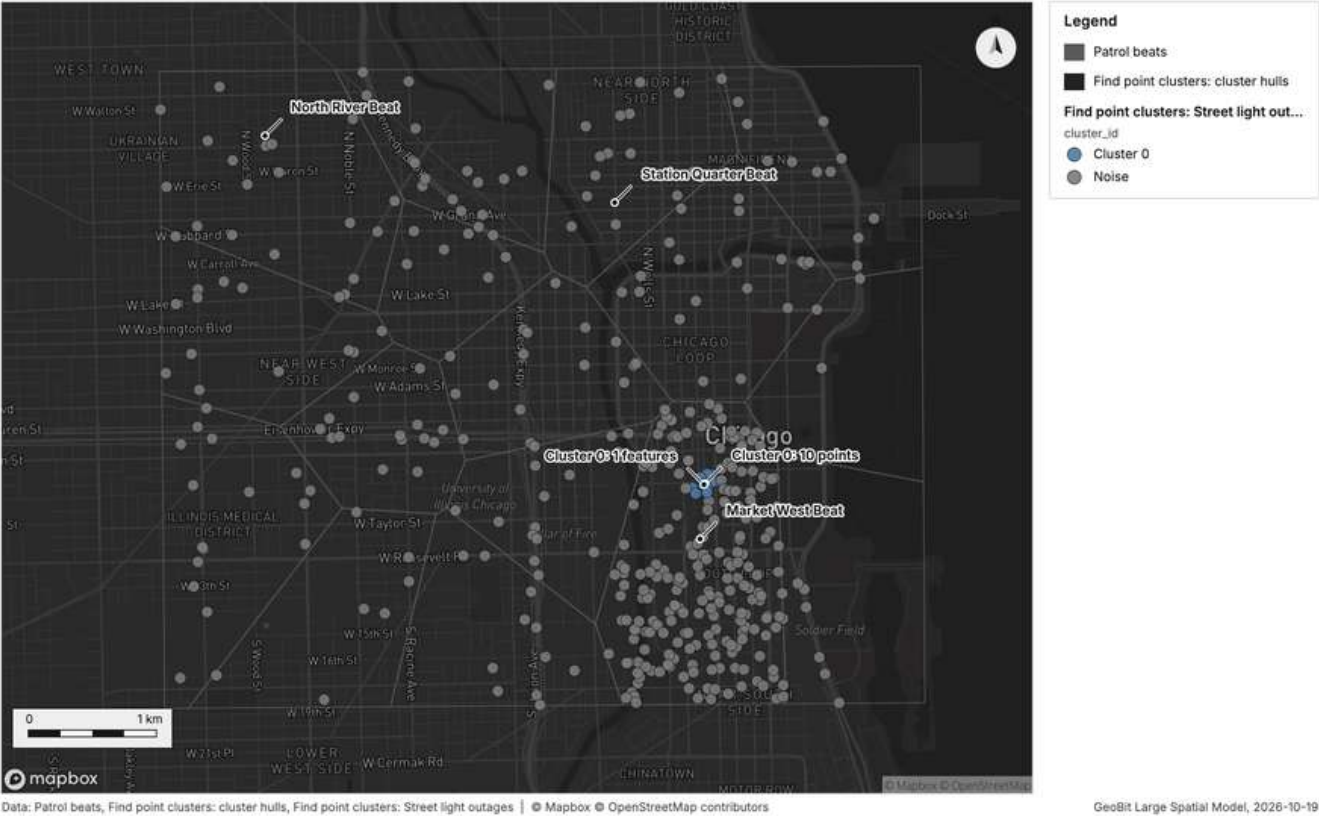


Figure 11. Clusters: street light outages [43]

What the map shows. The map draws Patrol beats with one symbol [43]. The map draws Find point clusters: cluster hulls with one symbol [43]. The map draws Find point clusters: Street light outages by cluster_id in 2 classes: Cluster 0, Noise [43]. It draws 437 features [43]. It covers longitude -87.695 to -87.597 and latitude 41.85 to 41.906, at about 1:33,798 [43].

Findings

Evidenced: Find point clusters on Street light outages: Find point clusters: 2 layers saved: Find point clusters: Street light outages (420 features); Find point clusters: cluster hulls (1 feature) [13][42].

Evidenced: It reported result, count 420; result, noise 410; result, distance m 100; result, elapsed ms 5; result, min points 10; billing, cost 0.0584 [42].

Tool gp_find_point_clusters; parameters {"method": "dbscan", "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Street light outages (a7218535)", "distance_m": 100.0, "min_points": 10}}

Summarize within

What this analysis is. Summarize within: Count and aggregate the features inside each polygon (or bin), proportionally for lines and polygons [44]. In ArcGIS it is Summarize Within or Aggregate Points; in QGIS,

native:countpointsinpolygon or native:sumlinelengths [44].

Why it was run on this data. Count CCTV cameras inside each feature of Patrol beats by ptz; the counts map as a choropleth (natural breaks, sequential colors) [45].

What it found. Summarize within on CCTV cameras, Patrol beats: Summarize within: 1 layer saved: Summarize within: Patrol beats (16 features) [14][15][46]. It reported result, count 16; result, elapsed ms 0; billing, cost 0.01154; billing, list price 0.01154; billing, upstream cost 0 [46].

Result	Value
result, count	16
result, elapsed ms	0
billing, cost	0.01154
billing, list price	0.01154
billing, upstream cost	0

Counts: CCTV cameras, by patrol beat

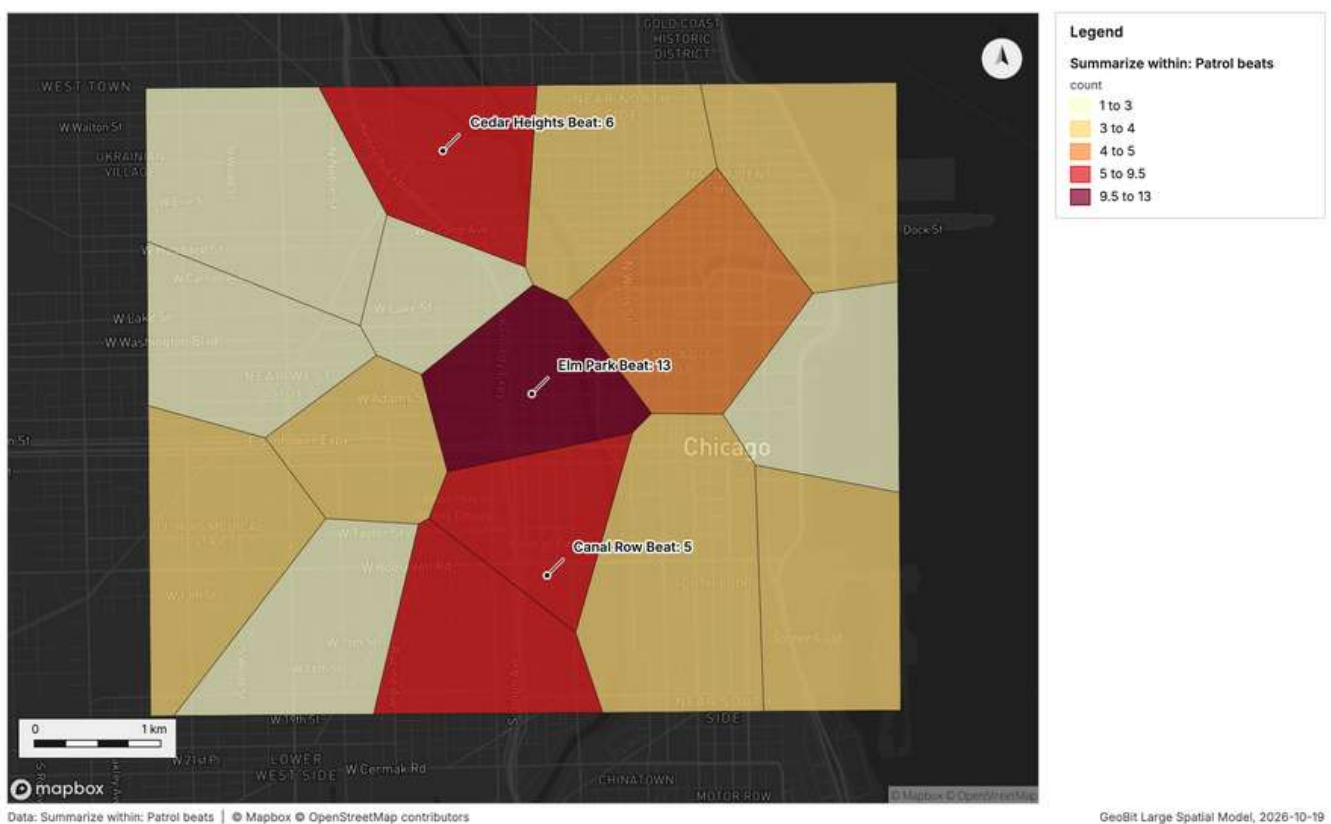


Figure 12. Counts: CCTV cameras, by patrol beat [47]

What the map shows. The map draws Summarize within: Patrol beats by count in 5 classes: 1 to 3, 3 to 4, 4 to 5, 5 to 9.5, 9.5 to 13 [47]. It draws 16 features [47]. It covers longitude -87.694 to -87.594 and latitude 41.85 to 41.907, at about 1:34,270 [47].

Findings

Evidenced: Summarize within on CCTV cameras, Patrol beats: Summarize within: 1 layer saved: Summarize within: Patrol beats (16 features) [14][15][46].

Evidenced: It reported result, count 16; result, elapsed ms 0; billing, cost 0.01154; billing, list price 0.01154; billing, upstream cost 0 [46].

Tool gp_summarize_within; parameters {"stats": [{"stat": "sum", "field": "installed_year"}], "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "CCTV cameras (ad88aaeb)", "group_by": "ptz", "polygons": {"layer": "Patrol beats (8c67e28f)"}}

Summarize within

What this analysis is. Summarize within: Count and aggregate the features inside each polygon (or bin), proportionally for lines and polygons [44]. In ArcGIS it is Summarize Within or Aggregate Points; in QGIS, native:countpointsinpolygon or native:sumlinelengths [44].

Why it was run on this data. Count CCTV cameras inside each feature of Patrol beats by ptz; the counts map as a choropleth (natural breaks, sequential colors) [45].

What it found. The analysis used the "Summarize within: Patrol beats" function, which processed 16 features [48].

Result	Value
result, count	16
result, elapsed ms	0
billing, cost	0.01274
billing, list price	0.01274
billing, upstream cost	0

Counts: licensed premises, by patrol beat

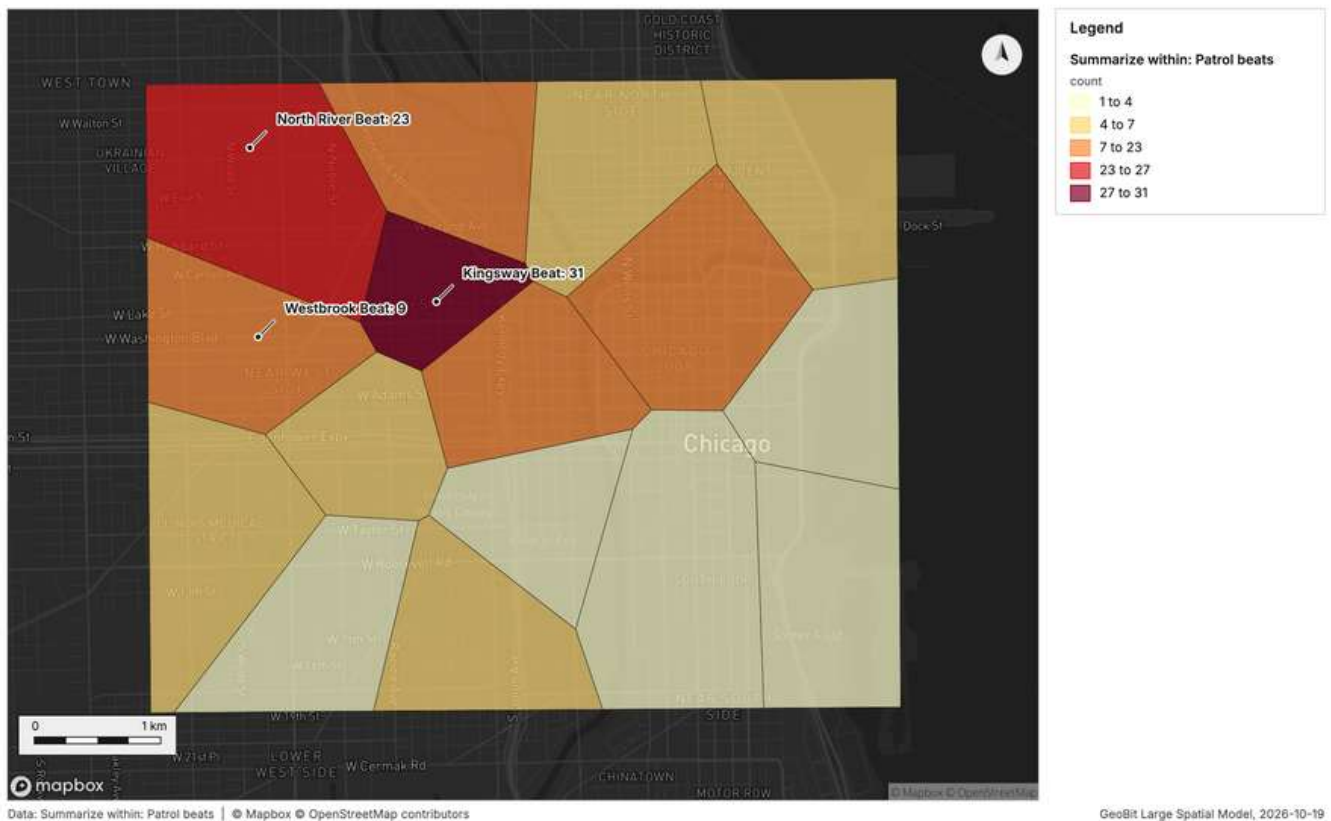


Figure 13. Counts: licensed premises, by patrol beat [49]

What the map shows. The map draws Summarize within: Patrol beats by count in 5 classes: 1 to 4, 4 to 7, 7 to 23, 23 to 27, 27 to 31 [49]. It draws 16 features [49]. It covers longitude -87.694 to -87.594 and latitude 41.85 to 41.907, at about 1:34,270 [49].

Findings

Evidenced: Summarize within on Licensed premises, Patrol beats: Summarize within: 1 layer saved: Summarize within: Patrol beats (16 features) [14][17][48].

Evidenced: It reported result, count 16; result, elapsed ms 0; billing, cost 0.01274; billing, list price 0.01274; billing, upstream cost 0 [48].

Tool gp_summarize_within; parameters {"stats": [{"stat": "sum", "field": "closing_hour"}], "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Licensed premises (055b5c2c)", "group_by": "type", "polygons": {"layer": "Patrol beats (8c67e28f)"}}

Summarize within

What this analysis is. Summarize within: Count and aggregate the features inside each polygon (or bin), proportionally for lines and polygons [44]. In ArcGIS it is Summarize Within or Aggregate Points; in QGIS, native:countpointsinpolygon or native:sumlinelengths [44].

Why it was run on this data. Count CCTV cameras inside each feature of Patrol beats by ptz; the counts map as a choropleth (natural breaks, sequential colors) [45].

What it found. Summarize within on Incidents, Patrol beats: Summarize within: 1 layer saved: Summarize within: Patrol beats (16 features) [12][14][50]. It reported result, count 16; result, elapsed ms 2; billing, cost 0.04394; billing, list price 0.04394; billing, upstream cost 0 [50].

Result	Value
result, count	16
result, elapsed ms	2
billing, cost	0.04394
billing, list price	0.04394
billing, upstream cost	0

Counts: incidents, by patrol beat

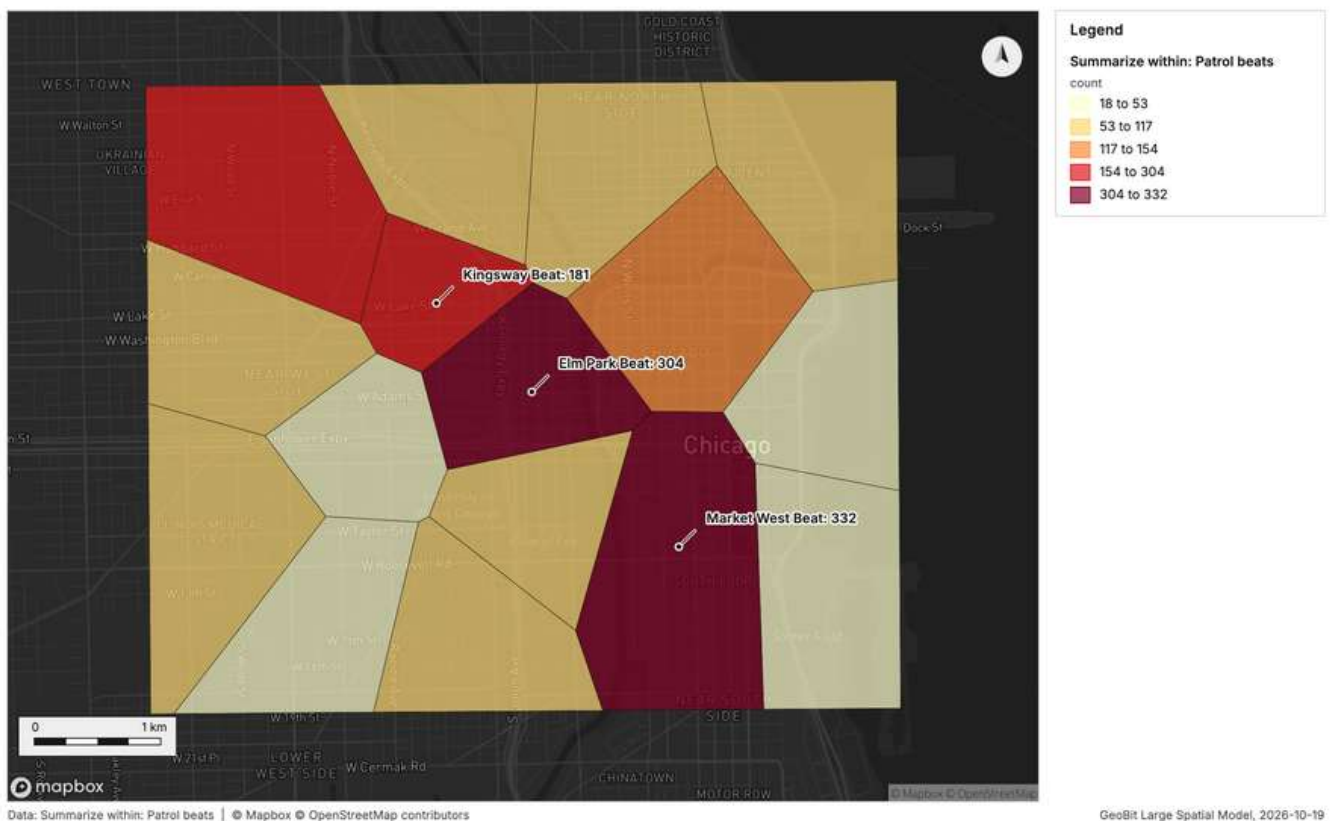


Figure 14. Counts: incidents, by patrol beat [51]

What the map shows. The map draws Summarize within: Patrol beats by count in 5 classes: 18 to 53, 53 to 117, 117 to 154, 154 to 304, 304 to 332 [51]. It draws 16 features [51]. It covers longitude -87.694 to -87.594 and latitude 41.85 to 41.907, at about 1:34,270 [51].

Findings

Evidenced: Summarize within on Incidents, Patrol beats: Summarize within: 1 layer saved: Summarize within: Patrol beats (16 features) [12][14][50].

Evidenced: It reported result, count 16; result, elapsed ms 2; billing, cost 0.04394; billing, list price 0.04394; billing, upstream cost 0 [50].

Tool gp_summarize_within; parameters [{"stats": [{"stat": "sum", "field": "severity"}]}, {"project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": [{"layer": "Incidents (36ad5f7c)", "group_by": "category", "polygons": [{"layer": "Patrol beats (8c67e28f)"}]}

Period change

What this analysis is. Period change: Counts or sums per period (week over week, month over month, any two periods, or before and after a date), per area, per H3 cell or in total, with the places of largest rise and fall and a significance note [52]. In ArcGIS it is Summarize Percent Change (Crime Analysis) or Change Point Detection [52].

Why it was run on this data. Incidents carry dates in 'reported_at' over 52 weeks: the count per week, week over week, with the places of largest rise and fall per feature of Patrol beats and whether the change is beyond chance [53].

What it found. Period change on Patrol beats, Incidents produced Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) (16 features) [7][8][12][14]. Incidents: count per week shows a trend of +0.36 per week; the second half of its weeks has 979 against 676 in the first (+44.8%) [55]. The chart Incidents: week of 2026-06-22 to week of 2026-06-29 by place is drawn from 30 rows [56]. The chart Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) is drawn from 5 rows [57].

Period change: incidents, by patrol beat

week of 2026-06-22 to week of 2026-06-29

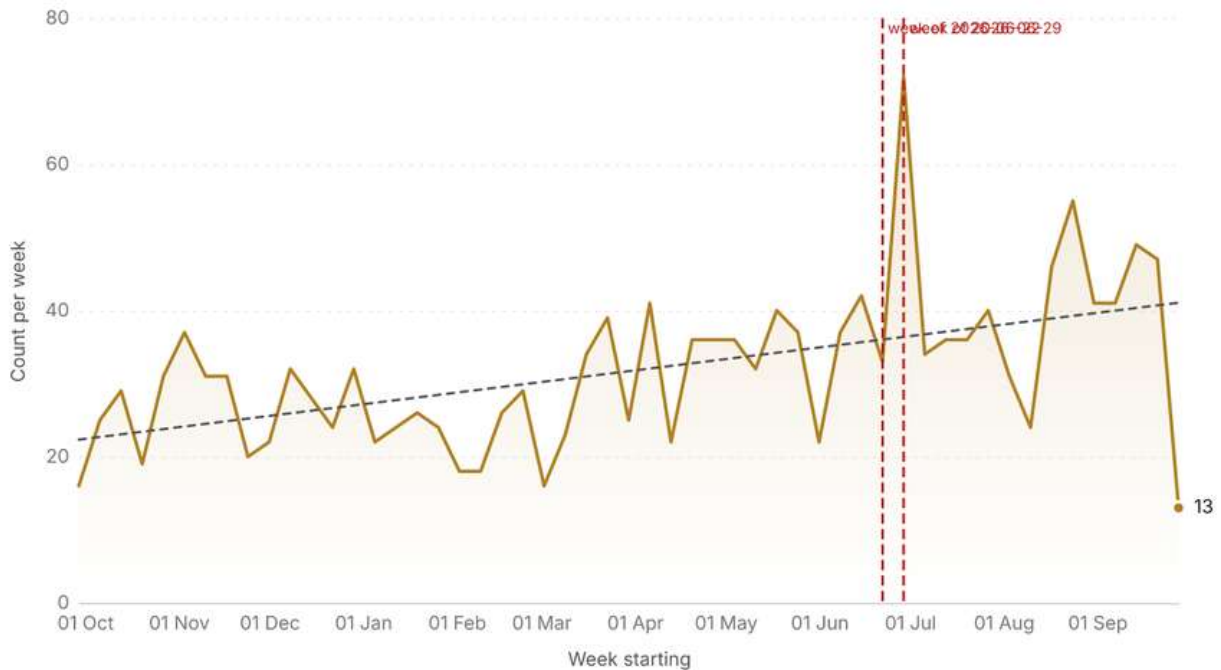


Figure 15. Period change: incidents, by patrol beat [54]

What the map shows. The map draws Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) by change in 4 classes: < -0.5 Std; Dev, -0.5 to 0.5 Std; Dev, 0.5 to 1.5 Std; Dev, > 1.5 Std; Dev [54]. It draws 16 features [54]. It covers longitude -87.696 to -87.592 and latitude 41.85 to 41.907, at about 1:35,725 [54].

Incidents: count per week

Per week: 53 weeks from 2025-09-29 to 2026-09-28; trend +0.36 per week; first half 676, second half 979 (+44.8%)

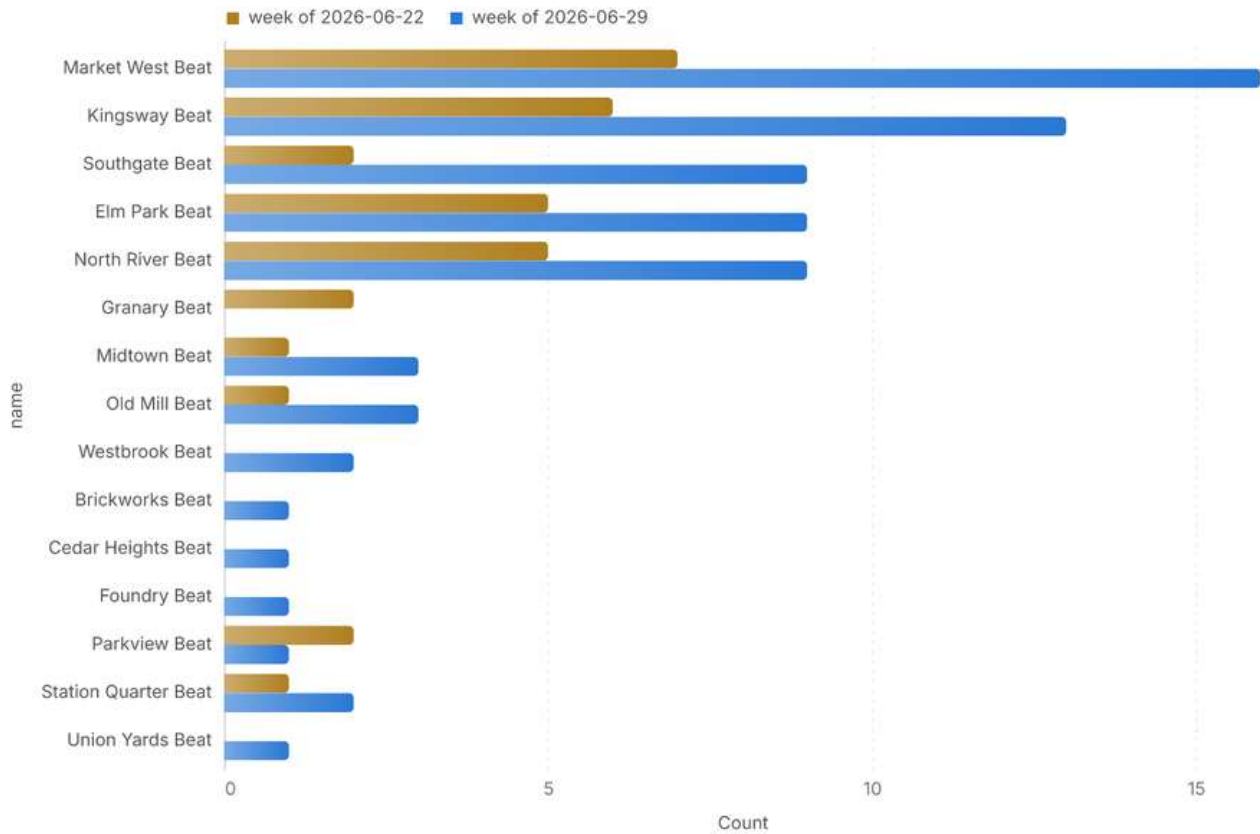


Per week, 2025-09-29 to 2026-09-28. Source: Incidents (1,680 features).

Figure 16. Incidents: count per week [55]. Per week, 2025-09-29 to 2026-09-28. Source: Incidents (1,680 features). The data is in the appendix.

Incidents: week of 2026-06-22 to week of 2026-06-29 by place

week of 2026-06-22 against week of 2026-06-29, the 15 places of largest change

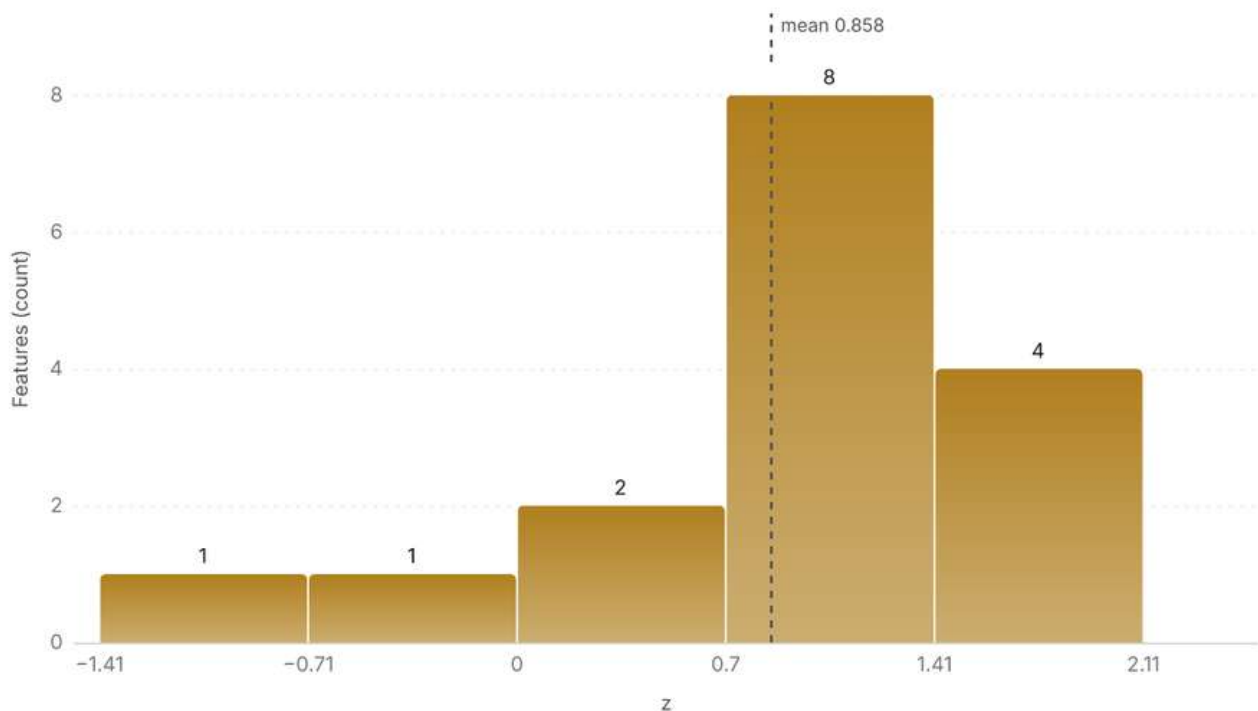


Source: Incidents (1,680 features).

Figure 17. Incidents: week of 2026-06-22 to week of 2026-06-29 by place [56]. Source: Incidents (1,680 features). The data is in the appendix.

Distribution of z

16 values in 5 bins



Source: Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) (16 features).

Figure 18. Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) [57]. Source: Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) (16 features). The data is in the appendix.

Findings

Evidenced: Period change on Patrol beats, Incidents produced Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) (16 features) [7][8][12][14].

Evidenced: Incidents: count per week shows a trend of +0.36 per week; the second half of its weeks has 979 against 676 in the first (+44.8%) [55].

Evidenced: The chart Incidents: week of 2026-06-22 to week of 2026-06-29 by place is drawn from 30 rows [56].

Evidenced: The chart Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) is drawn from 5 rows [57].

Tool gp_period_change; parameters {"by": "area", "areas": {"layer": "Patrol beats (8c67e28f)", "period": "week", "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Incidents (36ad5f7c)", "area_field": "name", "time_field": "reported_at"}}

Period change

What this analysis is. Period change: Counts or sums per period (week over week, month over month, any two periods, or before and after a date), per area, per H3 cell or in total, with the places of largest rise and fall and a significance note [52]. In ArcGIS it is Summarize Percent Change (Crime Analysis) or Change Point Detection [52].

Why it was run on this data. Incidents carry dates in 'reported_at' over 52 weeks: the count per week, week over week, with the places of largest rise and fall per feature of Patrol beats and whether the change is beyond chance [53].

What it found. Period change on Patrol beats, Street light outages produced Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) (7 features) [9][10][13][14]. Street light outages: count per week shows a trend of -0.0337 per week; the second half of its weeks has 183 against 224 in the first (-18.3%) [59]. The chart Street light outages: week of 2026-02-02 to week of 2026-02-09 by place is drawn from 14 rows [60]. The chart Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) is drawn from 5 rows [61].

Period change: street light outages, by patrol beat

week of 2026-02-02 to week of 2026-02-09

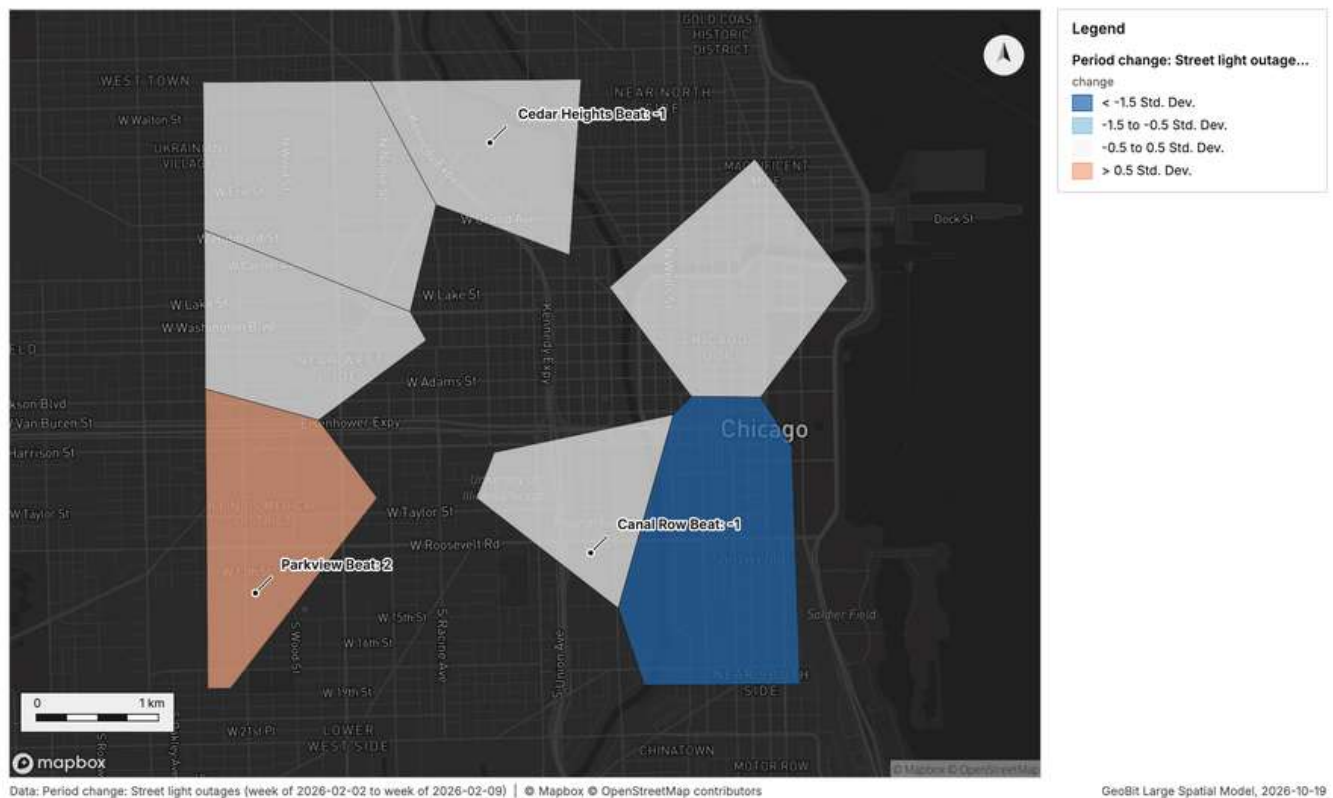


Figure 19. Period change: street light outages, by patrol beat [58]

What the map shows. The map draws Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) by change in 4 classes: < -1.5 Std; Dev, -1.5 to -0.5 Std; Dev, -0.5 to 0.5 Std; Dev, > 0.5 Std; Dev [58]. It draws 7 features [58]. It covers longitude -87.7 to -87.597 and latitude 41.85 to 41.907, at about 1:35,479 [58].

Street light outages: count per week

Per week: 53 weeks from 2025-09-29 to 2026-09-28; trend -0.0337 per week; first half 224, second half 183 (-18.3%)

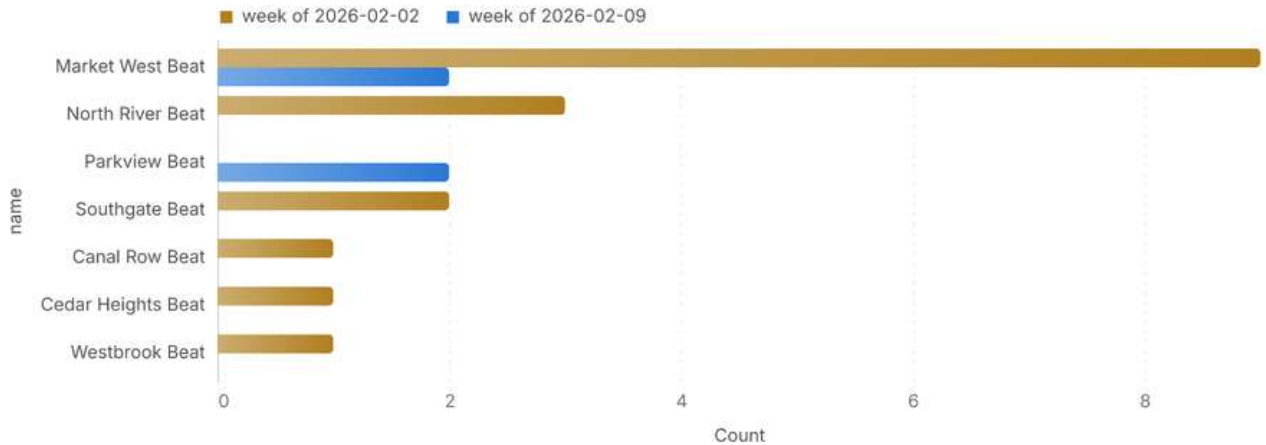


Per week, 2025-09-29 to 2026-09-28. Source: Street light outages (420 features).

Figure 20. Street light outages: count per week [59]. Per week, 2025-09-29 to 2026-09-28. Source: Street light outages (420 features). The data is in the appendix.

Street light outages: week of 2026-02-02 to week of 2026-02-09 by place

week of 2026-02-02 against week of 2026-02-09, the 7 places of largest change

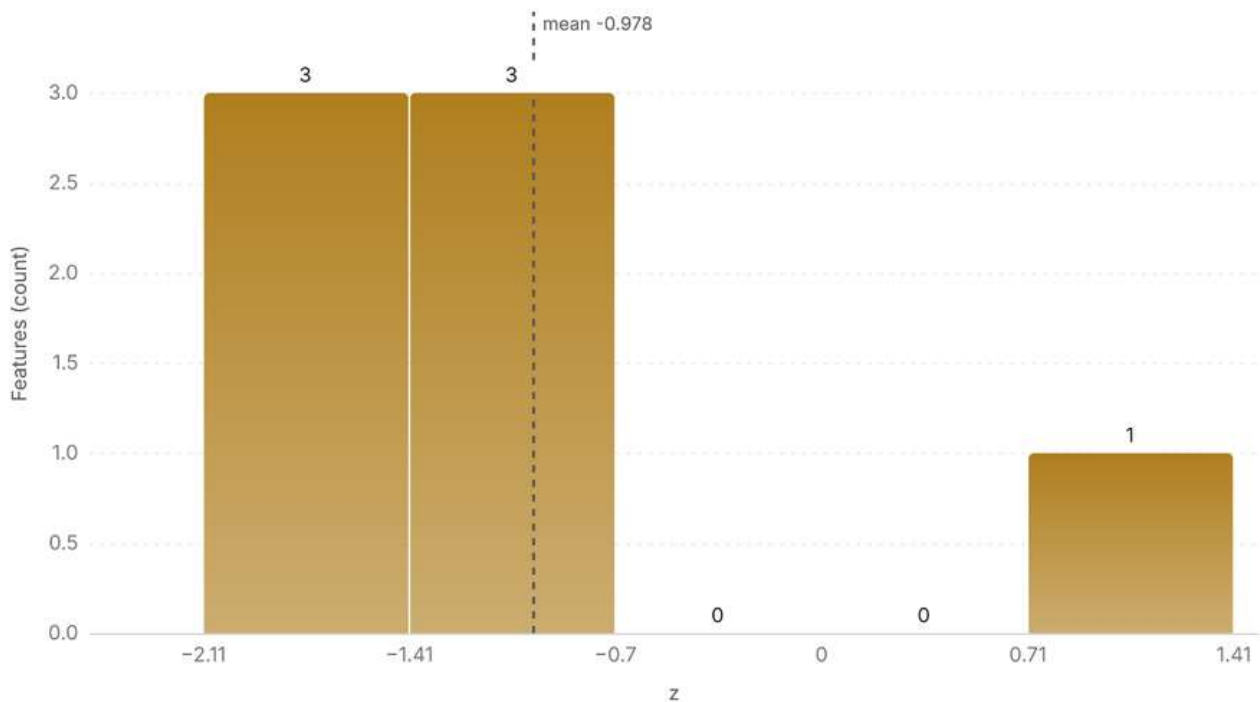


Source: Street light outages (420 features).

Figure 21. Street light outages: week of 2026-02-02 to week of 2026-02-09 by place [60]. Source: Street light outages (420 features). The data is in the appendix.

Distribution of z

7 values in 5 bins



Source: Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) (7 features).

Figure 22. Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) [61]. Source: Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) (7 features). The data is in the appendix.

Findings

Evidenced: Period change on Patrol beats, Street light outages produced Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) (7 features) [9][10][13][14].

Evidenced: Street light outages: count per week shows a trend of -0.0337 per week; the second half of its weeks has 183 against 224 in the first (-18.3%) [59].

Evidenced: The chart Street light outages: week of 2026-02-02 to week of 2026-02-09 by place is drawn from 14 rows [60].

Evidenced: The chart Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) is drawn from 5 rows [61].

Tool gp_period_change; parameters {"by": "area", "areas": {"layer": "Patrol beats (8c67e28f)", "period": "week", "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Street light outages (a7218535)", "area_field": "name", "time_field": "reported_at"}}

Calculate density

What this analysis is. Calculate density: Kernel density per square kilometer on a grid [62]. In ArcGIS it is Calculate Density or Kernel Density; in QGIS, native:heatmapkerneldensityestimation [62].

Why it was run on this data. 120 points in Licensed premises: a density surface shows where they concentrate [63]. Measured: Licensed premises are clustered (nearest-neighbor ratio 0.85, $z = -3.2$), median spacing 121 m [63].

What it found. Calculate density on Licensed premises: Calculate density: 1 layer saved: Calculate density: Licensed premises (164 features) [17][64]. It reported result, count 164; result, elapsed ms 4; result, bandwidth m 1,000; result, cell size m 500; result, excluded null 0; result, max density per km2 42.62 [64].

Result	Value
result, count	164

Result	Value
result, elapsed ms	4
result, bandwidth m	1,000
result, cell size m	500
result, excluded null	0
result, max density per km2	42.62
billing, cost	0.0524
billing, list price	0.0524
billing, upstream cost	0

Density: licensed premises

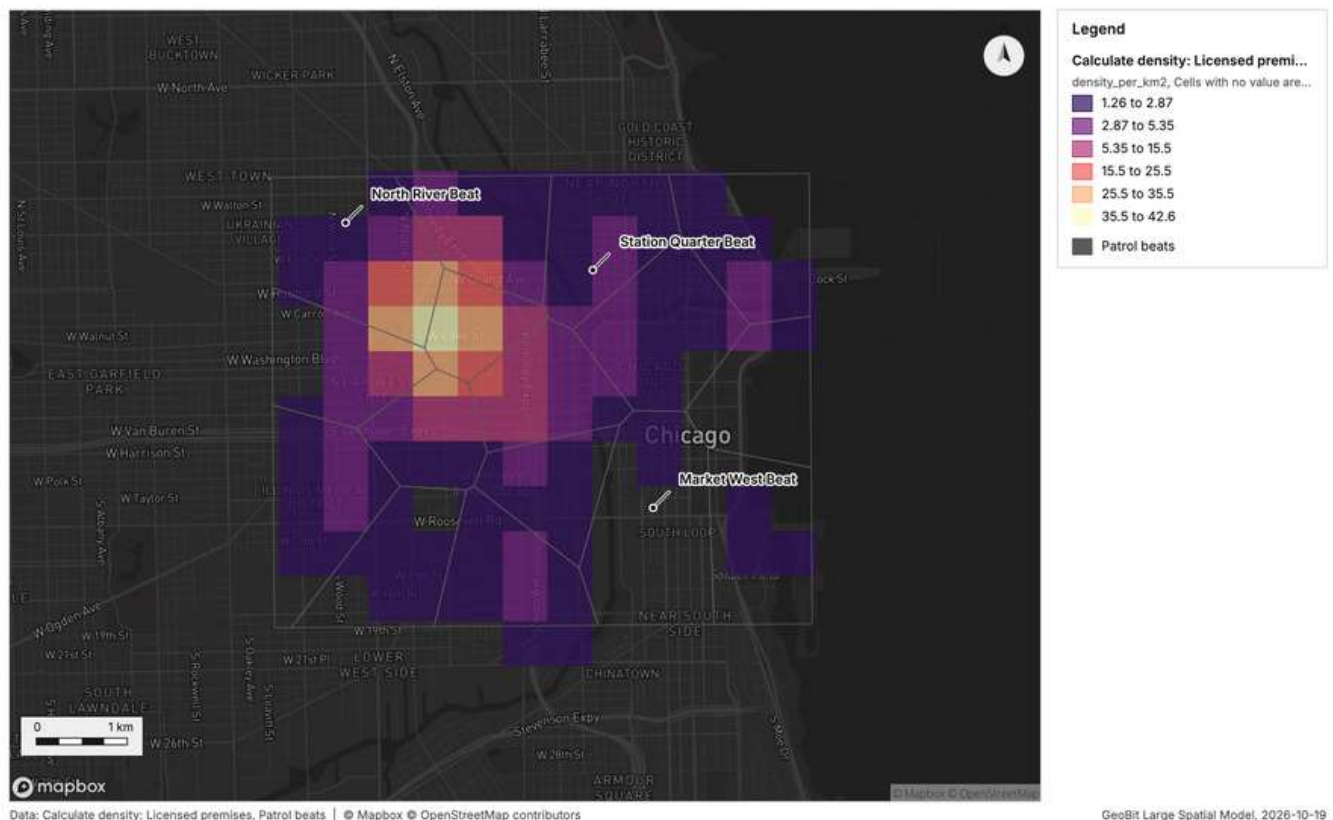


Figure 23. Density: licensed premises [65]

What the map shows. The map draws Calculate density: Licensed premises by density_per_km2 in 6 classes: 1.26 to 2.87, 2.87 to 5.35, 5.35 to 15.5, 15.5 to 25.5, 25.5 to 35.5, 35.5 to 42.6 [65]. The map draws Patrol beats with one symbol [65]. It draws 180 features [65]. It covers longitude -87.716 to -87.577 and latitude 41.839 to 41.918, at about 1:47,798 [65].

Findings

Evidenced: Calculate density on Licensed premises: Calculate density: 1 layer saved: Calculate density: Licensed premises (164 features) [17][64].

Evidenced: It reported result, count 164; result, elapsed ms 4; result, bandwidth m 1,000; result, cell size m 500; result, excluded null 0; result, max density per km2 42.62 [64].

Tool gp_calculate_density; parameters {"kernel": "quartic", "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Licensed premises (055b5c2c)", "bandwidth_m": 1000.0, "cell_size_m": 500.0}}

Calculate density

What this analysis is. Calculate density: Kernel density per square kilometer on a grid [62]. In ArcGIS it is Calculate Density or Kernel Density; in QGIS, native:heatmapkerneldensityestimation [62].

Why it was run on this data. 1680 points in Incidents: a density surface shows where they concentrate [66]. Measured: Incidents are clustered (nearest-neighbor ratio 0.73, z = -21.0), median spacing 34.3 m [66].

What it found. Calculate density on Incidents: Calculate density: 1 layer saved: Calculate density: Incidents (2874 features) [12][67]. It reported result, count 2,874; result, elapsed ms 50; result, bandwidth m 200; result, cell size m 100; result, excluded null 0; result, max density per km2 1,347 [67].

Result	Value
result, count	2,874
result, elapsed ms	50
result, bandwidth m	200
result, cell size m	100
result, excluded null	0
result, max density per km2	1,347
billing, cost	0.0836
billing, list price	0.0836
billing, upstream cost	0

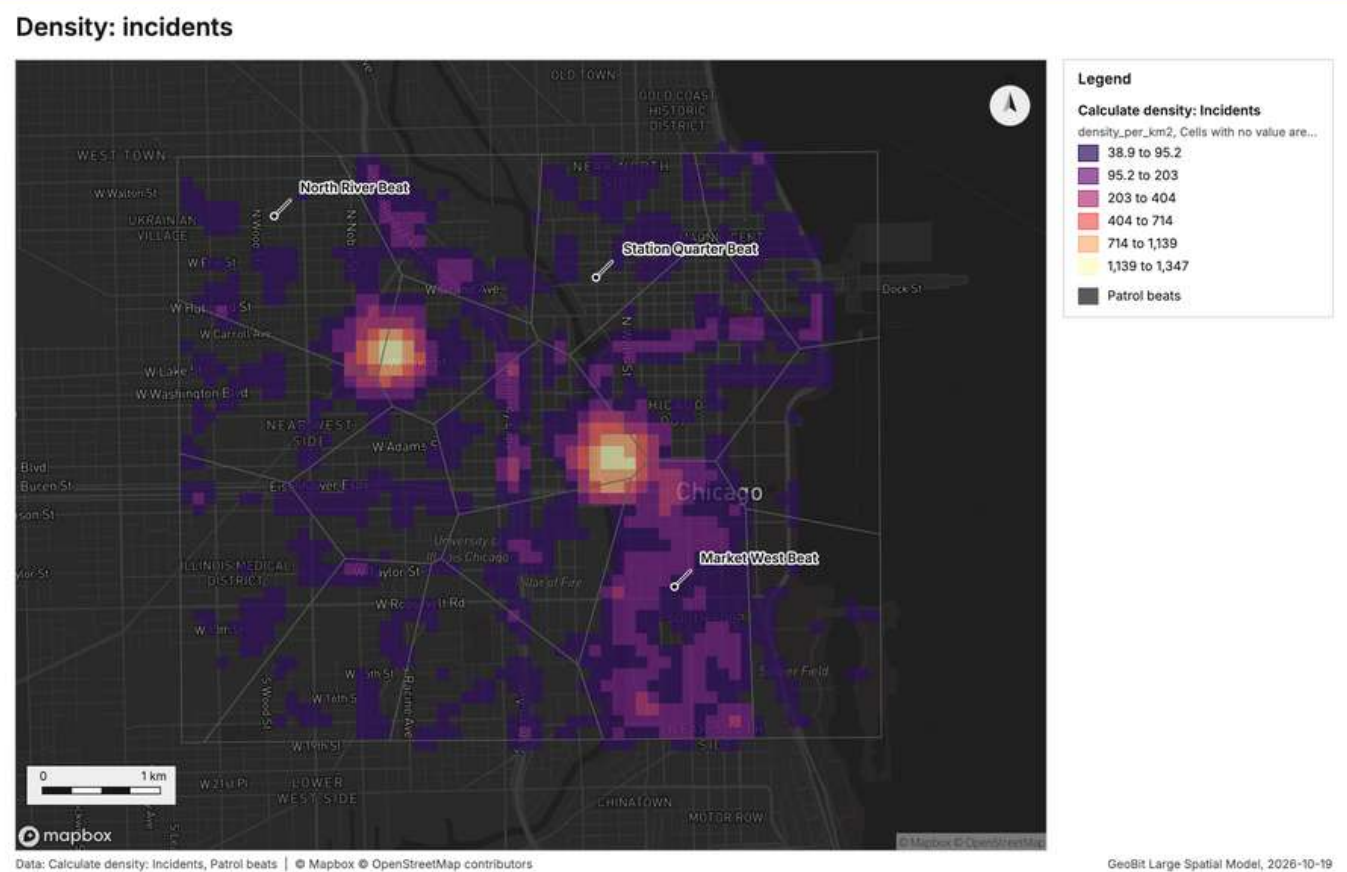


Figure 24. Density: incidents [68]

What the map shows. The map draws Calculate density: Incidents by density_per_km2 in 6 classes: 38.9 to 95.2, 95.2 to 203, 203 to 404, 404 to 714, 714 to 1,139, 1,139 to 1,347 [68]. The map draws Patrol beats with one symbol [68]. It draws 2,890 features [68]. It covers longitude -87.697 to -87.591 and latitude 41.848 to 41.909, at about 1:36,730 [68].

Findings

Evidenced: Calculate density on Incidents: Calculate density: 1 layer saved: Calculate density: Incidents (2874 features) [12][67].

Evidenced: It reported result, count 2,874; result, elapsed ms 50; result, bandwidth m 200; result, cell size m 100; result, excluded null 0; result, max density per km2 1,347 [67].

Tool gp_calculate_density; parameters {"kernel": "quartic", "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Incidents (36ad5f7c)"}, "bandwidth_m": 200.0, "cell_size_m": 100.0}

Calculate density

What this analysis is. Calculate density: Kernel density per square kilometer on a grid [62]. In ArcGIS it is Calculate Density or Kernel Density; in QGIS, native:heatmapkerneldensityestimation [62].

Why it was run on this data. 420 points in Street light outages: a density surface shows where they concentrate [69]. Measured: Street light outages are clustered (nearest-neighbor ratio 0.88, $z = -4.9$), median spacing 74.9 m [69].

What it found. Calculate density on Street light outages: Calculate density: 1 layer saved: Calculate density: Street light outages (848 features) [13][70]. It reported result, count 848; result, elapsed ms 15; result, bandwidth m 500; result, cell size m 200; result, excluded null 0; result, max density per km2 107.5 [70].

Result	Value
result, count	848
result, elapsed ms	15
result, bandwidth m	500
result, cell size m	200
result, excluded null	0
result, max density per km2	107.5
billing, cost	0.0584
billing, list price	0.0584
billing, upstream cost	0

Density: street light outages

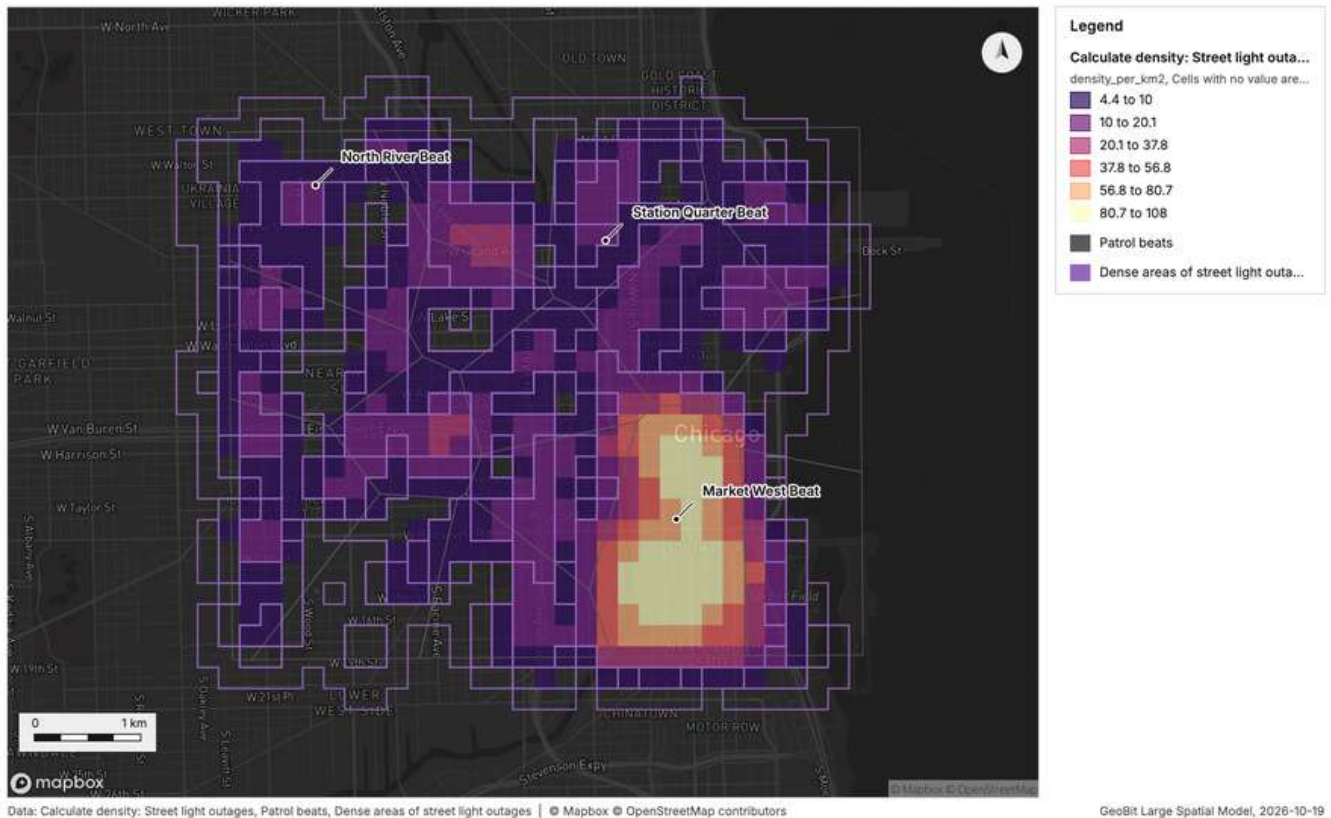


Figure 25. Density: street light outages [71]

What the map shows. The map draws Calculate density: Street light outages by density_per_km2 in 6 classes: 4.4 to 10, 10 to 20.1, 20.1 to 37.8, 37.8 to 56.8, 56.8 to 80.7, 80.7 to 108 [71]. The map draws Patrol beats with one symbol [71]. The map draws Dense areas of street light outages with one symbol [71]. It draws 869 features [71]. It covers longitude -87.706 to -87.588 and latitude 41.845 to 41.912, at about 1:40,754 [71].

Findings

Evidenced: Calculate density on Street light outages: Calculate density: 1 layer saved: Calculate density: Street light outages (848 features) [13][70].

Evidenced: It reported result, count 848; result, elapsed ms 15; result, bandwidth m 500; result, cell size m 200; result, excluded null 0; result, max density per km2 107.5 [70].

Tool gp_calculate_density; parameters {"kernel": "quartic", "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Street light outages (a7218535)"}, "bandwidth_m": 500.0, "cell_size_m": 200.0}

Hot spots

What this analysis is. Hot spot analysis: Getis-Ord Gi* hot and cold spots with z-scores, p-values and confidence bins [20]. In ArcGIS it is Find Hot Spots or Hot Spot Analysis (Getis-Ord Gi*); in QGIS, qgis:hotspot (plugin) [20].

Why it was run on this data. 1680 points: Getis-Ord Gi* tests whether the concentrations in Incidents are statistically significant [72]. Measured: Incidents are clustered (nearest-neighbor ratio 0.73, $z = -21.0$), median spacing 34.3 m [72]. Cells of 100 m and a band of 200 m from the measured spacing [72].

What it found. Hot spots on Incidents: Hot spot analysis: 1 layer saved: Hot spot analysis: Incidents (2912 features) [12][73]. It reported result, bins 2,912; result, count 2,912; result, elapsed ms 100; result, cell size m 100; result, incidents used 1,680; result, distance band m 200 [73].

Result	Value
result, bins	2,912

Result	Value
result, count	2,912
result, elapsed ms	100
result, cell size m	100
result, incidents used	1,680
result, distance band m	200
billing, cost	0.0836
billing, list price	0.0836
billing, upstream cost	0

Hot spots: incidents

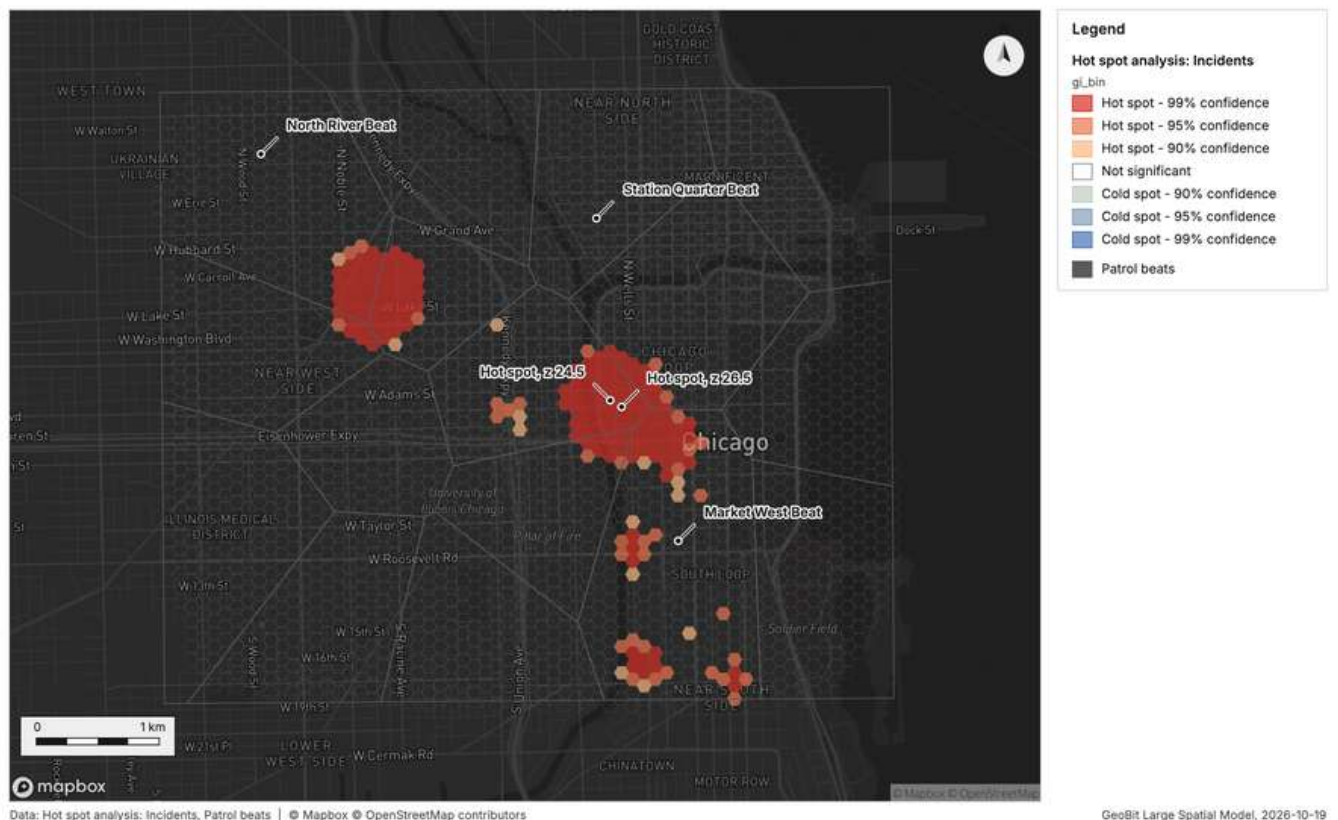


Figure 26. Hot spots: incidents [74]

What the map shows. The map draws Hot spot analysis: Incidents by `gi_bin` in 7 classes: Hot spot - 99% confidence, Hot spot - 95% confidence, Hot spot - 90% confidence, Not significant, Cold spot - 90% confidence, Cold spot - 95% confidence and 1 more [74]. The map draws Patrol beats with one symbol [74]. It draws 2,928 features [74]. It covers longitude -87.695 to -87.593 and latitude 41.849 to 41.907, at about 1:35,233 [74].

Findings

Evidenced: Hot spots on Incidents: Hot spot analysis: 1 layer saved: Hot spot analysis: Incidents (2912 features) [12][73].

Evidenced: It reported result, bins 2,912; result, count 2,912; result, elapsed ms 100; result, cell size m 100; result, incidents used 1,680; result, distance band m 200 [73].

Tool `gp_hot_spots`; parameters `{ "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": { "layer": "Incidents (36ad5f7c)", "aggregation": "hexagon", "cell_size_m": 100.0, "distance_band_m": 200.0 }`

Near repeat

What this analysis is. Repeat and near repeat classification: Classify incidents as originators, repeats (same place) or near repeats within a distance and time window, with a Knox test table [75]. In ArcGIS it is Repeat and Near Repeat Classification or Near Repeat Calculator [75].

Why it was run on this data. Near repeat analysis tests whether Incidents close in space also follow each other within 30 days [76].

What it found. The gp_near_repeat tool processed the Incidents data [12] and generated results covering 30 days [77]. The tool identified 1,680 results [77], involving 152 chains [77]. This analysis calculated pairs linked involving 1,357 pairs [77] over a distance of 100 m [77]. The total cost for this process was 0.1004 [77].

Result	Value
result, days	30
result, count	1,680
result, chains	152
result, distance m	100
result, elapsed ms	39
result, pairs linked	1,357
billing, cost	0.1004
billing, list price	0.1004
billing, upstream cost	0



Figure 27. Near repeat: incidents [78]

What the map shows. The map draws Repeat and near repeat classification: Incidents by nr_class in 4 classes: Originator, Repeat, Near repeat, Isolated [78]. It draws 1,680 features [78]. It covers longitude -87.695 to -87.593 and latitude 41.85 to 41.907, at about 1:35,233 [78].

Findings

Evidenced: Near repeat on Incidents: Repeat and near repeat classification: 1 layer saved: Repeat and near repeat classification: Incidents (1680 features) [12][77].

Evidenced: It reported result, days 30; result, count 1,680; result, chains 152; result, distance m 100; result, elapsed ms 39; result, pairs linked 1,357 [77].

Tool gp_near_repeat; parameters {"days": 30, "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Incidents (36ad5f7c)"}, "distance_m": 100.0, "time_field": "reported_at"}

What follows from the results

Hot cells inside each cluster of licensed premises, from Hot spot analysis: Incidents and Find point clusters: cluster hulls: 1 of 3 clusters hold hot spot cells; cluster 0 holds the most (53) [79][73][36]. Change beside the counts per patrol beat, from Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) and Summarize within: Patrol beats: the busiest area, Market West Beat (332 in all), changed by +9 [87][7][50]. Change of incidents where density is high, from Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) and Calculate density: Street light outages: the largest rise (+9, Market West Beat) is where density averages 58.82 per square kilometer [92][7][70]. Hot cells of CCTV cameras per patrol beat, from Hot spot analysis: CCTV cameras: 9 of 16 areas hold hot spot cells; Southgate Beat holds the most (5) [97][22]. Nearest police station to each cluster of licensed premises, from Find point clusters: cluster hulls: the 3 clusters lie 836 to 972 m from the nearest facility (Central District Station and others) [103][36]. Dense areas of street light outages, from Calculate density: Street light outages: the densest of five classes joins 170 cells into one area [109][70]. Change of street light outages per patrol beat, from Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09): Parkview Beat rose the most (+2) and Market West Beat fell the most (-7) [112][9].

Findings

Evidenced: Hot cells inside each cluster of licensed premises, from Hot spot analysis: Incidents and Find point clusters: cluster hulls: 1 of 3 clusters hold hot spot cells; cluster 0 holds the most (53) [79][73][36].

Evidenced: Change beside the counts per patrol beat, from Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) and Summarize within: Patrol beats: the busiest area, Market West Beat (332 in all), changed by +9 [87][7][50].

Evidenced: Change of incidents where density is high, from Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) and Calculate density: Street light outages: the largest rise (+9, Market West Beat) is where density averages 58.82 per square kilometer [92][7][70].

Evidenced: Hot cells of CCTV cameras per patrol beat, from Hot spot analysis: CCTV cameras: 9 of 16 areas hold hot spot cells; Southgate Beat holds the most (5) [97][22].

Evidenced: Nearest police station to each cluster of licensed premises, from Find point clusters: cluster hulls: the 3 clusters lie 836 to 972 m from the nearest facility (Central District Station and others) [103][36].

Evidenced: Dense areas of street light outages, from Calculate density: Street light outages: the densest of five classes joins 170 cells into one area [109][70].

Evidenced: Change of street light outages per patrol beat, from Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09): Parkview Beat rose the most (+2) and Market West Beat fell the most (-7) [112][9].

Hot cells inside each cluster of licensed premises

What this analysis is. Summarize within: Count and aggregate the features inside each polygon (or bin), proportionally for lines and polygons [44]. In ArcGIS it is Summarize Within or Aggregate Points; in QGIS, native:countpointsinpolygon or native:sumlinelengths [44].

Why it was run on this data. Count CCTV cameras inside each feature of Patrol beats by ptz; the counts map as a choropleth (natural breaks, sequential colors) [45].

What it found. The `gp\_summarize\_within` analysis saved one layer called Hot cells inside each cluster of licensed premises with 3 features [79].

Result	Value
result, count	3
result, elapsed ms	6
billing, cost	0.0683
billing, list price	0.0683
billing, upstream cost	0

Hot cells inside each cluster of licensed premises



Figure 28. Hot cells inside each cluster of licensed premises [83]

What the map shows. The map draws Hot cells inside each cluster of licensed premises by count in 2 classes: 2 to 5, 5 to 86 [83]. The map draws Patrol beats with one symbol [83]. It draws 19 features [83]. It covers longitude -87.667 to -87.631 and latitude 41.875 to 41.896, at about 1:12,455 [83].

Cluster sizes

3 clusters over 3 features

cluster	features	share
0	1	33.3%
1	1	33.3%
2	1	33.3%

Source: Hot cells inside each cluster of licensed premises (3 features).

Figure 29. Hot cells inside each cluster of licensed premises [84]. Source: Hot cells inside each cluster of licensed premises (3 features). The data is in the appendix.

Findings

Evidenced: Summarize within on Hot spot analysis: Incidents, Find point clusters: cluster hulls produced Hot cells inside each cluster of licensed premises (3 features) [79][80][81][82].

Evidenced: It reported result, count 3; result, elapsed ms 6; billing, cost 0.0683; billing, list price 0.0683; billing, upstream cost 0 [79].

Evidenced: The chart Hot cells inside each cluster of licensed premises is drawn from 3 rows [84].

Tool gp_summarize_within; parameters {"project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Hot spot analysis: Incidents (8382f930)", "group_by": "gi_bin", "polygons": {"layer": "Find point clusters: cluster hulls (4dfef6fb)", "output_name": "Hot cells inside each cluster of licensed premises"}}

Change beside the counts per patrol beat

What this analysis is. Spatial join: Attach attributes (or aggregates) of matching features from another layer, by location, distance, time and attributes [85]. In ArcGIS it is Join Features or Spatial Join; in QGIS, native:joinattributesbylocation or native:joinbylocationsummary [85].

Why it was run on this data. It was run toward the goal "Describe the project Sample: Public safety, Chicago: run the analyses that tell the most about its data, draw every result, and write a cited report" [86].

What it found. Spatial join on Summarize within: Patrol beats, Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) produced Change beside the counts per patrol beat (16 features) [8][87][88][89]. It reported result, count 16; result, elapsed ms 1; billing, cost 0.01066; billing, list price 0.01066; billing, upstream cost 0 [87]. The chart Change beside the counts per patrol beat is drawn from 5 rows [91].

Result	Value
result, count	16
result, elapsed ms	1
billing, cost	0.01066
billing, list price	0.01066
billing, upstream cost	0

Change beside the counts per patrol beat

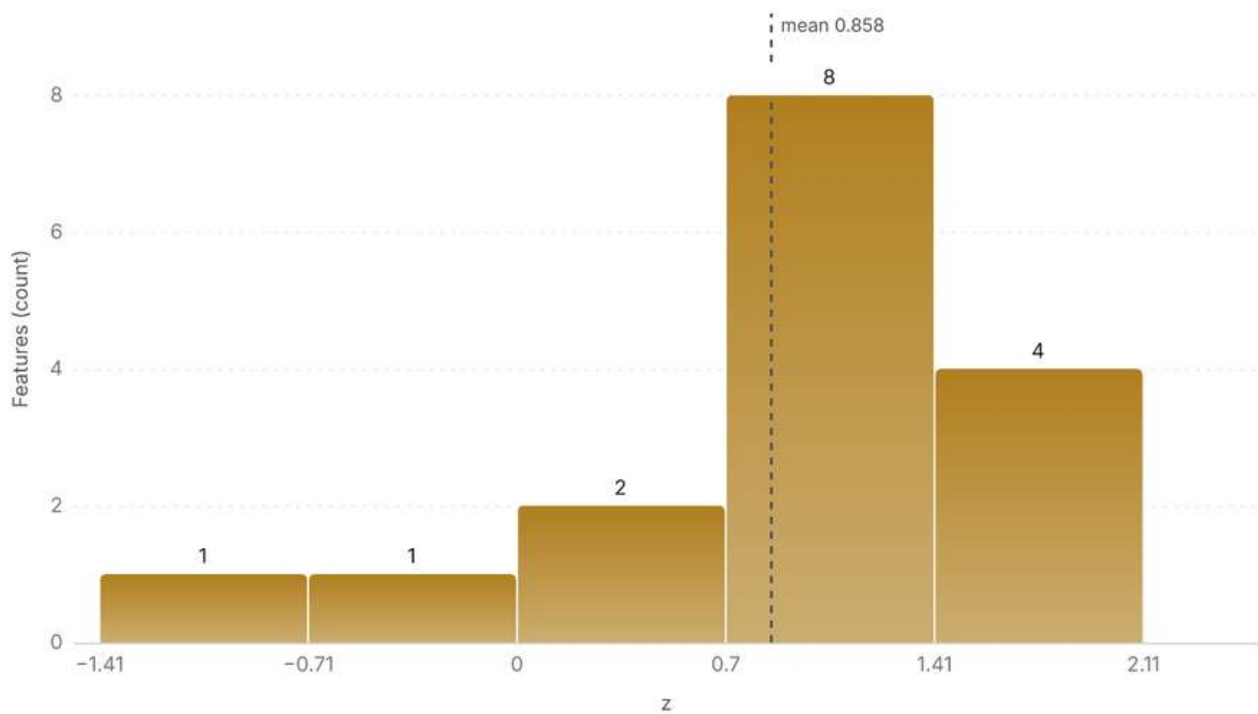


Figure 30. Change beside the counts per patrol beat [90]

What the map shows. The map draws Change beside the counts per patrol beat by count in 5 classes: 18 to 53, 53 to 117, 117 to 154, 154 to 304, 304 to 332 [90]. It draws 16 features [90]. It covers longitude -87.694 to -87.594 and latitude 41.85 to 41.907, at about 1:34,270 [90].

Distribution of z

16 values in 5 bins



Source: Change beside the counts per patrol beat (16 features).

Figure 31. Change beside the counts per patrol beat [91]. Source: Change beside the counts per patrol beat (16 features). The data is in the appendix.

Findings

Evidenced: Spatial join on Summarize within: Patrol beats, Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) produced Change beside the counts per patrol beat (16 features) [8][87][88][89].

Evidenced: It reported result, count 16; result, elapsed ms 1; billing, cost 0.01066; billing, list price 0.01066; billing, upstream cost 0 [87].

Evidenced: The chart Change beside the counts per patrol beat is drawn from 5 rows [91].

Tool gp_spatial_join; parameters {"join": {"layer": "Summarize within: Patrol beats (31bedf68)", "fields": ["count"], "target": {"layer": "Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) (1e0726ac)", "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "predicate": "largest_overlap", "output_name": "Change beside the counts per patrol beat"}}

Change of incidents where density is high

What this analysis is. Spatial join: Attach attributes (or aggregates) of matching features from another layer, by location, distance, time and attributes [85]. In ArcGIS it is Join Features or Spatial Join; in QGIS, native:joinattributesbylocation or native:joinbylocationsummary [85].

Why it was run on this data. It was run toward the goal "Describe the project Sample: Public safety, Chicago: run the analyses that tell the most about its data, draw every result, and write a cited report" [86].

What it found. The spatial join utilized the Period change: Incidents data [8] and calculated density data from Street light outages [93].

Result	Value
result, count	16
result, elapsed ms	1
billing, cost	0.0273
billing, list price	0.0273

Result	Value
billing, upstream cost	0

Change of incidents where density is high

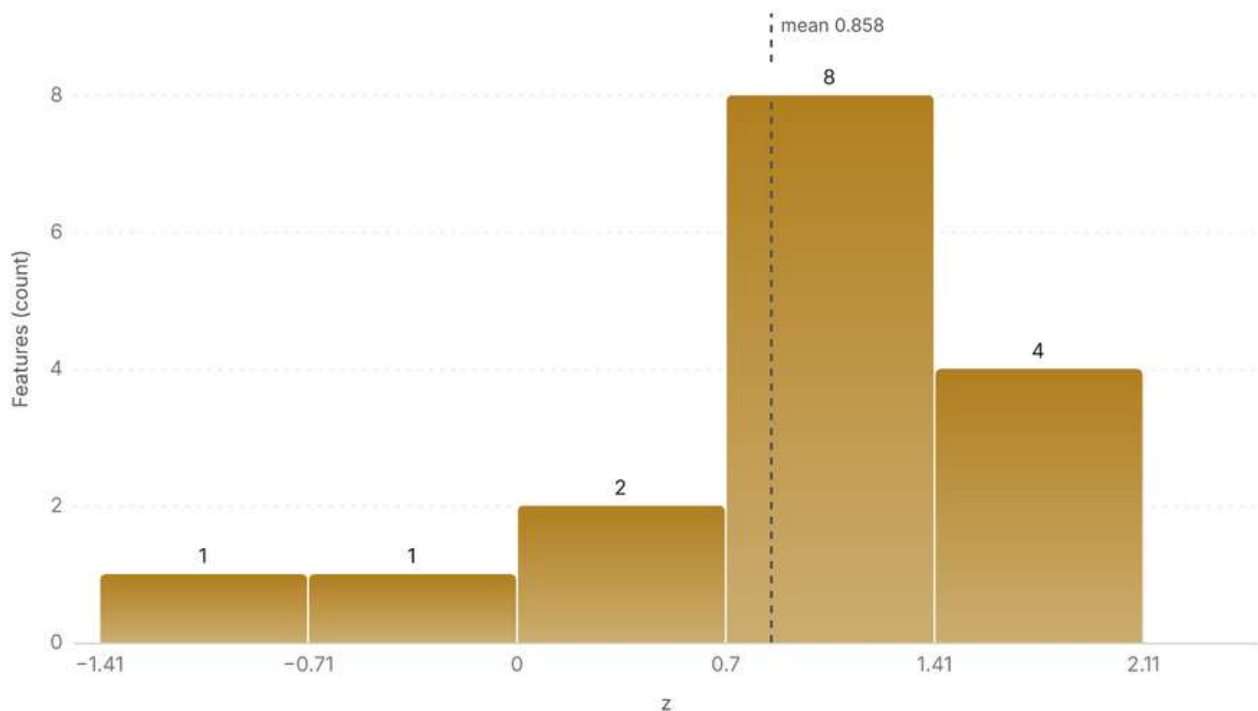


Figure 32. Change of incidents where density is high [95]

What the map shows. The map draws Change of incidents where density is high by join_count in 5 classes: 38 to 46, 46 to 57, 57 to 75, 75 to 90, 90 to 94 [95]. It draws 16 features [95]. It covers longitude -87.694 to -87.594 and latitude 41.85 to 41.907, at about 1:34,270 [95].

Distribution of z

16 values in 5 bins



Source: Change of incidents where density is high (16 features).

Figure 33. Change of incidents where density is high [96]. Source: Change of incidents where density is high (16 features). The data is in the appendix.

Findings

Evidenced: Spatial join on Calculate density: Street light outages, Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) produced Change of incidents where density is high (16 features) [8][92][93][94].

Evidenced: It reported result, count 16; result, elapsed ms 1; billing, cost 0.0273; billing, list price 0.0273; billing, upstream cost 0 [92].

Evidenced: The chart Change of incidents where density is high is drawn from 5 rows [96].

Tool gp_spatial_join; parameters {"join": {"layer": "Calculate density: Street light outages (22316e02)", "stats": [{"agg": "mean", "field": "density_per_km2"}], "target": {"layer": "Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) (1e0726ac)", "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "predicate": "intersects", "output_name": "Change of incidents where density is high"}}

Hot cells of CCTV cameras per patrol beat

What this analysis is. Summarize within: Count and aggregate the features inside each polygon (or bin), proportionally for lines and polygons [44]. In ArcGIS it is Summarize Within or Aggregate Points; in QGIS, native:countpointsinpolygon or native:sumlinelengths [44].

Why it was run on this data. Count CCTV cameras inside each feature of Patrol beats by ptz; the counts map as a choropleth (natural breaks, sequential colors) [45].

What it found. Summarize within on Hot spot analysis: CCTV cameras, Patrol beats produced Hot cells of CCTV cameras per patrol beat (16 features) [14][97][98][99]. It reported result, count 16; result, elapsed ms 2; billing, cost 0.01104; billing, list price 0.01104; billing, upstream cost 0 [97]. The chart Hot cells of CCTV cameras per patrol beat is drawn from 5 rows [101].

Result	Value
result, count	16
result, elapsed ms	2

Result	Value
billing, cost	0.01104
billing, list price	0.01104
billing, upstream cost	0

Hot cells of CCTV cameras per patrol beat

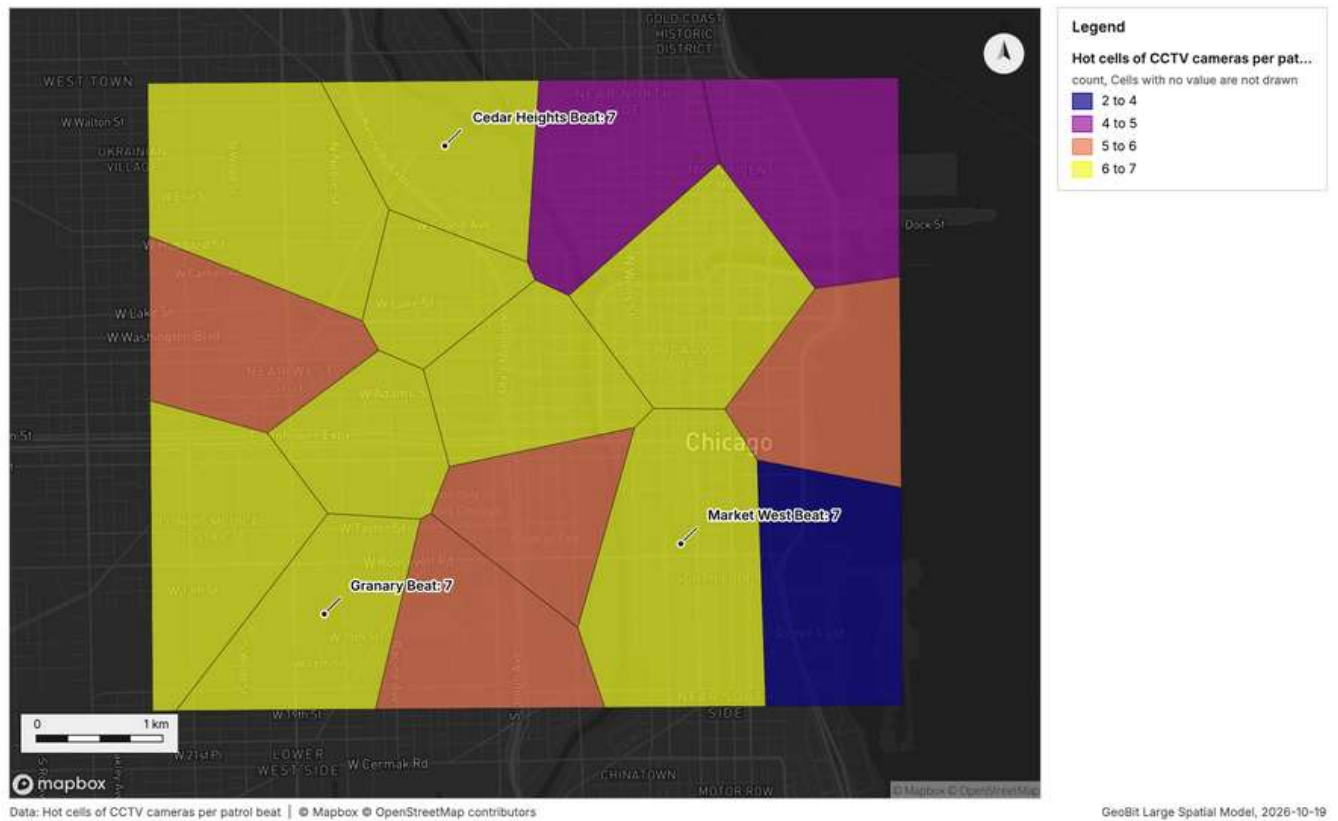
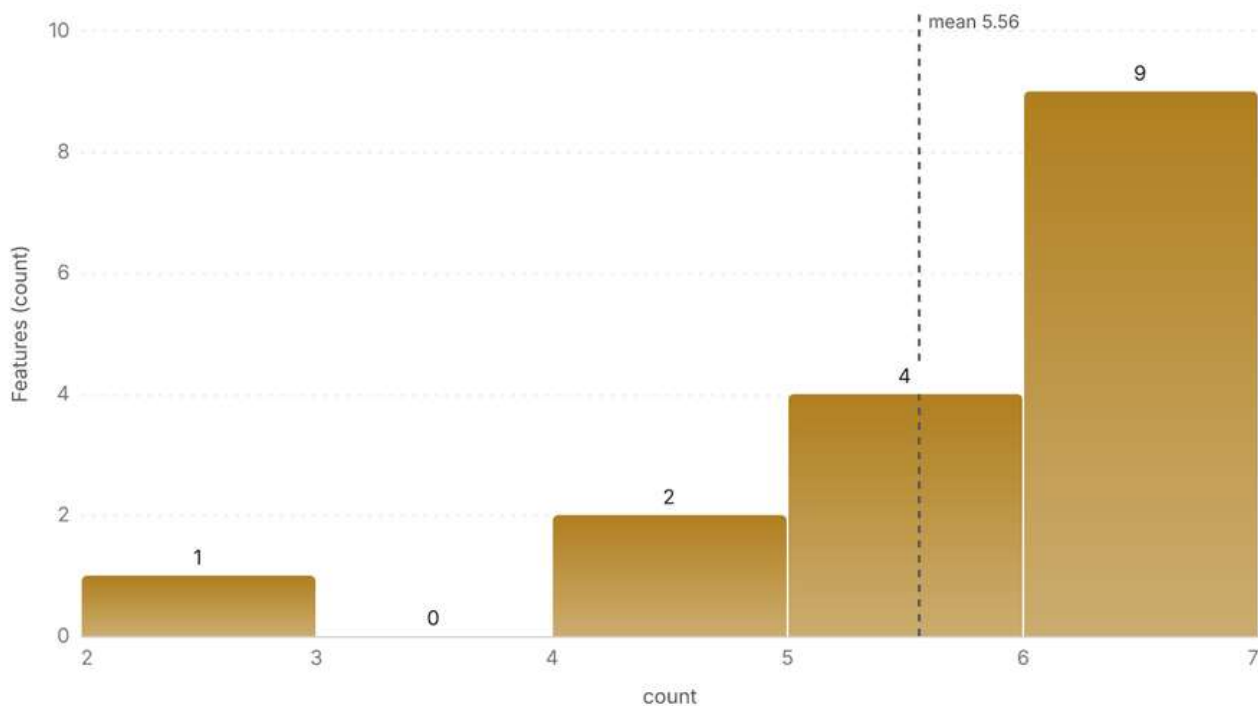


Figure 34. Hot cells of CCTV cameras per patrol beat [100]

What the map shows. The map draws Hot cells of CCTV cameras per patrol beat by count in 4 classes: 2 to 4, 4 to 5, 5 to 6, 6 to 7 [100]. It draws 16 features [100]. It covers longitude -87.694 to -87.594 and latitude 41.85 to 41.907, at about 1:34,270 [100].

Distribution of count

16 values in 5 bins



Source: Hot cells of CCTV cameras per patrol beat (16 features).

Figure 35. Hot cells of CCTV cameras per patrol beat [101]. Source: Hot cells of CCTV cameras per patrol beat (16 features). The data is in the appendix.

Findings

Evidenced: Summarize within on Hot spot analysis: CCTV cameras, Patrol beats produced Hot cells of CCTV cameras per patrol beat (16 features) [14][97][98][99].

Evidenced: It reported result, count 16; result, elapsed ms 2; billing, cost 0.01104; billing, list price 0.01104; billing, upstream cost 0 [97].

Evidenced: The chart Hot cells of CCTV cameras per patrol beat is drawn from 5 rows [101].

Tool gp_summarize_within; parameters {"project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Hot spot analysis: CCTV cameras (2cc32b98)"}, "group_by": "gi_bin", "polygons": {"layer": "Patrol beats (8c67e28f)"}, "output_name": "Hot cells of CCTV cameras per patrol beat"}

Nearest police station to each cluster of licensed premises

What this analysis is. Find nearest: The k nearest features for each input, with geodesic distance and bearing [102]. In ArcGIS it is Find Nearest or Near; in QGIS, native:joinbynearest or native:nearestneighbouranalysis [102].

Why it was run on this data. It was run toward the goal "Describe the project Sample: Public safety, Chicago: run the analyses that tell the most about its data, draw every result, and write a cited report" [86].

What it found. Find nearest on Police stations, Find point clusters: cluster hulls produced Nearest police station to each cluster of licensed premises (3 features) [19][81][103][104]. It reported result, count 3; result, elapsed ms 3; billing, cost 0.01012; billing, list price 0.01012; billing, upstream cost 0 [103]. The chart Nearest police station to each cluster of licensed premises is drawn from 3 rows [106].

Result	Value
result, count	3
result, elapsed ms	3
billing, cost	0.01012

Result	Value
billing, list price	0.01012
billing, upstream cost	0

Nearest police station to each cluster of licensed premises



Figure 36. Nearest police station to each cluster of licensed premises [105]

What the map shows. The map draws Nearest police station to each cluster of licensed premises by distance_m in 2 classes: 836 to 881, 881 to 972 [105]. The map draws Patrol beats with one symbol [105]. It draws 19 features [105]. It covers longitude -87.667 to -87.631 and latitude 41.875 to 41.896, at about 1:12,455 [105].

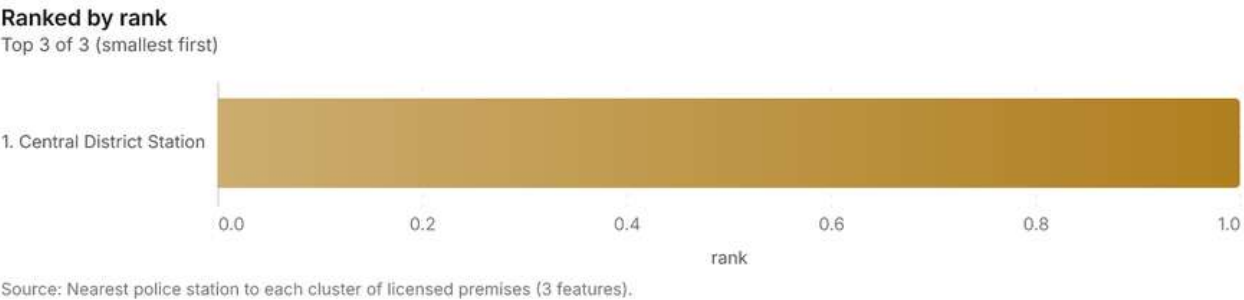


Figure 37. Nearest police station to each cluster of licensed premises [106]. Source: Nearest police station to each cluster of licensed premises (3 features). The data is in the appendix.

Findings

Evidenced: Find nearest on Police stations, Find point clusters: cluster hulls produced Nearest police station to each cluster of licensed premises (3 features) [19][81][103][104].

Evidenced: It reported result, count 3; result, elapsed ms 3; billing, cost 0.01012; billing, list price 0.01012; billing, upstream cost 0 [103].

Evidenced: The chart Nearest police station to each cluster of licensed premises is drawn from 3 rows [106].

Tool gp_find_nearest; parameters {"k": 1, "to": {"layer": "Police stations (6b7fdf5e)"}, "from": {"layer": "Find point clusters: cluster hulls (4dfef6fb)"}, "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "output_name": "Nearest police station to each cluster of licensed premises"}

Dense areas of street light outages

What this analysis is. Pipeline: Run up to 20 GIS operations in one engine call; a step's params may use "\$id" (an earlier step's result) or "\$id.key", and layer references [107]. Every step's map outputs are saved as styled layers [107].

Why it was run on this data. Patrol beats holds population in 'population': CCTV cameras per 10,000 people in each feature compares features of different size; mapped as a choropleth (natural breaks, sequential colors) [108].

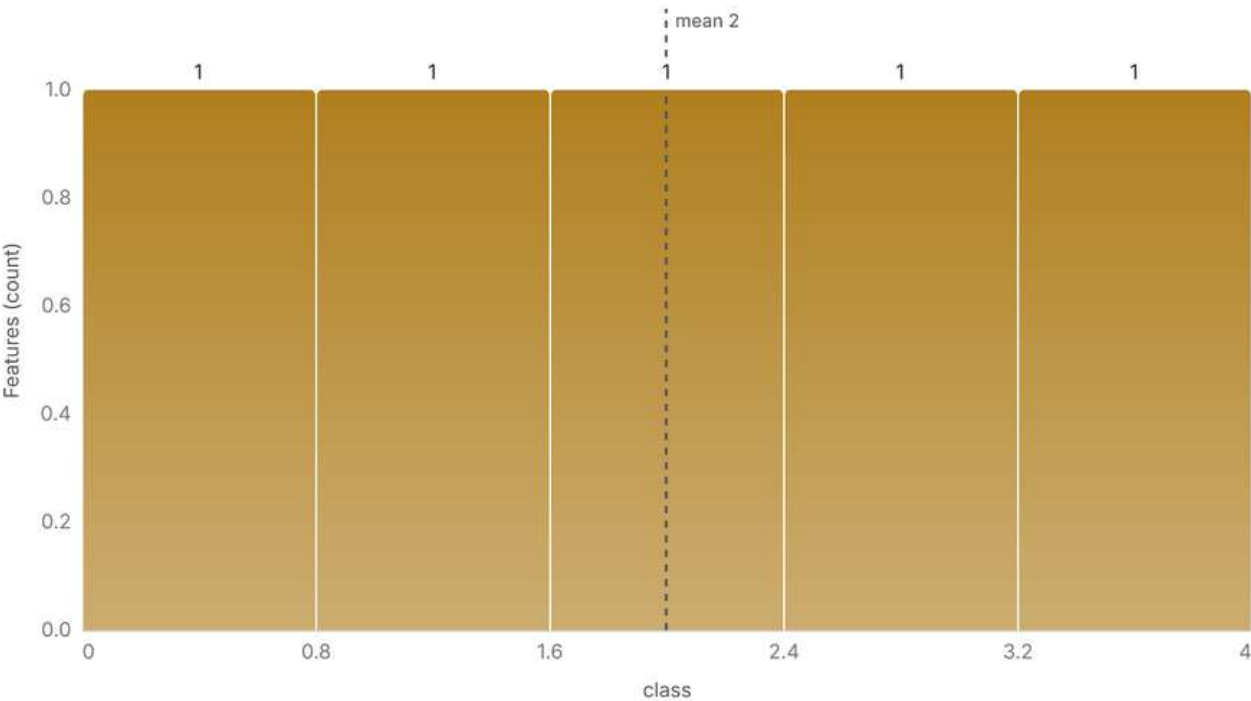
What it found. Pipeline on Calculate density: Street light outages produced Dense areas of street light outages (5 features) [93][109][110]. It reported result, count 5; result, elapsed ms 13; billing, cost 0.03697; billing, list price 0.03697; billing, upstream cost 0; list price 0.03697 [109]. The chart Dense areas of street light outages is drawn from 5 rows [111].

Result	Value
result, count	5
result, elapsed ms	13
billing, cost	0.03697
billing, list price	0.03697
billing, upstream cost	0
list price	0.03697

What the map shows. Drawn with calculate density on the map Density: street light outages [71].

Distribution of class

5 values in 5 bins



Source: Dense areas of street light outages (5 features).

Figure 38. Dense areas of street light outages [111]. Source: Dense areas of street light outages (5 features). The data is in the appendix.

Findings

Evidenced: Pipeline on Calculate density: Street light outages produced Dense areas of street light outages (5 features) [93][109][110].

Evidenced: It reported result, count 5; result, elapsed ms 13; billing, cost 0.03697; billing, list price 0.03697; billing, upstream cost 0; list price 0.03697 [109].

Evidenced: The chart Dense areas of street light outages is drawn from 5 rows [111].

Tool gp_pipeline; parameters {"save": "final", "steps": [{"id": "classes", "params": {"field": "density_per_km2", "method": "quantile", "classes": 5, "features": {"layer": "Calculate density: Street light outages (22316e02)"}, "operation": "classify_field"}, {"id": "areas", "params": {"by": ["class"], "features": "\$classes"}, "operation": "dissolve"}], "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "output_name": "Dense

Change of street light outages per patrol beat

What this analysis is. Summarize within: Count and aggregate the features inside each polygon (or bin), proportionally for lines and polygons [44]. In ArcGIS it is Summarize Within or Aggregate Points; in QGIS, native:countpointsinpolygon or native:sumlinelengths [44].

Why it was run on this data. Count CCTV cameras inside each feature of Patrol beats by ptz; the counts map as a choropleth (natural breaks, sequential colors) [45].

What it found. Summarize within on Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09), Patrol beats produced Change of street light outages per patrol beat (16 features) [10][14][112][113]. It reported result, count 16; result, elapsed ms 1; billing, cost 0.01048; billing, list price 0.01048; billing, upstream cost 0 [112]. The chart Change of street light outages per patrol beat is drawn from 5 rows [115].

Result	Value
result, count	16
result, elapsed ms	1
billing, cost	0.01048
billing, list price	0.01048
billing, upstream cost	0

Change of street light outages per patrol beat

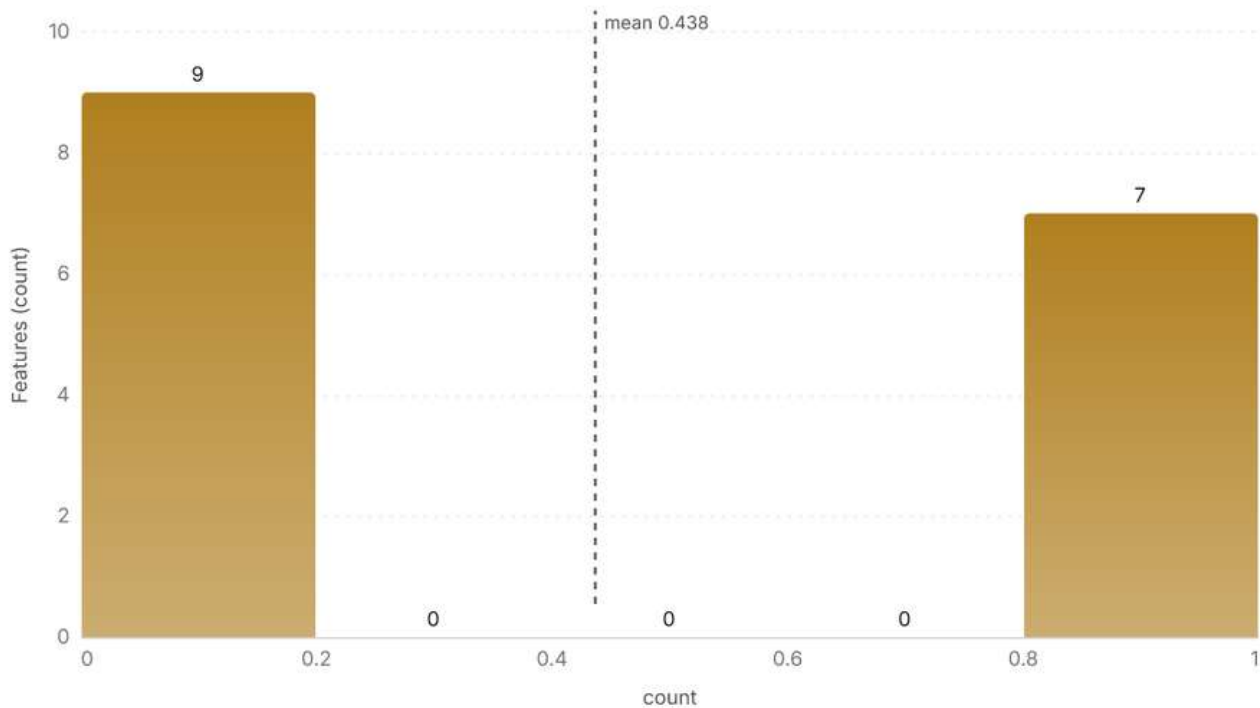


Figure 39. Change of street light outages per patrol beat [114]

What the map shows. The map draws Change of street light outages per patrol beat by sum_change in 4 classes: -7 to -3, -3 to -2, -2 to -1, -1 to 2 [114]. It draws 16 features [114]. It covers longitude -87.694 to -87.594 and latitude 41.85 to 41.907, at about 1:34,270 [114].

Distribution of count

16 values in 5 bins



Source: Change of street light outages per patrol beat (16 features).

Figure 40. Change of street light outages per patrol beat [115]. Source: Change of street light outages per patrol beat (16 features). The data is in the appendix.

Findings

Evidenced: Summarize within on Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09), Patrol beats produced Change of street light outages per patrol beat (16 features) [10][14][112][113].

Evidenced: It reported result, count 16; result, elapsed ms 1; billing, cost 0.01048; billing, list price 0.01048; billing, upstream cost 0 [112].

Evidenced: The chart Change of street light outages per patrol beat is drawn from 5 rows [115].

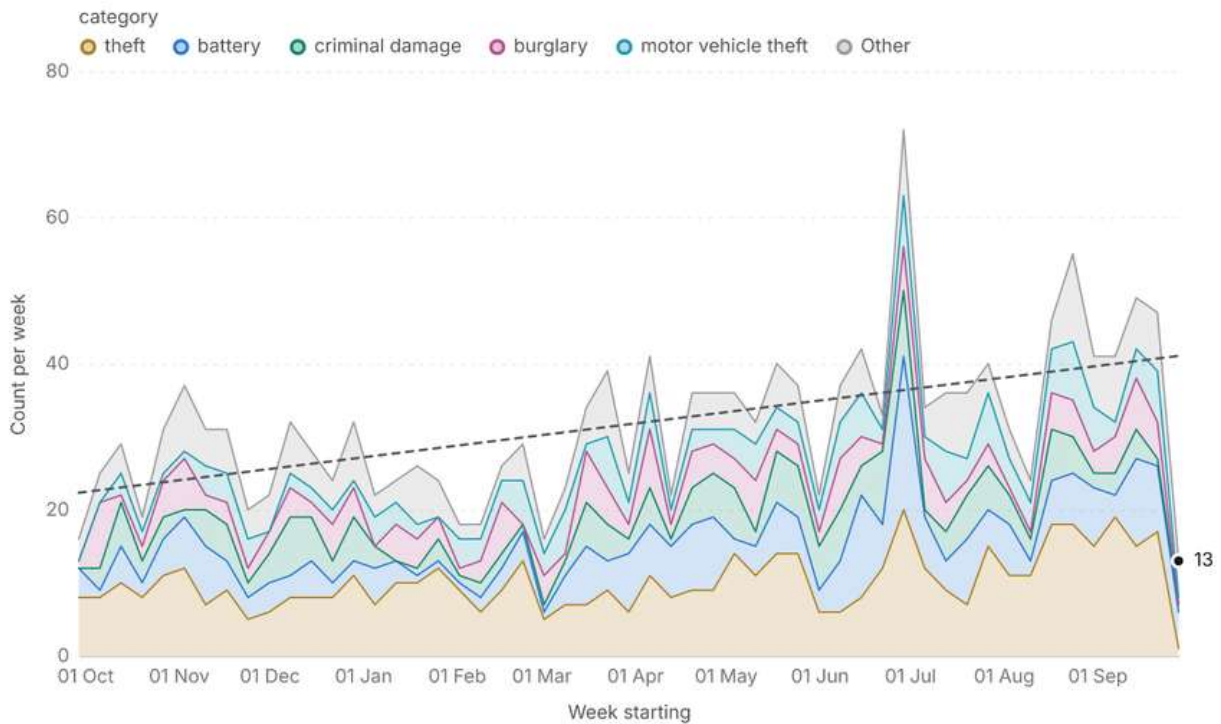
Tool gp_summarize_within; parameters {"stats": [{"agg": "sum", "field": "change"}], "project": "fe9df6b9-8a15-4264-946b-4b37b8dbb89d", "features": {"layer": "Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) (b942fd09)", "polygons": {"layer": "Patrol beats (8c67e28f)", "output_name": "Change of street light outages per patrol beat"}}

Maps and charts

The run also made 25 chart(s) [116][117][118][119][120][121][122][123][124][125][126][127][128][129][130][131][132][133][134][135][136][137][138][139][140].

Count per week by reported_at and category

Per week: 53 weeks from 2025-09-29 to 2026-09-28; trend +0.36 per week; first half 676, second half 979 (+44.8%)

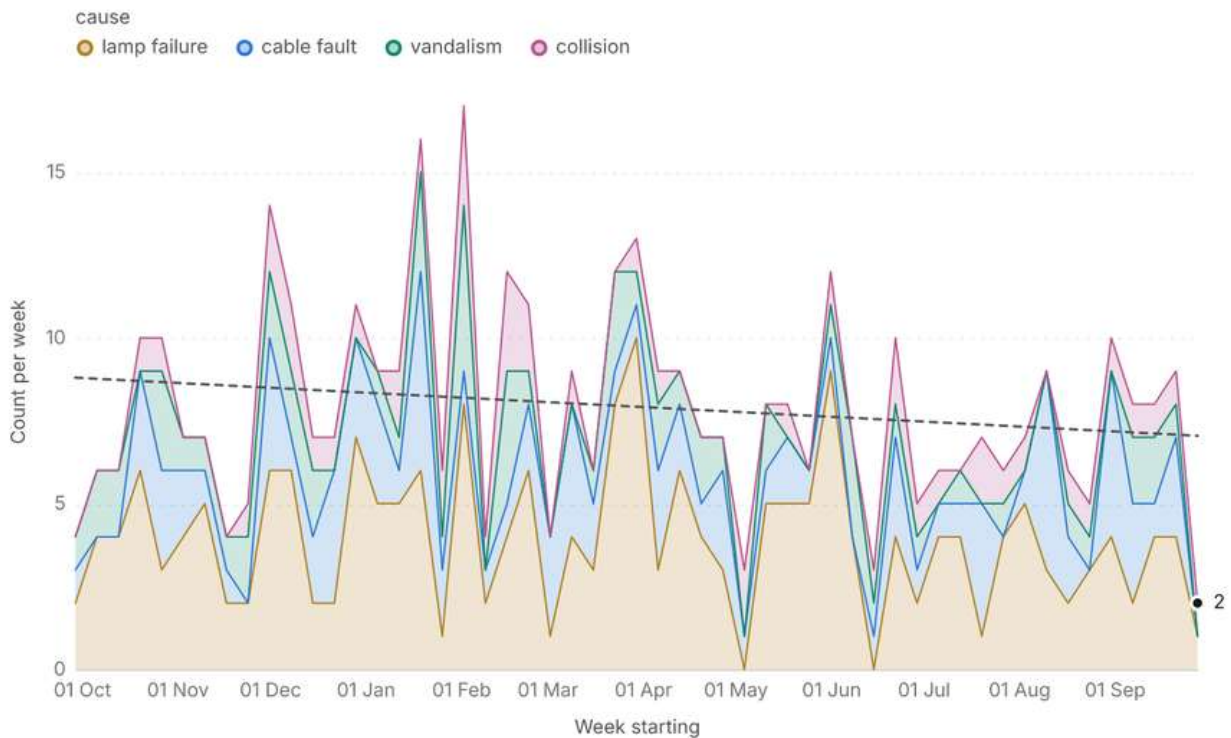


Per week, 2025-09-29 to 2026-09-28. Source: Incidents (1,680 features).

Figure 41. Incidents over time (reported_at) [116]. Per week, 2025-09-29 to 2026-09-28. Source: Incidents (1,680 features). The data is in the appendix.

Count per week by reported_at and cause

Per week: 53 weeks from 2025-09-29 to 2026-09-28; trend -0.0337 per week; first half 224, second half 183 (-18.3%)

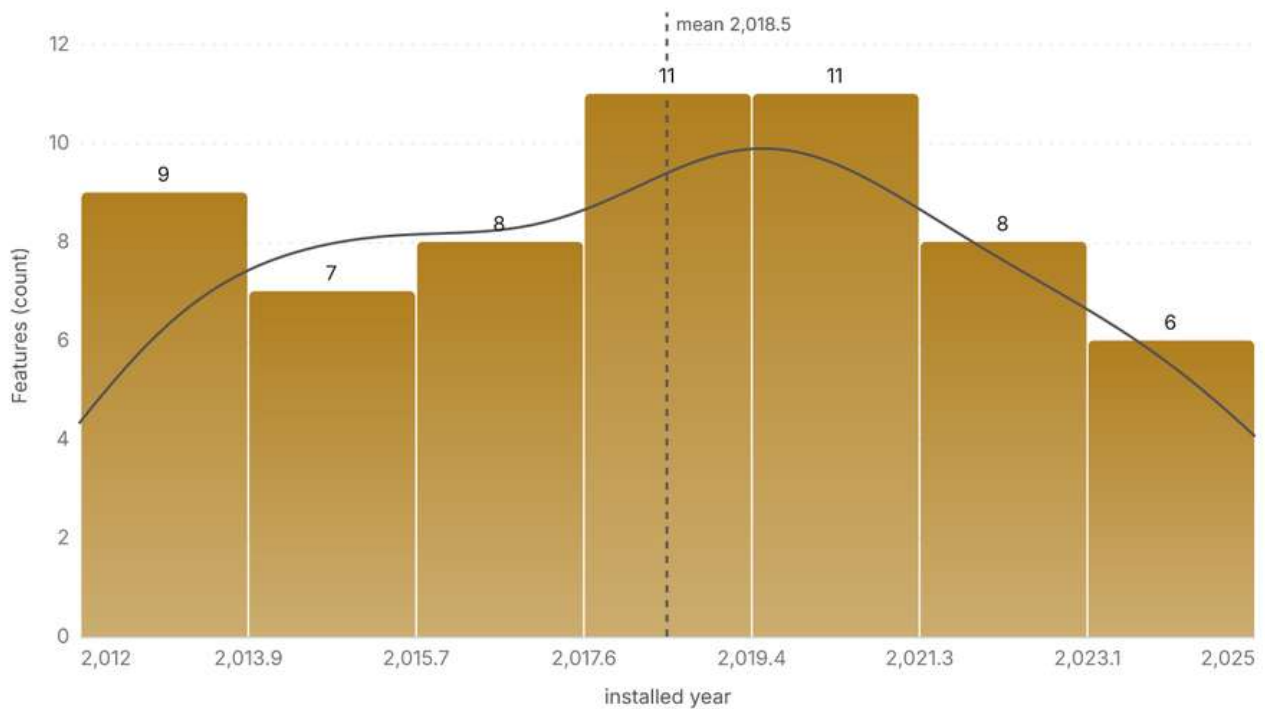


Per week, 2025-09-29 to 2026-09-28. Source: Street light outages (420 features).

Figure 42. Street light outages over time (reported_at) [117]. Per week, 2025-09-29 to 2026-09-28. Source: Street light outages (420 features). The data is in the appendix.

Distribution of installed_year

60 values in 7 bins

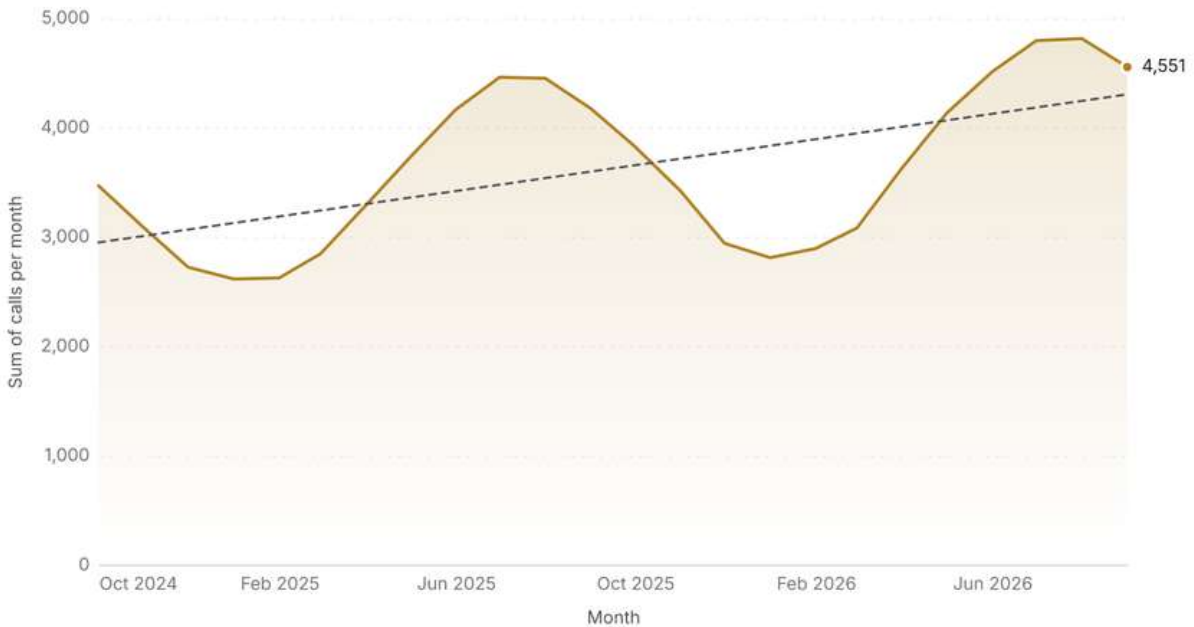


Source: CCTV cameras (60 features).

Figure 43. CCTV cameras over time (installed_year) [118]. Source: CCTV cameras (60 features). The data is in the appendix.

Sum of calls per month by month

Per month: 24 months from 2024-10-01 to 2026-09-01; trend +58.9 per month; first half 4.16e+04, second half 4.538e+04 (+9.1%)

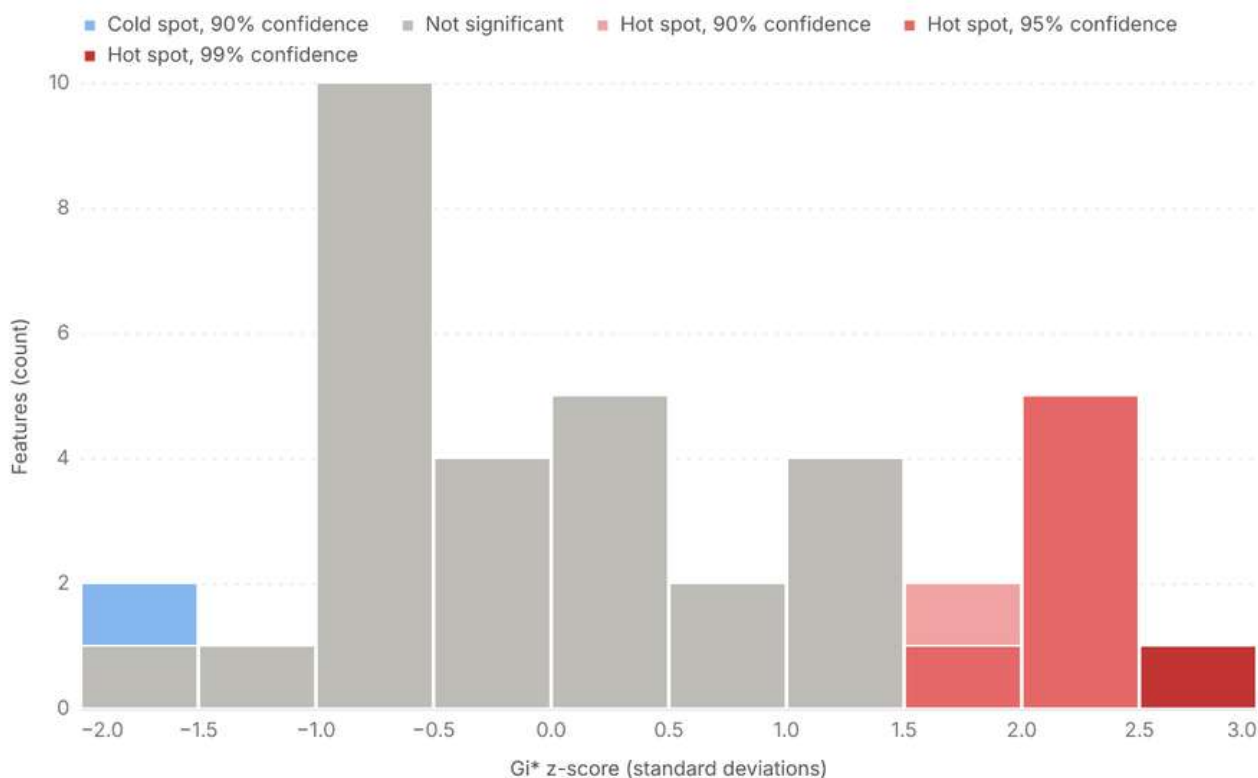


Per month, 2024-10-01 to 2026-09-01. Source: Calls for service by beat and month (384 features).

Figure 44. Calls for service by beat and month over time (month) [119]. Per month, 2024-10-01 to 2026-09-01. Source: Calls for service by beat and month (384 features). The data is in the appendix.

Gi* z-score distribution

36 features: 8 hot and 1 cold at 90% confidence or more

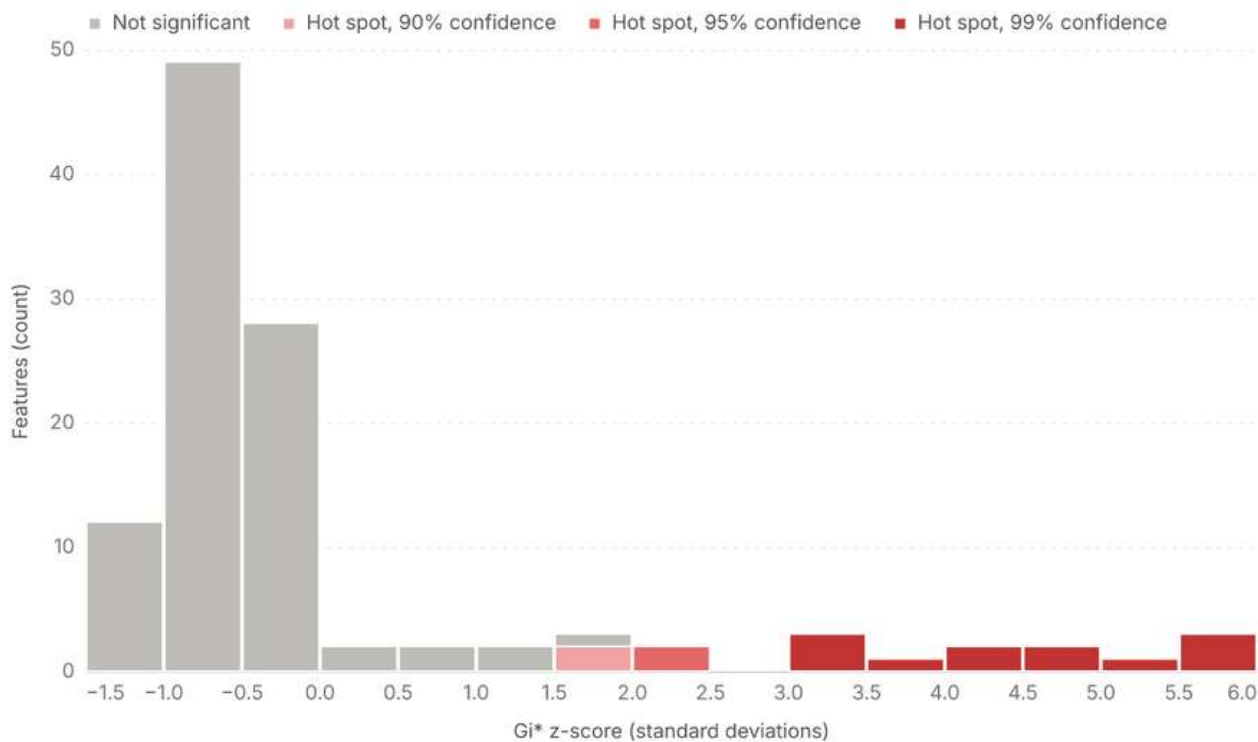


Source: Hot spot analysis: CCTV cameras (36 features).

Figure 45. Hot spot analysis: CCTV cameras [120]. Source: Hot spot analysis: CCTV cameras (36 features). The data is in the appendix.

Gi* z-score distribution

112 features: 16 hot and 0 cold at 90% confidence or more

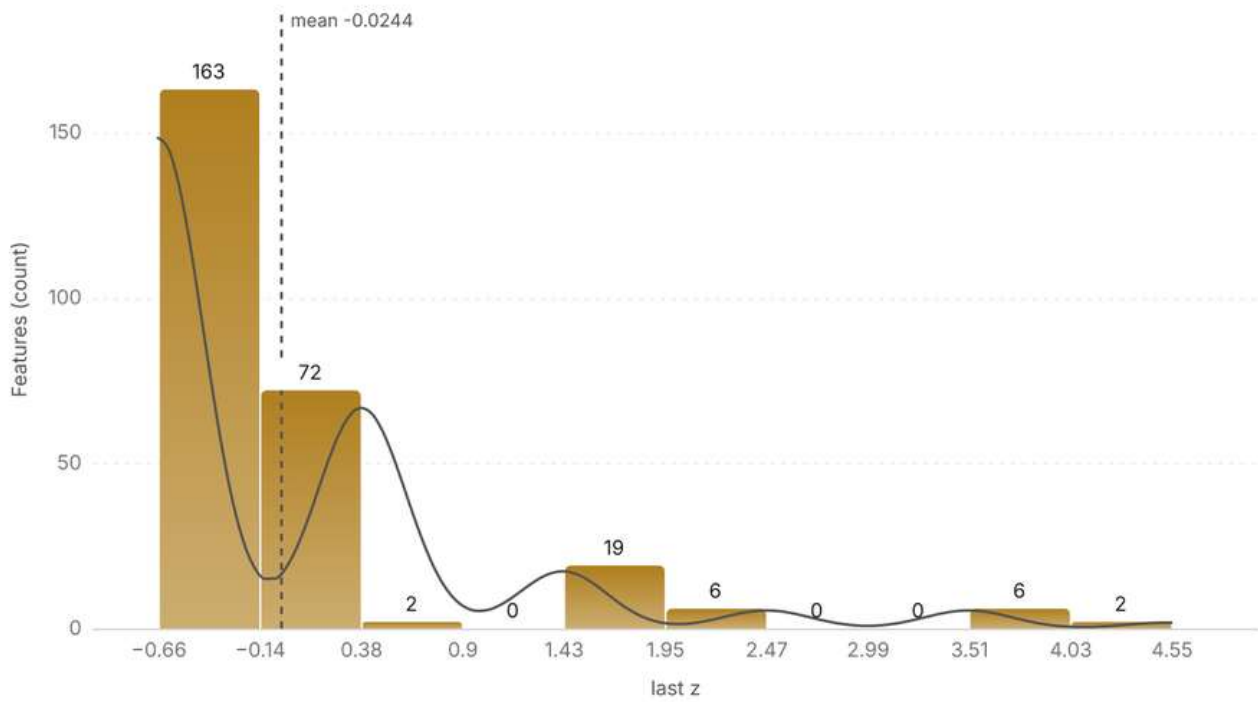


Source: Hot spot analysis: Licensed premises (112 features).

Figure 46. Hot spot analysis: Licensed premises [121]. Source: Hot spot analysis: Licensed premises (112 features). The data is in the appendix.

Distribution of last_z

270 values in 10 bins

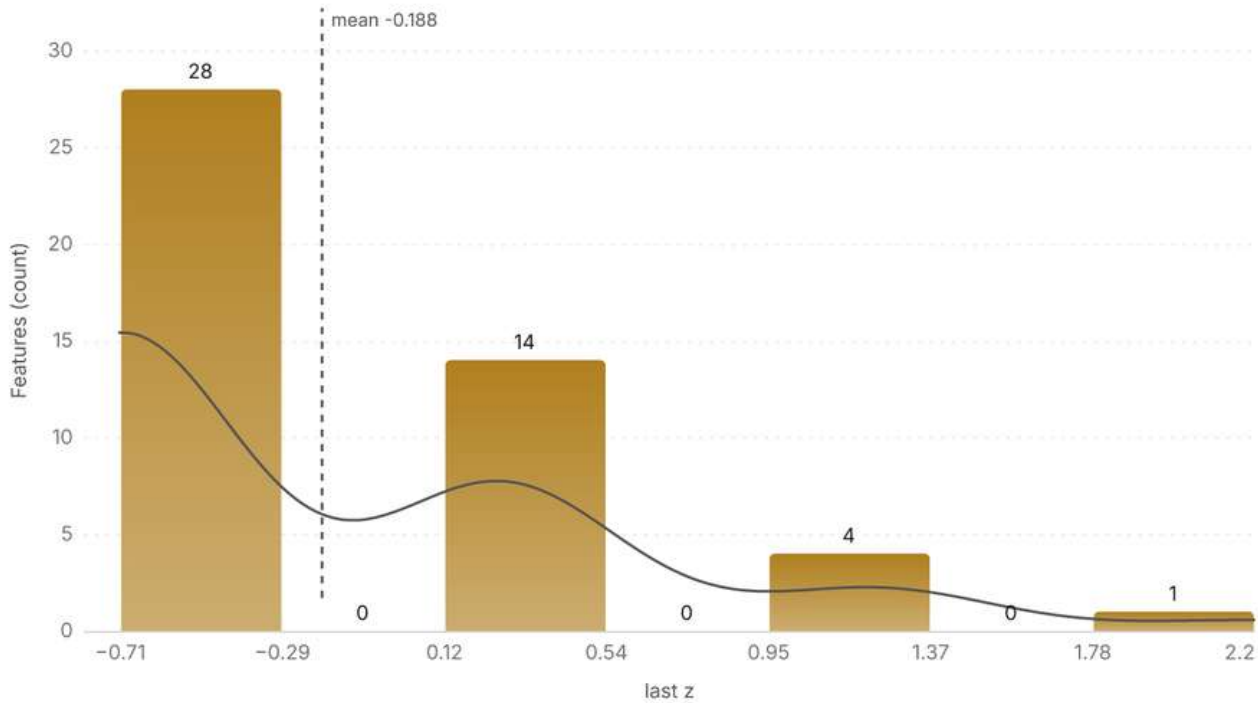


Source: Emerging hot spots: Incidents (270 features).

Figure 47. Emerging hot spots: Incidents [122]. Source: Emerging hot spots: Incidents (270 features). The data is in the appendix.

Distribution of last_z

47 values in 7 bins



Source: Emerging hot spots: Street light outages (47 features).

Figure 48. Emerging hot spots: Street light outages [123]. Source: Emerging hot spots: Street light outages (47 features). The data is in the appendix.

Cluster sizes

3 clusters over 120 features

cluster	features	share
Noise	61	50.8%
0	53	44.2%
1	3	2.5%
2	3	2.5%

Source: Find point clusters: Licensed premises (120 features).

Figure 49. Find point clusters: Licensed premises [124]. Source: Find point clusters: Licensed premises (120 features). The data is in the appendix.

Cluster sizes

3 clusters over 3 features

cluster	features	share
0	1	33.3%
1	1	33.3%
2	1	33.3%

Source: Find point clusters: cluster hulls (3 features).

Figure 50. Find point clusters: cluster hulls [125]. Source: Find point clusters: cluster hulls (3 features). The data is in the appendix.

Cluster sizes

3 clusters over 1,680 features

cluster	features	share
Noise	1,609	95.8%
0	30	1.8%
1	21	1.2%
2	20	1.2%

Period: 2025-10-01 to 2026-09-30 (reported_at). Source: Find point clusters: Incidents (1,680 features).

Figure 51. Find point clusters: Incidents [126]. Period: 2025-10-01 to 2026-09-30 (reported_at). Source: Find point clusters: Incidents (1,680 features). The data is in the appendix.

Cluster sizes

3 clusters over 3 features

cluster	features	share
0	1	33.3%
1	1	33.3%
2	1	33.3%

Source: Find point clusters: cluster hulls (3 features).

Figure 52. Find point clusters: cluster hulls [127]. Source: Find point clusters: cluster hulls (3 features). The data is in the appendix.

Cluster sizes

1 clusters over 420 features

cluster	features	share
Noise	410	97.6%
0	10	2.4%

Period: 2025-10-06 to 2026-10-20 (repaired_on). Source: Find point clusters: Street light outages (4...

Figure 53. Find point clusters: Street light outages [128]. Period: 2025-10-06 to 2026-10-20 (repaired_on). Source: Find point clusters: Street light outages (420 features). The data is in the appendix.

Cluster sizes

1 clusters over 1 features

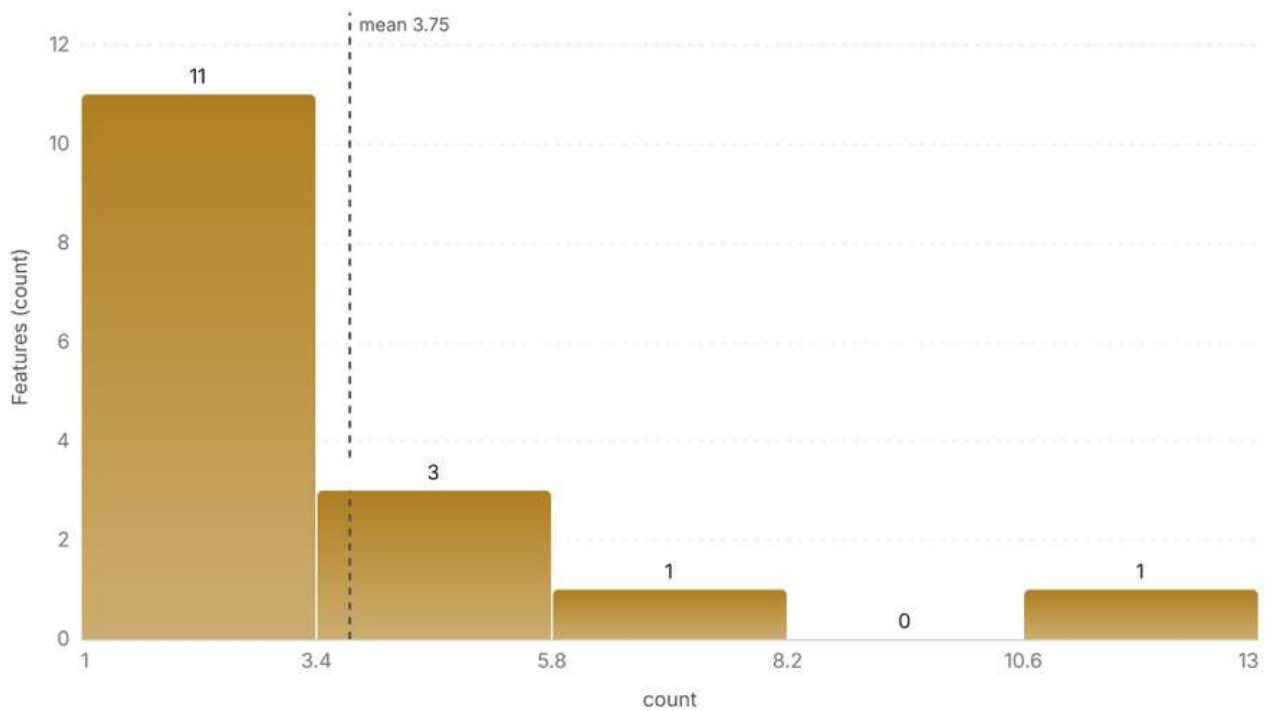
cluster	features	share
0	1	100.0%

Source: Find point clusters: cluster hulls (1 features).

Figure 54. Find point clusters: cluster hulls [129]. Source: Find point clusters: cluster hulls (1 features). The data is in the appendix.

Distribution of count

16 values in 5 bins

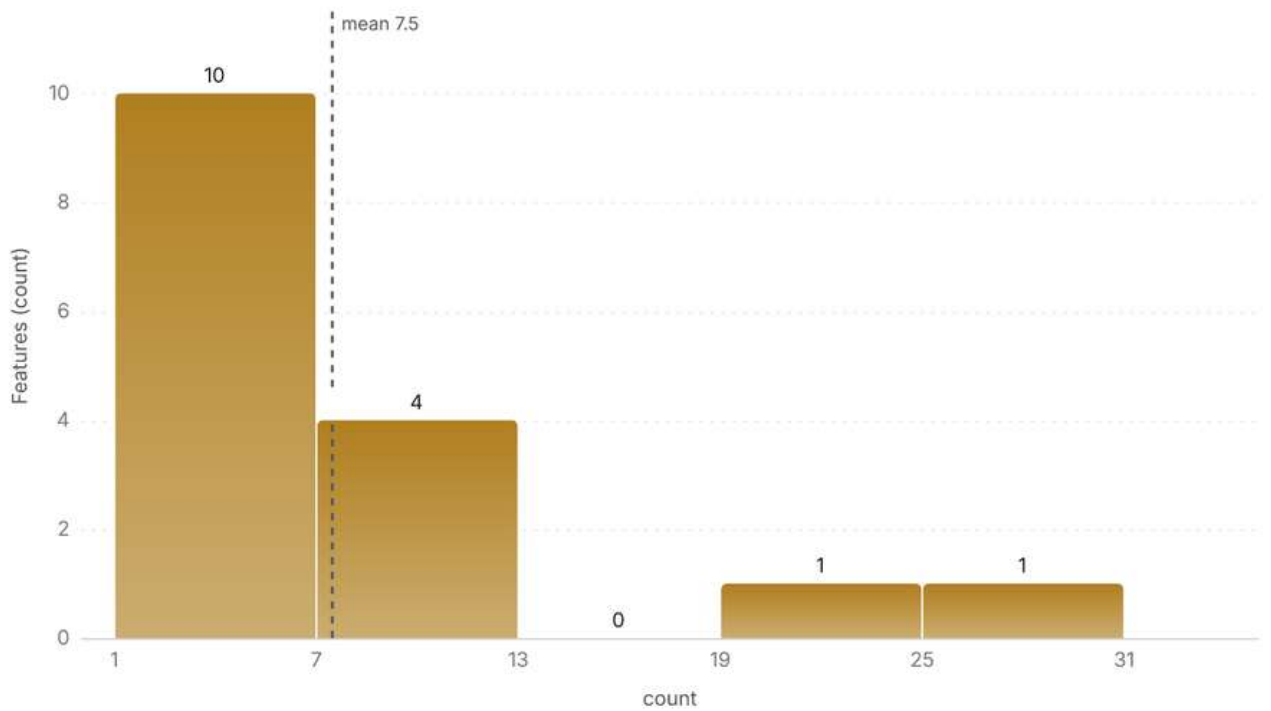


Source: Summarize within: Patrol beats (16 features).

Figure 55. Summarize within: Patrol beats [130]. Source: Summarize within: Patrol beats (16 features). The data is in the appendix.

Distribution of count

16 values in 5 bins

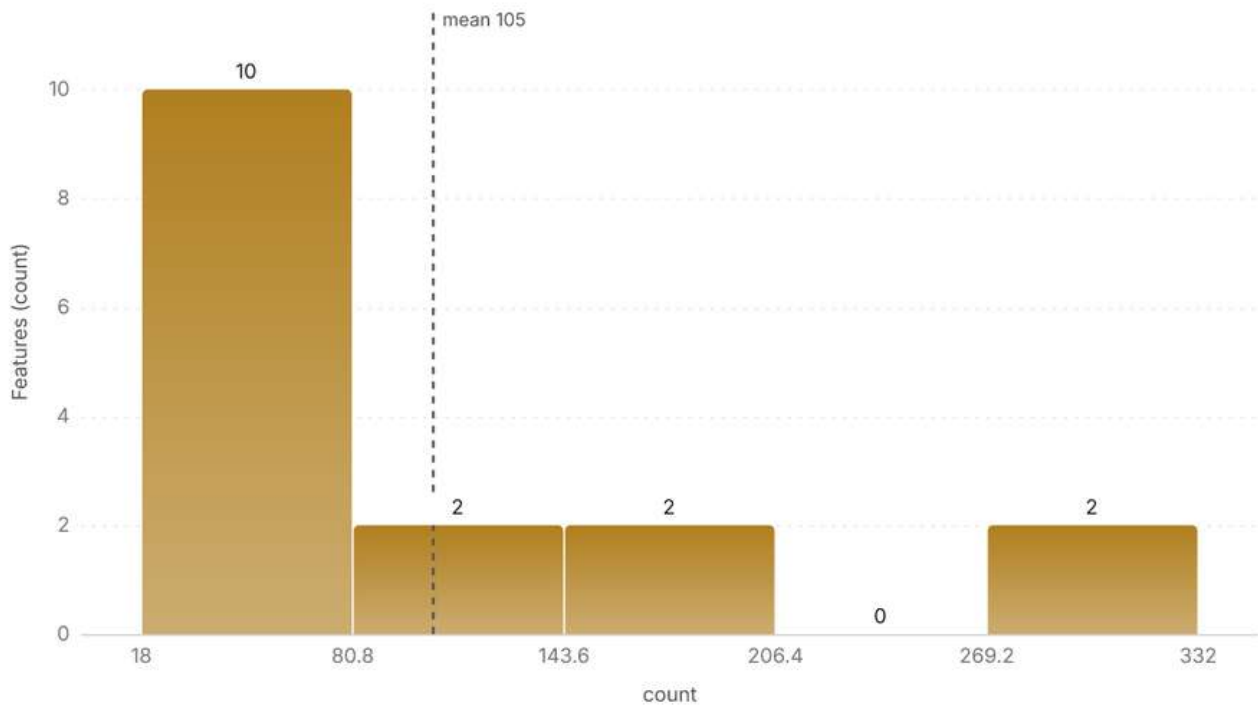


Source: Summarize within: Patrol beats (16 features).

Figure 56. Summarize within: Patrol beats [131]. Source: Summarize within: Patrol beats (16 features). The data is in the appendix.

Distribution of count

16 values in 5 bins

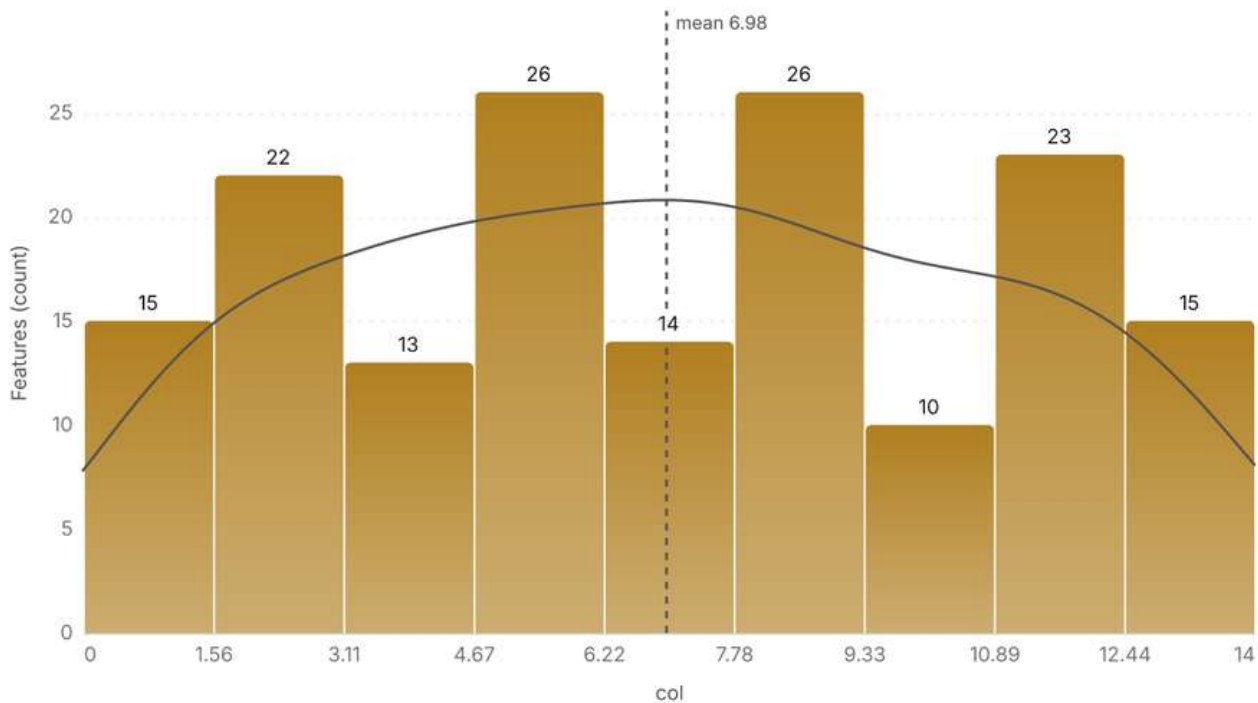


Source: Summarize within: Patrol beats (16 features).

Figure 57. Summarize within: Patrol beats [132]. Source: Summarize within: Patrol beats (16 features). The data is in the appendix.

Distribution of col

164 values in 9 bins

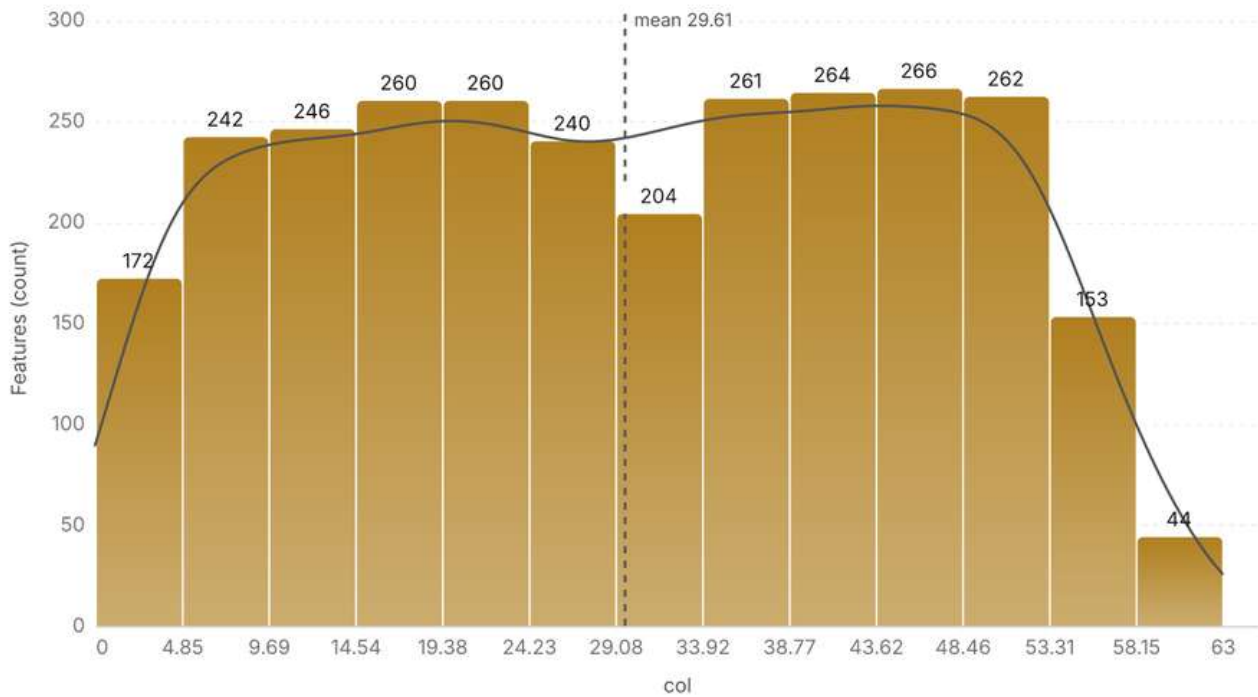


Source: Calculate density: Licensed premises (164 features).

Figure 58. Calculate density: Licensed premises [133]. Source: Calculate density: Licensed premises (164 features). The data is in the appendix.

Distribution of col

2,874 values in 13 bins

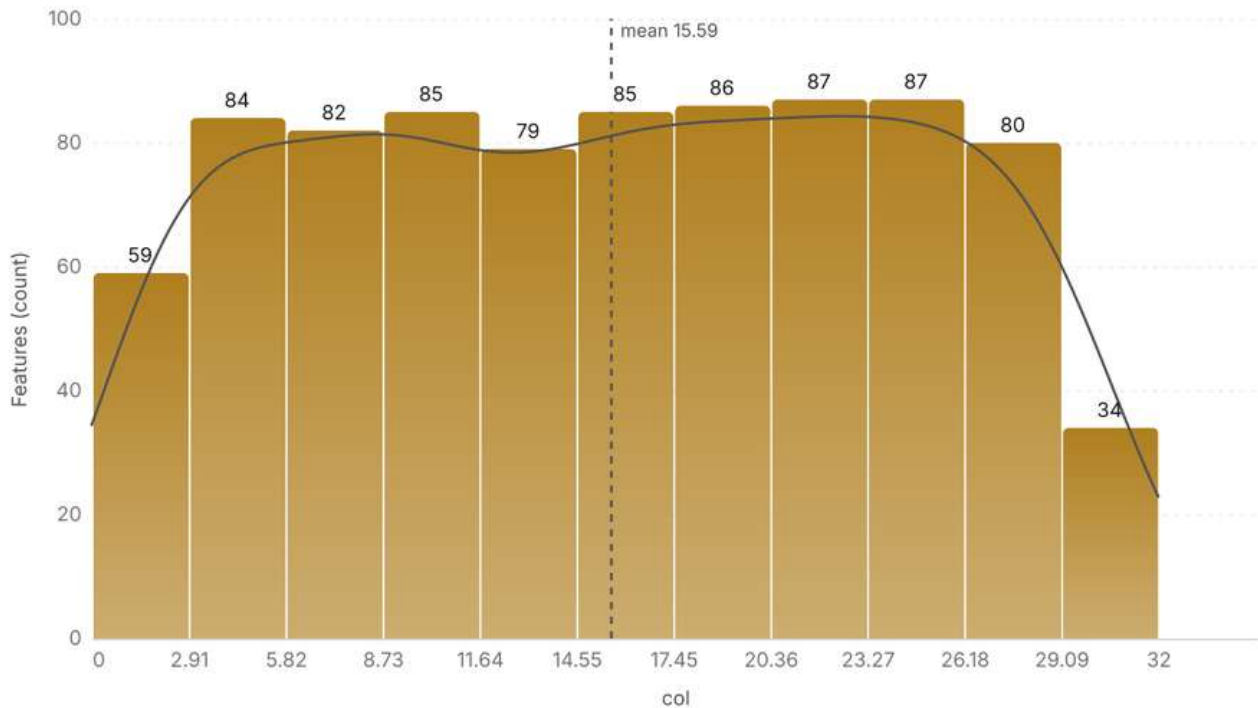


Source: Calculate density: Incidents (2,874 features).

Figure 59. Calculate density: Incidents [134]. Source: Calculate density: Incidents (2,874 features). The data is in the appendix.

Distribution of col

848 values in 11 bins



Source: Calculate density: Street light outages (848 features).

Figure 60. Calculate density: Street light outages [135]. Source: Calculate density: Street light outages (848 features). The data is in the appendix.

Gi* z-score distribution

2,912 features: 182 hot and 0 cold at 90% confidence or more

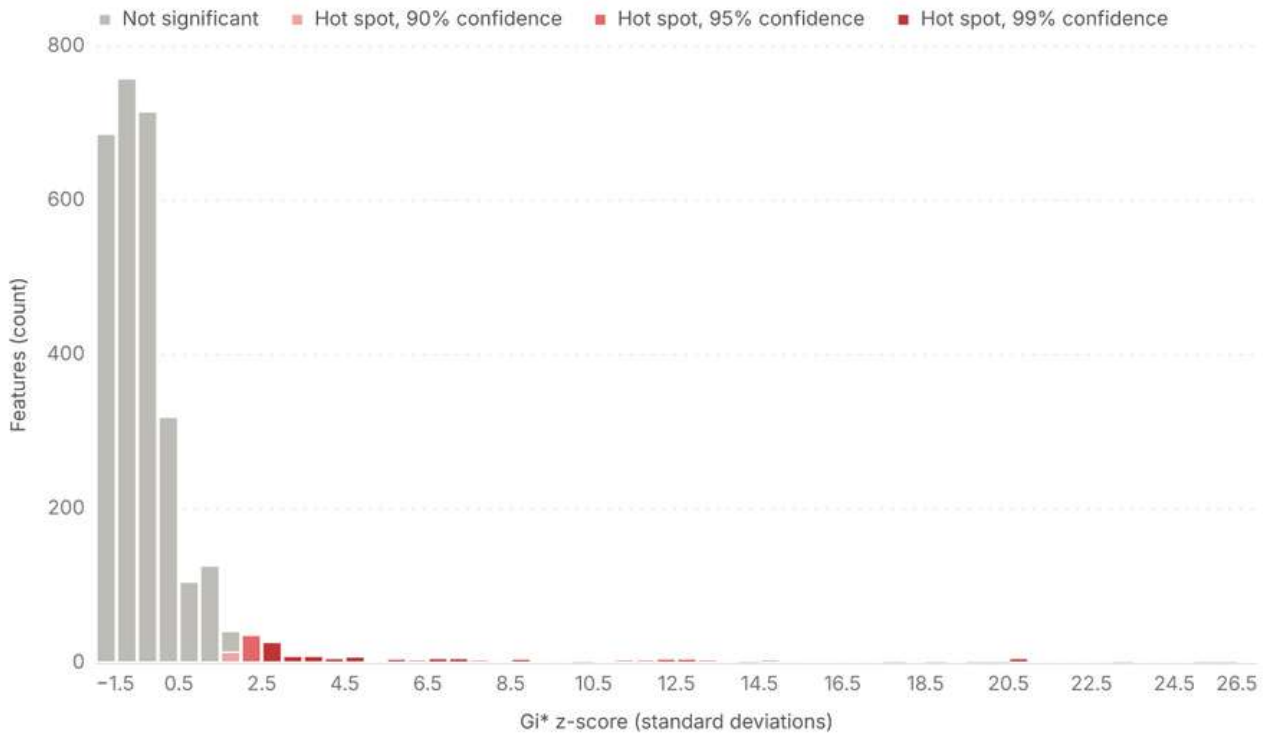


Figure 61. Hot spot analysis: Incidents [136]. Source: Hot spot analysis: Incidents (2,912 features). The data is in the appendix.

Count per week by reported_at and outcome

Per week: 53 weeks from 2025-09-29 to 2026-09-28; trend +0.36 per week; first half 676, second half 979 (+44.8%)

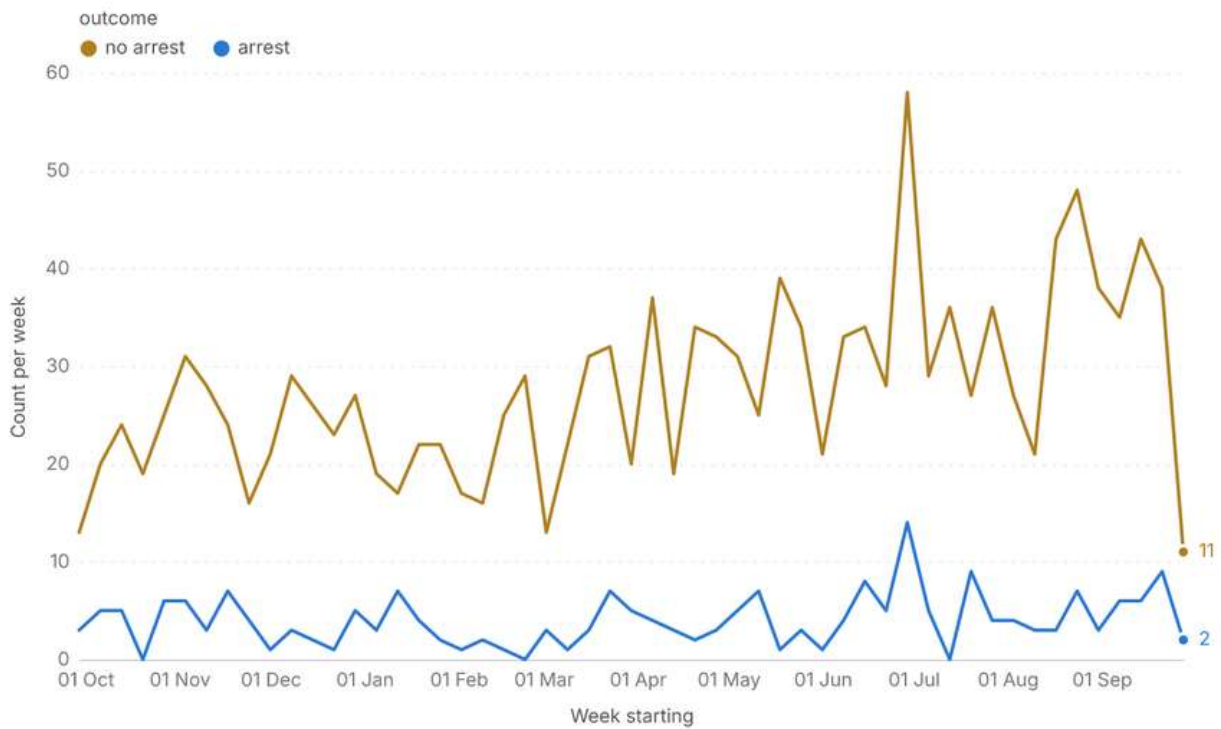
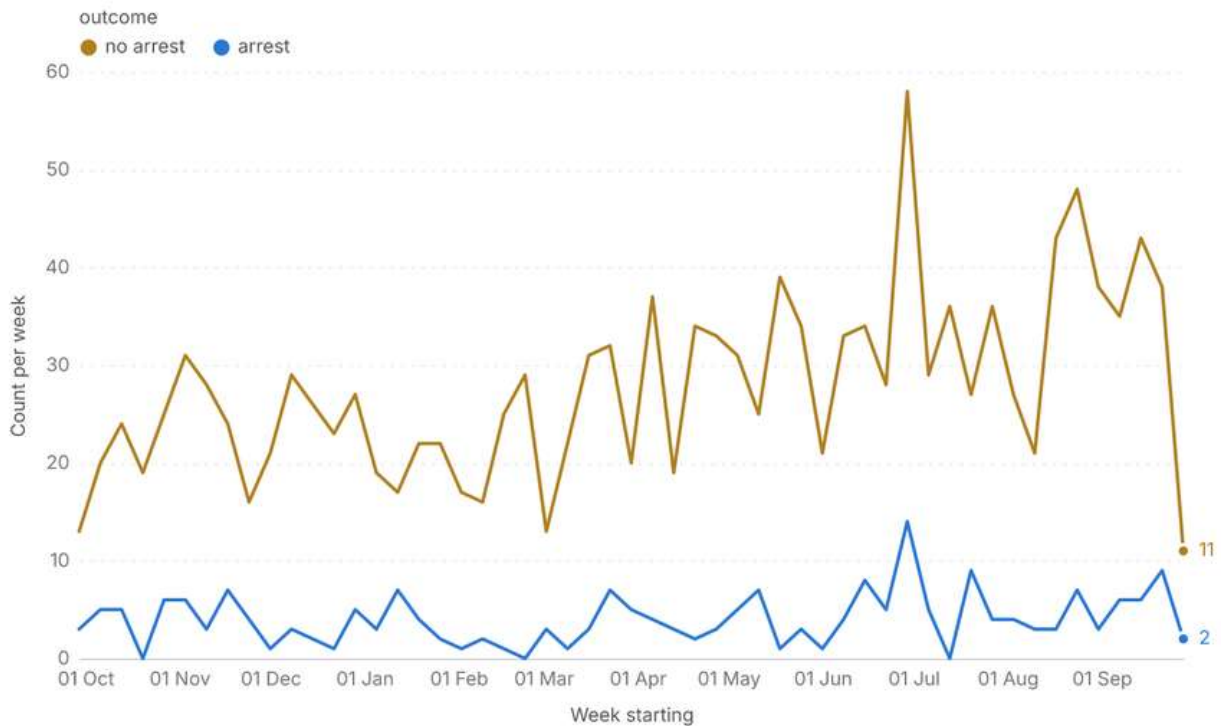


Figure 62. Repeat and near repeat classification: Incidents [137]. Per week, 2025-09-29 to 2026-09-28. Source: Repeat and near repeat classification: Incidents (1,680 features). The data is in the appendix.

Count per week by reported_at and outcome

Per week: 53 weeks from 2025-09-29 to 2026-09-28; trend +0.36 per week; first half 676, second half 979 (+44.8%)

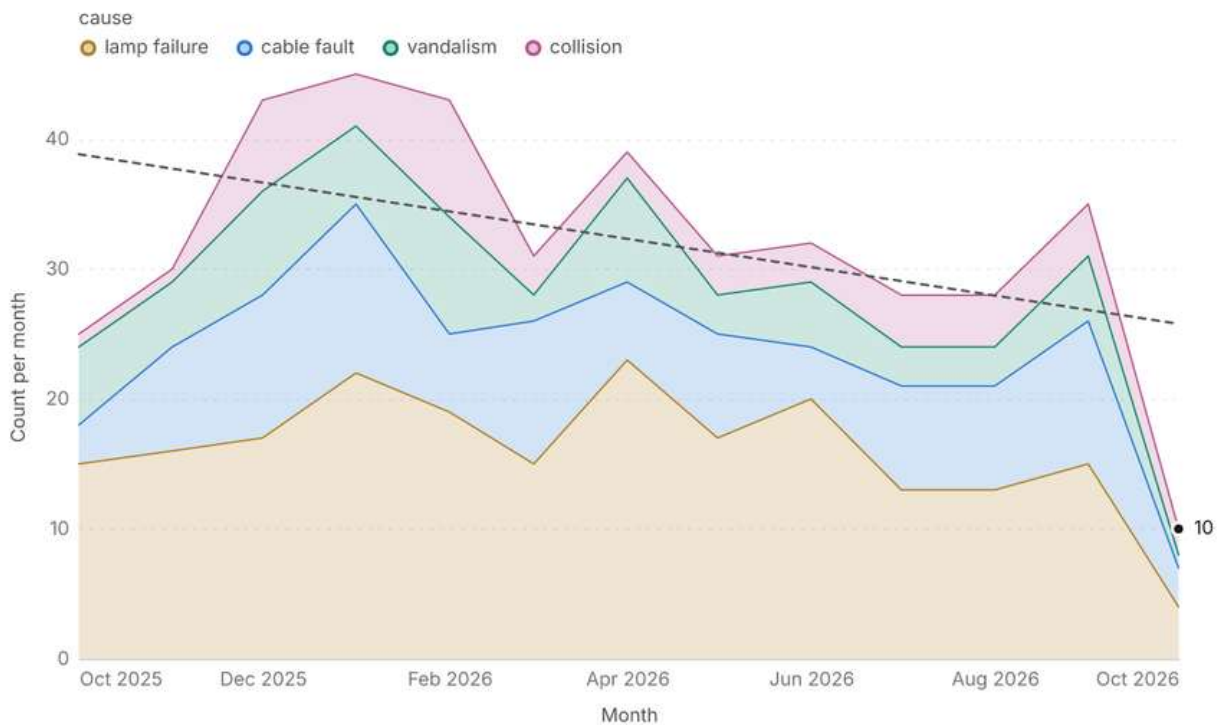


Per week, 2025-09-29 to 2026-09-28. Source: Repeat and near repeat classification: Incidents (1,680 features).

Figure 63. Repeat and near repeat classification: Incidents over time [138]. Per week, 2025-09-29 to 2026-09-28. Source: Repeat and near repeat classification: Incidents (1,680 features). The data is in the appendix.

Count per month by repaired_on and cause

Per month: 13 months from 2025-10-01 to 2026-10-01; trend -1.09 per month; first half 217, second half 164 (-24.4%)

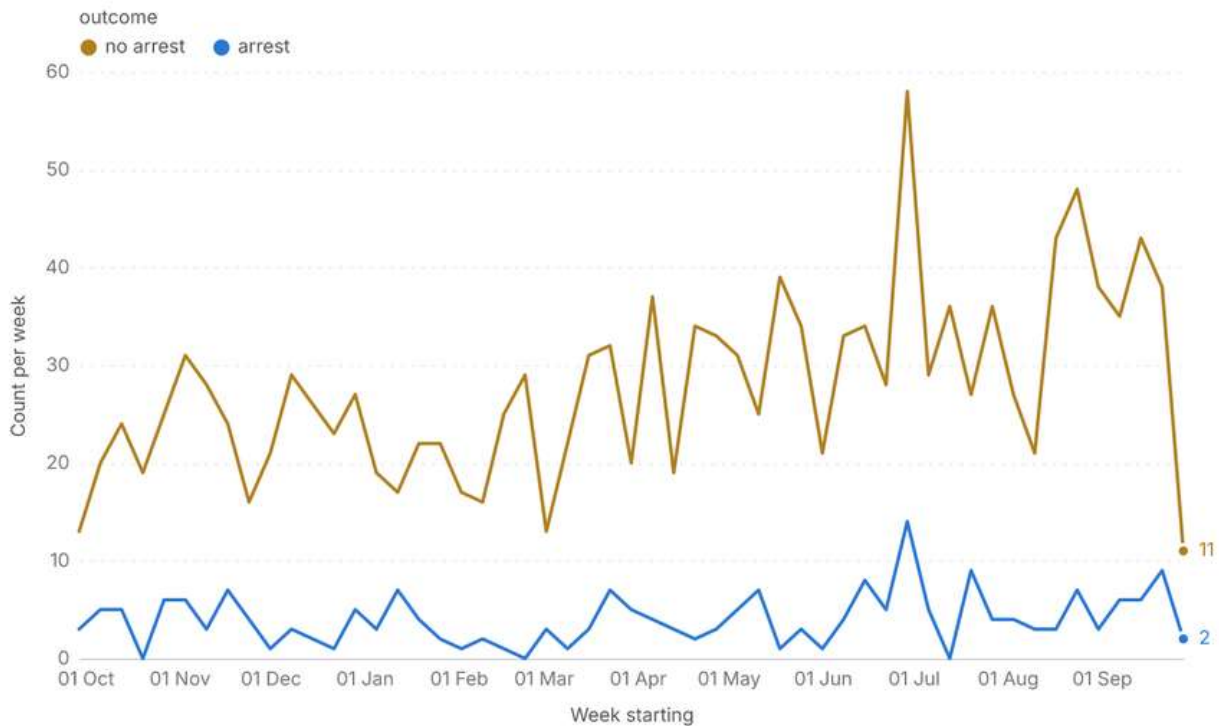


Per month, 2025-10-01 to 2026-10-01. Source: Find point clusters: Street light outages (420 features).

Figure 64. Find point clusters: Street light outages over time [139]. Per month, 2025-10-01 to 2026-10-01. Source: Find point clusters: Street light outages (420 features). The data is in the appendix.

Count per week by reported_at and outcome

Per week: 53 weeks from 2025-09-29 to 2026-09-28; trend +0.36 per week; first half 676, second half 979 (+44.8%)



Per week, 2025-09-29 to 2026-09-28. Source: Find point clusters: Incidents (1,680 features).

Figure 65. Find point clusters: Incidents over time [140]. Per week, 2025-09-29 to 2026-09-28. Source: Find point clusters: Incidents (1,680 features). The data is in the appendix.

Documents

What the documents name. Quarterly crime and safety briefing, third quarter 2026 (1 page, 1 page(s) from the text layer) names 12 event terms and 11 places [141]. Event terms in Quarterly crime and safety briefing, third quarter 2026: Thefts (page 1, line 7, 2 mentions), Transit (page 1, line 7, 2 mentions), street (page 1, line 9, 2 mentions), demonstration (page 1, line 3) [142]. Places named in Quarterly crime and safety briefing, third quarter 2026: Central Transit Center (page 1, line 7, 2 mentions), Market West Beat (page 1, line 9, 2 mentions), N Elizabeth St (page 1, line 11, 2 mentions), Kingsway Beat (page 1, line 11, 2 mentions) [142]. Hot spot patrol plan (1 page, 1 page(s) from the text layer) names 1 organization, 8 event terms and 6 places [143]. Organizations named in Hot spot patrol plan: Focus (page 1, line 7) [144]. Event terms in Hot spot patrol plan: theft (page 1, line 11, 2 mentions), patrol (page 1, line 1), Patrols (page 1, line 3), Transit (page 1, line 8) [144]. Places named in Hot spot patrol plan: Central District Station (page 1, line 3), Westside Station (page 1, line 3), Riverside Station (page 1, line 3), Central Transit Center (page 1, line 8) [144].

Result	Value
Documents	2
Entities	38
Organizations	1
Event terms	20
Places	17

Findings

Evidenced: Quarterly crime and safety briefing, third quarter 2026 (1 page, 1 page(s) from the text layer) names 12 event terms and 11 places.

Evidenced: Event terms in Quarterly crime and safety briefing, third quarter 2026: Thefts (page 1, line 7, 2 mentions), Transit (page 1, line 7, 2 mentions), street (page 1, line 9, 2 mentions), demonstration (page 1, line 3).

Evidenced: Places named in Quarterly crime and safety briefing, third quarter 2026: Central Transit Center (page 1, line 7, 2 mentions), Market West Beat (page 1, line 9, 2 mentions), N Elizabeth St (page 1, line 11, 2 mentions), Kingsway Beat (page 1, line 11, 2 mentions).

Evidenced: Hot spot patrol plan (1 page, 1 page(s) from the text layer) names 1 organization, 8 event terms and 6 places.

Evidenced: Organizations named in Hot spot patrol plan: Focus (page 1, line 7).

Evidenced: Event terms in Hot spot patrol plan: theft (page 1, line 11, 2 mentions), patrol (page 1, line 1), Patrols (page 1, line 3), Transit (page 1, line 8).

Evidenced: Places named in Hot spot patrol plan: Central District Station (page 1, line 3), Westside Station (page 1, line 3), Riverside Station (page 1, line 3), Central Transit Center (page 1, line 8).

Changes since the last run

94 number(s) changed since the report of 2026-10-19T04:03:32Z.

Analysis	Measure	Before	After	Change
Hot spots	result, bins	35	36	1
Hot spots	result, count	35	36	1
Hot spots	result, elapsed ms	2	3	1
Hot spots	result, incidents used	80	60	-20
Hot spots	result, distance band m	1,000	2,000	1,000
Hot spots	billing, cost	0.0516	0.0512	-0.0004
Hot spots	billing, list price	0.0516	0.0512	-0.0004
Hot spots	result, bins	35	112	77
Hot spots	result, count	35	112	77
Hot spots	result, elapsed ms	2	5	3
Hot spots	result, cell size m	1,000	500	-500
Hot spots	result, incidents used	80	120	40
Hot spots	billing, cost	0.0516	0.0524	0.0008
Hot spots	billing, list price	0.0516	0.0524	0.0008
Space time hot spots	result, elapsed ms	44	46	2
Space time hot spots	result, count	270	47	-223
Space time hot spots	result, elapsed ms	44	10	-34
Space time hot spots	result, resolution	9	8	-1
Space time hot spots	result, features used	1,680	420	-1,260
Space time hot spots	billing, cost	0.184	0.121	-0.063
Space time hot spots	billing, list price	0.184	0.121	-0.063
Find point clusters	result, count	1,680	120	-1,560
Find point clusters	result, noise	1,609	61	-1,548
Find point clusters	result, distance m	50	200	150
Find point clusters	result, elapsed ms	118	499	381
Find point clusters	result, min points	20	3	-17
Find point clusters	billing, cost	0.0836	0.0524	-0.0312
Find point clusters	billing, list price	0.0836	0.0524	-0.0312
Find point clusters	result, elapsed ms	118	19	-99
Find point clusters	result, count	1,680	420	-1,260
Find point clusters	result, noise	1,609	410	-1,199

Analysis	Measure	Before	After	Change
Find point clusters	result, distance m	50	100	50
Find point clusters	result, elapsed ms	118	5	-113
Find point clusters	result, min points	20	10	-10
Find point clusters	billing, cost	0.0836	0.0584	-0.0252
Find point clusters	billing, list price	0.0836	0.0584	-0.0252
Summarize within	result, elapsed ms	1	0	-1
Summarize within	billing, cost	0.01048	0.01154	0.00106
Summarize within	billing, list price	0.01048	0.01154	0.00106
Summarize within	result, elapsed ms	1	0	-1
Summarize within	billing, cost	0.01048	0.01274	0.00226
Summarize within	billing, list price	0.01048	0.01274	0.00226
Summarize within	result, elapsed ms	1	2	1
Summarize within	billing, cost	0.01048	0.04394	0.03346
Summarize within	billing, list price	0.01048	0.04394	0.03346
Calculate density	result, count	2,874	164	-2,710
Calculate density	result, elapsed ms	162	4	-158
Calculate density	result, bandwidth m	200	1,000	800
Calculate density	result, cell size m	100	500	400
Calculate density	result, max density per km2	1,347	42.62	-1,305
Calculate density	billing, cost	0.0836	0.0524	-0.0312
Calculate density	billing, list price	0.0836	0.0524	-0.0312
Calculate density	result, elapsed ms	162	50	-112
Calculate density	result, count	2,874	848	-2,026
Calculate density	result, elapsed ms	162	15	-147
Calculate density	result, bandwidth m	200	500	300
Calculate density	result, cell size m	100	200	100
Calculate density	result, max density per km2	1,347	107.5	-1,240
Calculate density	billing, cost	0.0836	0.0584	-0.0252
Calculate density	billing, list price	0.0836	0.0584	-0.0252
Hot spots	result, bins	35	2,912	2,877
Hot spots	result, count	35	2,912	2,877
Hot spots	result, elapsed ms	2	100	98
Hot spots	result, cell size m	1,000	100	-900
Hot spots	result, incidents used	80	1,680	1,600
Hot spots	result, distance band m	1,000	200	-800
Hot spots	billing, cost	0.0516	0.0836	0.032
Hot spots	billing, list price	0.0516	0.0836	0.032
Near repeat	result, count	420	1,680	1,260
Near repeat	result, chains	53	152	99
Near repeat	result, distance m	200	100	-100
Near repeat	result, elapsed ms	10	39	29
Near repeat	result, pairs linked	185	1,357	1,172

Analysis	Measure	Before	After	Change
Near repeat	billing, cost	0.0626	0.1004	0.0378
Near repeat	billing, list price	0.0626	0.1004	0.0378
Hot cells inside each cluster of licensed premises	result, count	16	3	-13
Hot cells inside each cluster of licensed premises	result, elapsed ms	1	6	5
Hot cells inside each cluster of licensed premises	billing, cost	0.01048	0.0683	0.05782
Hot cells inside each cluster of licensed premises	billing, list price	0.01048	0.0683	0.05782
Change beside the counts per patrol beat	billing, cost	0.0273	0.01066	-0.01664
Change beside the counts per patrol beat	billing, list price	0.0273	0.01066	-0.01664
Hot cells of CCTV cameras per patrol beat	result, elapsed ms	1	2	1
Hot cells of CCTV cameras per patrol beat	billing, cost	0.01048	0.01104	0.00056
Hot cells of CCTV cameras per patrol beat	billing, list price	0.01048	0.01104	0.00056
Nearest police station to each cluster of licensed premises	result, elapsed ms	2	3	1
Dense areas of street light outages	result, count	936	5	-931
Dense areas of street light outages	result, elapsed ms	22	13	-9
Dense areas of street light outages	billing, cost	0.102	0.03697	-0.06503
Dense areas of street light outages	billing, list price	0.102	0.03697	-0.06503
Dense areas of street light outages	list price	0.102	0.03697	-0.06503
Documents	Documents	17	2	-15
Documents	Entities	17	38	21
Documents	Organizations	17	1	-16
Documents	Event terms	17	20	3

Sources

- [1] Rendering: Chart: Timeline: events per month by dataset. 72 rows (id d013059e-6933-47a5-bb09-9a0dc42d4902)
- [2] Dataset: Incidents. vector, 1680 rows (id 8e5ad24c-d6a6-4a58-8281-8b363a095f60)
- [3] Dataset: Street light outages. vector, 420 rows (id abe096b9-4f2d-4a2c-8093-abb51b141f33)
- [4] Dataset: Calls for service by beat and month. table, 384 rows (id 924696a2-7623-45fc-aa81-6181d9eba827)
- [5] Rendering: Chart: Timeline lanes: events per month by dataset. 72 rows (id fb1cdee2-f533-45f4-983f-0cd951892613)
- [6] Rendering: Chart: Timeline: change from one month to the next. 23 rows (id 2d043b97-3b7e-4081-a3cc-a2d4f2bb2246)
- [7] Tool result: gp_period_change, step 0. The count rose from 33 in week of 2026-06-22 to 72 in week of 2026-06-29 (+118.2%); a change this large is unlikely to be chance (p = 0.000178). (id 2042e52a-03d6-42f1-8365-22ab6777dc1e:0)

- [8] Layer: Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) (id 1e0726ac-a223-423b-b680-55434fca5e6)
- [9] Tool result: gp_period_change, step 1. The count fell from 17 in week of 2026-02-02 to 4 in week of 2026-02-09 (-76.5%); a change this large is unlikely to be chance ($p = 0.0072$). (id 2042e52a-03d6-42f1-8365-22ab6777dc1e:1)
- [10] Layer: Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) (id b942fd09-4b01-4ffe-a2ab-c88503e90ef1)
- [11] Rendering: Map: Overview: the top 3 results. view longitude -87.71811 to -87.57468, latitude 41.83798 to 41.91748 (id 79e66837-1f85-4f45-956b-0a34bfd5fe00)
- [12] Layer: Incidents. spatial profile (id 36ad5f7c-eab7-4ac7-8256-9737c4a1b044)
- [13] Layer: Street light outages. spatial profile (id a7218535-327c-4a76-b5d4-8caa09f44155)
- [14] Layer: Patrol beats. spatial profile (id 8c67e28f-6678-462f-a450-e83d278138e8)
- [15] Layer: CCTV cameras. spatial profile (id ad88aaeb-e7ac-4b9c-aa1c-c4626ae498b8)
- [16] Layer: Transit stops. spatial profile (id 313ae694-78aa-4830-955c-22be11a8a8a3)
- [17] Layer: Licensed premises. spatial profile (id 055b5c2c-2a86-4379-95be-6f38f708b65b)
- [18] Layer: Roads. spatial profile (id f63e5a45-031b-44a5-bf1e-7b9d17cb2378)
- [19] Layer: Police stations. spatial profile (id 6b7fdf5e-7de9-4f14-995d-0c918b2e91ec)
- [20] Catalog: Hot spot analysis (operation catalog, gp_hot_spots). Getis-Ord G_i^* hot and cold spots with z-scores, p-values and confidence bins. ArcGIS: Find Hot Spots, Hot Spot Analysis (Getis-Ord G_i^*). QGIS: qgis:hotspot (plugin). (id gp_hot_spots)
- [21] Plan: Hot spots of CCTV cameras (the Start plan's candidate c_f0a51c3ce192). 60 points: Getis-Ord G_i^* tests whether the concentrations in CCTV cameras are statistically significant. (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_f0a51c3ce192)
- [22] Tool result: gp_hot_spots, step 0. Hot spot analysis: 1 layer saved: Hot spot analysis: CCTV cameras (36 features). (id 321ba186-8b6e-4c4b-bb58-94f915d8b6aa:0)
- [23] Rendering: Map: Hot spots: CCTV cameras. view longitude -87.7152 to -87.57762, latitude 41.83848 to 41.91701 (id a5a339e4-5577-4333-9b86-911f2f84f49a)
- [24] Plan: Hot spots of Licensed premises (the Start plan's candidate c_91bb663e526f). 120 points: Getis-Ord G_i^* tests whether the concentrations in Licensed premises are statistically significant. Measured: Licensed premises are clustered (nearest-neighbor ratio 0.85, $z = -3.2$), median spacing 121 m. Cells of 500 m and a band of 1000 m from the measured spacing. (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_91bb663e526f)
- [25] Tool result: gp_hot_spots, step 1. Hot spot analysis: 1 layer saved: Hot spot analysis: Licensed premises (112 features). (id 321ba186-8b6e-4c4b-bb58-94f915d8b6aa:1)
- [26] Rendering: Map: Hot spots: licensed premises. view longitude -87.70465 to -87.5929, latitude 41.84743 to 41.91121 (id 2145f368-15a9-49e0-ad22-77165edbf2be)
- [27] Catalog: Emerging hot spots (operation catalog, gp_space_time_hot_spots). Where hot spots are new, consecutive, intensifying, persistent, diminishing, sporadic, oscillating or historical over time. ArcGIS: Emerging Hot Spot Analysis, Create Space Time Cube. (id gp_space_time_hot_spots)
- [28] Plan: Space time hot spots of Incidents (the Start plan's candidate c_1c60b58dbb29). Incidents carry dates in 'reported_at': emerging hot spot analysis finds new, intensifying and fading hot spots per week. Measured: the pattern of Incidents changes over time (earlier half clustered, later half clustered; the center moved 132 m). (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_1c60b58dbb29)
- [29] Tool result: gp_space_time_hot_spots, step 0. Emerging hot spots: 1 layer saved: Emerging hot spots: Incidents (270 features). (id 961133c9-b424-4eba-880c-76b21b589fcb:0)
- [30] Rendering: Map: Emerging hot spots: incidents. view longitude -87.70246 to -87.58676, latitude 41.84569 to 41.90983 (id 6f2b1b3c-6588-4aa1-b6cf-4e9a3a111f44)
- [31] Plan: Space time hot spots of Street light outages (the Start plan's candidate c_2469aa67bba0). Street light outages carry dates in 'reported_at': emerging hot spot analysis finds new, intensifying and fading hot spots per week. Measured: the pattern of Street light outages changes over time (earlier half clustered, later half clustered; the center moved 263 m). (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_2469aa67bba0)
- [32] Tool result: gp_space_time_hot_spots, step 1. Emerging hot spots: 1 layer saved: Emerging hot spots: Street light outages (47 features). (id 961133c9-b424-4eba-880c-76b21b589fcb:1)
- [33] Rendering: Map: Emerging hot spots: street light outages. view longitude -87.71613 to -87.57759, latitude 41.83894 to 41.91574 (id 91191d14-e6a0-40e1-a6fa-dd44826aaf6e)
- [34] Catalog: Find point clusters (operation catalog, gp_find_point_clusters). Density-based clusters (DBSCAN, HDBSCAN or OPTICS, optionally space-time) with hulls and noise. ArcGIS: Find Point Clusters, Density-based Clustering. QGIS: native:dbscanclustering, native:stdbscanclustering. (id gp_find_point_clusters)
- [35] Plan: Cluster points of Licensed premises (the Start plan's candidate c_bca1140666e1). DBSCAN finds dense groups of Licensed premises and separates noise. Measured: Licensed premises are clustered (nearest-neighbor ratio 0.85, $z = -3.2$), median spacing 121 m. DBSCAN at 200 m (twice the measured spacing). (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_bca1140666e1)

[36] Tool result: gp_find_point_clusters, step 0. Find point clusters: 2 layers saved: Find point clusters: Licensed premises (120 features); Find point clusters: cluster hulls (3 features). (id 215b8c93-8d01-4390-b188-f5c767207b46:0)

[37] Rendering: Map: Clusters: licensed premises. view longitude -87.69497 to -87.59835, latitude 41.85068 to 41.90582 (id 2605dc65-0adc-4643-9694-8530ea34521a)

[38] Plan: Cluster points of Incidents (the Start plan's candidate c_0aed3f12db5c). DBSCAN finds dense groups of Incidents and separates noise. Measured: Incidents are clustered (nearest-neighbor ratio 0.73, z = -21.0), median spacing 34.3 m. DBSCAN at 50 m (twice the measured spacing). (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_0aed3f12db5c)

[39] Tool result: gp_find_point_clusters, step 1. Find point clusters: 2 layers saved: Find point clusters: Incidents (1680 features); Find point clusters: cluster hulls (3 features). (id 215b8c93-8d01-4390-b188-f5c767207b46:1)

[40] Rendering: Map: Clusters: incidents. view longitude -87.69327 to -87.59462, latitude 41.8503 to 41.9066 (id d9cb38e3-2bbf-4bd6-8736-3a3f54e2766c)

[41] Plan: Cluster points of Street light outages (the Start plan's candidate c_eac5e908317b). DBSCAN finds dense groups of Street light outages and separates noise. Measured: Street light outages are clustered (nearest-neighbor ratio 0.88, z = -4.9), median spacing 74.9 m. DBSCAN at 100 m (twice the measured spacing). (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_eac5e908317b)

[42] Tool result: gp_find_point_clusters, step 2. Find point clusters: 2 layers saved: Find point clusters: Street light outages (420 features); Find point clusters: cluster hulls (1 feature). (id 215b8c93-8d01-4390-b188-f5c767207b46:2)

[43] Rendering: Map: Clusters: street light outages. view longitude -87.6954 to -87.59744, latitude 41.85029 to 41.9062 (id e91b963b-96c8-45a2-9a13-6a160f41445f)

[44] Catalog: Summarize within (operation catalog, gp_summarize_within). Count and aggregate the features inside each polygon (or bin), proportionally for lines and polygons. ArcGIS: Summarize Within, Aggregate Points. QGIS: native:countpointsinpolygon, native:sumlinelengths. (id gp_summarize_within)

[45] Plan: CCTV cameras per feature of Patrol beats (the Start plan's candidate c_c58f45b29b6e). Count CCTV cameras inside each feature of Patrol beats by ptz; the counts map as a choropleth (natural breaks, sequential colors). (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_c58f45b29b6e)

[46] Tool result: gp_summarize_within, step 0. Summarize within: 1 layer saved: Summarize within: Patrol beats (16 features). (id 5e359a15-f5e2-429c-a252-d2486c76e559:0)

[47] Rendering: Map: Counts: CCTV cameras, by patrol beat. view longitude -87.69371 to -87.59438, latitude 41.85001 to 41.9067 (id 1d6099da-be90-4b9c-9991-ddaea0c2a814)

[48] Tool result: gp_summarize_within, step 1. Summarize within: 1 layer saved: Summarize within: Patrol beats (16 features). (id 5e359a15-f5e2-429c-a252-d2486c76e559:1)

[49] Rendering: Map: Counts: licensed premises, by patrol beat. view longitude -87.69371 to -87.59438, latitude 41.85001 to 41.9067 (id f3ebc560-673b-4e0e-bfeb-f244b6e425c8)

[50] Tool result: gp_summarize_within, step 2. Summarize within: 1 layer saved: Summarize within: Patrol beats (16 features). (id 5e359a15-f5e2-429c-a252-d2486c76e559:2)

[51] Rendering: Map: Counts: incidents, by patrol beat. view longitude -87.69371 to -87.59438, latitude 41.85001 to 41.9067 (id f6217787-f7ba-4030-aa6d-63161fb23a9e)

[52] Catalog: Period change (analysis catalog, gp_period_change). Counts or sums per period (week over week, month over month, any two periods, or before and after a date), per area, per H3 cell or in total, with the places of largest rise and fall and a significance note. ArcGIS: Summarize Percent Change (Crime Analysis), Change Point Detection. (id gp_period_change)

[53] Plan: Incidents: change per week per feature of Patrol beats (the Start plan's candidate c_55dcc49526ff). Incidents carry dates in 'reported_at' over 52 weeks: the count per week, week over week, with the places of largest rise and fall per feature of Patrol beats and whether the change is beyond chance. (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_55dcc49526ff)

[54] Rendering: Map: Period change: incidents, by patrol beat. view longitude -87.69576 to -87.59221, latitude 41.8496 to 41.907 (id f8fa38e0-6b2b-4027-9d48-4238d9d56b8b)

[55] Rendering: Chart: Incidents: count per week. 53 rows (id 669d11fe-6a6b-4977-827a-e6583fbb9ec8)

[56] Rendering: Chart: Incidents: week of 2026-06-22 to week of 2026-06-29 by place. 30 rows (id d57784f7-9e7d-4cb3-a1b4-5c224a8d2ffd)

[57] Rendering: Chart: Period change: Incidents (week of 2026-06-22 to week of 2026-06-29). 5 rows (id 8f97238b-666e-416b-87f0-c34f89646566)

[58] Rendering: Map: Period change: street light outages, by patrol beat. view longitude -87.69969 to -87.59686, latitude 41.84969 to 41.90669 (id 064b0349-aa03-4072-ac98-9eb86c884bd9)

[59] Rendering: Chart: Street light outages: count per week. 53 rows (id 73202d54-d8bb-4119-8b31-815538262a83)

[60] Rendering: Chart: Street light outages: week of 2026-02-02 to week of 2026-02-09 by place. 14 rows (id 56c46fab-d5ad-44bb-b563-5bba1cc24883)

[61] Rendering: Chart: Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09). 5 rows (id d58ef4fc-c705-4cc6-bbc5-aca3bf3f48b6)

[62] Catalog: Calculate density (operation catalog, gp_calculate_density). Kernel density per square kilometer on a grid. ArcGIS: Calculate Density, Kernel Density. QGIS: native:heatmapkerneldensityestimation. (id gp_calculate_density)

[63] Plan: Kernel density of Licensed premises (the Start plan's candidate c_2b247b24a505). 120 points in Licensed premises: a density surface shows where they concentrate. Measured: Licensed premises are clustered (nearest-neighbor ratio 0.85, $z = -3.2$), median spacing 121 m. (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_2b247b24a505)

[64] Tool result: gp_calculate_density, step 0. Calculate density: 1 layer saved: Calculate density: Licensed premises (164 features). (id 8475a7ee-691d-4552-8a24-41bb69bf46a4:0)

[65] Rendering: Map: Density: licensed premises. view longitude -87.71552 to -87.57698, latitude 41.83894 to 41.91801 (id 2d0ffd6b-492c-46b6-9708-edf0e8f348fa)

[66] Plan: Kernel density of Incidents (the Start plan's candidate c_9007d02c4a41). 1680 points in Incidents: a density surface shows where they concentrate. Measured: Incidents are clustered (nearest-neighbor ratio 0.73, $z = -21.0$), median spacing 34.3 m. (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_9007d02c4a41)

[67] Tool result: gp_calculate_density, step 1. Calculate density: 1 layer saved: Calculate density: Incidents (2874 features). (id 8475a7ee-691d-4552-8a24-41bb69bf46a4:1)

[68] Rendering: Map: Density: incidents. view longitude -87.69708 to -87.59062, latitude 41.848 to 41.90876 (id 0aa6b6e6-e52d-4399-b08c-8e798eb73c93)

[69] Plan: Kernel density of Street light outages (the Start plan's candidate c_bd626b9123bb). 420 points in Street light outages: a density surface shows where they concentrate. Measured: Street light outages are clustered (nearest-neighbor ratio 0.88, $z = -4.9$), median spacing 74.9 m. (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_bd626b9123bb)

[70] Tool result: gp_calculate_density, step 2. Calculate density: 1 layer saved: Calculate density: Street light outages (848 features). (id 8475a7ee-691d-4552-8a24-41bb69bf46a4:2)

[71] Rendering: Map: Density: street light outages. view longitude -87.70567 to -87.58754, latitude 41.84454 to 41.91196 (id 27e532e4-8298-4330-ad1a-0d9375f48b07)

[72] Plan: Hot spots of Incidents (the Start plan's candidate c_c312b5d076a7). 1680 points: Getis-Ord G_i^* tests whether the concentrations in Incidents are statistically significant. Measured: Incidents are clustered (nearest-neighbor ratio 0.73, $z = -21.0$), median spacing 34.3 m. Cells of 100 m and a band of 200 m from the measured spacing. (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_c312b5d076a7)

[73] Tool result: gp_hot_spots, step 0. Hot spot analysis: 1 layer saved: Hot spot analysis: Incidents (2912 features). (id bc2d155b-8245-44bd-bc02-ae3dd8ce99bd:0)

[74] Rendering: Map: Hot spots: incidents. view longitude -87.69527 to -87.59314, latitude 41.84909 to 41.90737 (id 207cb3df-c55c-401c-8124-cbf80367ad53)

[75] Catalog: Repeat and near repeat classification (operation catalog, gp_near_repeat). Classify incidents as originators, repeats (same place) or near repeats within a distance and time window, with a Knox test table. ArcGIS: Repeat and Near Repeat Classification, Near Repeat Calculator. (id gp_near_repeat)

[76] Plan: Near repeat of Incidents (the Start plan's candidate c_cabb2c797127). Near repeat analysis tests whether Incidents close in space also follow each other within 30 days. (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_cabb2c797127)

[77] Tool result: gp_near_repeat, step 0. Repeat and near repeat classification: 1 layer saved: Repeat and near repeat classification: Incidents (1680 features). (id e703fd06-1a0c-47e1-8d41-9a7f7ca7a096:0)

[78] Rendering: Map: Near repeat: incidents. view longitude -87.69493 to -87.59281, latitude 41.85009 to 41.9067 (id 28e59ede-c587-4b24-bb28-3230a99a4d59)

[79] Tool result: gp_summarize_within, step 0. Summarize within: 1 layer saved: Hot cells inside each cluster of licensed premises (3 features). (id 47c5f0de-dfdf-494b-911d-90b10a714d4d:0)

[80] Layer: Hot spot analysis: Incidents. 2,912 features (id 8382f930-c9d0-432b-82b7-fabc618137e9)

[81] Layer: Find point clusters: cluster hulls. 3 features (id 4dfef6fb-4663-43a7-86b3-cb7ca742b344)

[82] Layer: Hot cells inside each cluster of licensed premises. 3 features (id ca4b4f64-91e3-4c8b-b95e-1027e417c18a)

[83] Rendering: Map: Hot cells inside each cluster of licensed premises. view longitude -87.66722 to -87.63111, latitude 41.87536 to 41.89597 (id 1f5b237f-456e-4271-ac5a-8b7c49ea1203)

[84] Rendering: Chart: Hot cells inside each cluster of licensed premises. 3 rows (id dc8f6491-2889-4c96-8892-a5a92ddccff9)

[85] Catalog: Spatial join (operation catalog, gp_spatial_join). Attach attributes (or aggregates) of matching features from another layer, by location, distance, time and attributes. ArcGIS: Join Features, Spatial Join. QGIS: native:joinattributesbylocation, native:joinbylocationsummary, native:joinbynearest. (id gp_spatial_join)

[86] Plan: The run's goal. Describe the project Sample: Public safety, Chicago: run the analyses that tell the most about its data, draw every result, and write a cited report. (id 2e6054ca-62f3-479f-b398-915fe26200ce:goal)

[87] Tool result: gp_spatial_join, step 0. Spatial join: 1 layer saved: Change beside the counts per patrol beat (16 features). (id b47bd286-7bf7-47ee-8462-aba2f7f03009:0)

[88] Layer: Summarize within: Patrol beats. 16 features (id 31bedf68-b7b3-41b2-abda-6a464b2f0776)

[89] Layer: Change beside the counts per patrol beat. 16 features (id a982a2d6-956f-4dfe-b821-16eefe49fc59)

[90] Rendering: Map: Change beside the counts per patrol beat. view longitude -87.69371 to -87.59438, latitude 41.85001 to 41.9067 (id 72abfc34-1aa3-41c0-918f-e1038e14d6e4)

[91] Rendering: Chart: Change beside the counts per patrol beat. 5 rows (id 0db6652b-8019-4841-a5c5-bb77cb37c605)

[92] Tool result: gp_spatial_join, step 0. Spatial join: 1 layer saved: Change of incidents where density is high (16 features). (id a507fc16-21fd-45b9-aeb6-d8c679c59bfa:0)

[93] Layer: Calculate density: Street light outages. 848 features (id 22316e02-9759-4f61-b1eb-206b935b14bb)

[94] Layer: Change of incidents where density is high. 16 features (id b18abe82-9e7c-4939-aba0-31147b337e8d)

[95] Rendering: Map: Change of incidents where density is high. view longitude -87.69371 to -87.59438, latitude 41.85001 to 41.9067 (id 4c6d9fb2-ffd0-4f64-8535-c3988767f184)

[96] Rendering: Chart: Change of incidents where density is high. 5 rows (id 92ea2477-a522-47ee-89b1-746ee6856ca5)

[97] Tool result: gp_summarize_within, step 0. Summarize within: 1 layer saved: Hot cells of CCTV cameras per patrol beat (16 features). (id 614dc9e6-1702-4222-aaee-d9710ae1d2fa:0)

[98] Layer: Hot spot analysis: CCTV cameras. 36 features (id 2cc32b98-9097-49ba-8818-944110cdf58f)

[99] Layer: Hot cells of CCTV cameras per patrol beat. 16 features (id d17a96b4-151e-4595-be18-86aaab10e46f)

[100] Rendering: Map: Hot cells of CCTV cameras per patrol beat. view longitude -87.69371 to -87.59438, latitude 41.85001 to 41.9067 (id b8be83a4-10bf-4533-a453-099468da0894)

[101] Rendering: Chart: Hot cells of CCTV cameras per patrol beat. 5 rows (id 35fadd76-8342-4832-bb6b-54b406cc2355)

[102] Catalog: Find nearest (operation catalog, gp_find_nearest). The k nearest features for each input, with geodesic distance and bearing. ArcGIS: Find Nearest, Near, Generate Near Table. QGIS: native:joinbynearest, native:nearestneighbouranalysis. (id gp_find_nearest)

[103] Tool result: gp_find_nearest, step 0. Find nearest: 1 layer saved: Nearest police station to each cluster of licensed premises (3 features). (id c991d762-1f84-44c6-96ae-3710f29ec64c:0)

[104] Layer: Nearest police station to each cluster of licensed premises. 3 features (id e1507503-e9d4-495b-92ae-125ebdaa2cf0)

[105] Rendering: Map: Nearest police station to each cluster of licensed premises. view longitude -87.66722 to -87.63111, latitude 41.87536 to 41.89597 (id 85be50e0-3982-4731-8c0e-823fa9294a88)

[106] Rendering: Chart: Nearest police station to each cluster of licensed premises. 3 rows (id 2dec7314-090d-4c50-abac-7f19aa87b8c3)

[107] Catalog: Pipeline (tool description, gp_pipeline). Run up to 20 GIS operations in one engine call; a step's params may use "\$id" (an earlier step's result) or "\$id.key", and layer references. Every step's map outputs are saved as styled layers. Never calls Mapbox. (id gp_pipeline)

[108] Plan: CCTV cameras per 10,000 people per feature of Patrol beats (the Start plan's candidate c_c2ae8a2714b2). Patrol beats holds population in 'population': CCTV cameras per 10,000 people in each feature compares features of different size; mapped as a choropleth (natural breaks, sequential colors). (id f922208b-bbd9-4f8c-a605-3fb31853d7fd:c_c2ae8a2714b2)

[109] Tool result: gp_pipeline, step 0. Pipeline of 2 steps (classify_field > dissolve): 1 layer saved. (id 6ca7bfd5-79a6-41c1-bf7d-8e6d94107d57:0)

[110] Layer: Dense areas of street light outages. 5 features (id ac9b6845-0f71-4373-bd6d-610425383c47)

[111] Rendering: Chart: Dense areas of street light outages. 5 rows (id eb14b23d-e657-47db-bbb9-6dc855c8b8cc)

[112] Tool result: gp_summarize_within, step 0. Summarize within: 1 layer saved: Change of street light outages per patrol beat (16 features). (id cc3dd633-eef0-4eb3-8158-2f9fd13fb200:0)

[113] Layer: Change of street light outages per patrol beat. 16 features (id 3aa058c3-6af3-4495-9b14-12531d1ab9a2)

[114] Rendering: Map: Change of street light outages per patrol beat. view longitude -87.69371 to -87.59438, latitude 41.85001 to 41.9067 (id 8c09d493-6848-4496-8154-9e4918bed43f)

[115] Rendering: Chart: Change of street light outages per patrol beat. 5 rows (id f5280b27-6c71-4ddf-ba62-2c3527a68ab7)

[116] Rendering: Chart: Incidents over time (reported_at). 318 rows (id 77127ac6-8e99-4791-97cd-fae719d89262)

[117] Rendering: Chart: Street light outages over time (reported_at). 212 rows (id f9621103-3d0a-49ab-b90b-f7b40f93745b)

[118] Rendering: Chart: CCTV cameras over time (installed_year). 7 rows (id d430a879-efdd-4bd0-81f7-baa28a4e5360)

[119] Rendering: Chart: Calls for service by beat and month over time (month). 24 rows (id 7c56f65f-9b6b-4cdd-a312-17f1982d8de0)

[120] Rendering: Chart: Hot spot analysis: CCTV cameras. 12 rows (id 64aa9539-922f-4609-8b9a-6ef06a308a05)

[121] Rendering: Chart: Hot spot analysis: Licensed premises. 15 rows (id 4a5bc439-21a2-432b-9b8c-8615b719b8f0)

[122] Rendering: Chart: Emerging hot spots: Incidents. 10 rows (id 07721714-421e-4a56-9250-c62be37e8e3e)

[123] Rendering: Chart: Emerging hot spots: Street light outages. 7 rows (id 890e75d2-c676-4d56-aa47-5dc8fc6b1f37)

[124] Rendering: Chart: Find point clusters: Licensed premises. 4 rows (id eab8321b-459d-4b21-8ac3-03b4c9716a0b)

[125] Rendering: Chart: Find point clusters: cluster hulls. 3 rows (id 597c1cc7-6d4d-45ea-805f-e76406a7301d)

[126] Rendering: Chart: Find point clusters: Incidents. 4 rows (id 834a7e88-1f92-40c3-876e-07b230849ef1)

[127] Rendering: Chart: Find point clusters: cluster hulls. 3 rows (id b1d73a1a-bd54-4f9a-829e-a64da853e8b8)

[128] Rendering: Chart: Find point clusters: Street light outages. 2 rows (id da93f938-3c5c-4e4b-a1e9-332a9c4d97c4)

[129] Rendering: Chart: Find point clusters: cluster hulls. 1 rows (id d0a69a7c-4f2e-46e8-8fbb-3db7d1804d97)

[130] Rendering: Chart: Summarize within: Patrol beats. 5 rows (id cf0bb795-0579-4a40-a979-e2f725bdfd8a)

[131] Rendering: Chart: Summarize within: Patrol beats. 5 rows (id cf1142c2-7076-48aa-b438-d97d2f7f83d6)

[132] Rendering: Chart: Summarize within: Patrol beats. 5 rows (id 85f26d21-089a-4d33-bb0c-b985b8e6ddae)

[133] Rendering: Chart: Calculate density: Licensed premises. 9 rows (id 3365b9ed-e2bc-4612-b00e-b147032aaa0b)

[134] Rendering: Chart: Calculate density: Incidents. 13 rows (id 130ec3b4-ddc0-4f62-8c53-493253574a12)

[135] Rendering: Chart: Calculate density: Street light outages. 11 rows (id 5d19b0ed-c618-4e8e-9536-3f3a0821dcd8)

[136] Rendering: Chart: Hot spot analysis: Incidents. 48 rows (id dc40d842-a071-4cf4-87b5-9dbd4aff8223)

[137] Rendering: Chart: Repeat and near repeat classification: Incidents. 106 rows (id 2774b60c-5a11-46d6-a8e1-f56f2a252051)

[138] Rendering: Chart: Repeat and near repeat classification: Incidents over time. 106 rows (id d3456b40-f8d2-4674-9fe4-b420ca81087b)

[139] Rendering: Chart: Find point clusters: Street light outages over time. 52 rows (id b7008422-a117-4748-8bb2-7dd55cd29bdd)

[140] Rendering: Chart: Find point clusters: Incidents over time. 106 rows (id fc4f3d1b-6848-404c-9e97-b57b023c1cbd)

[141] Document: Quarterly crime and safety briefing, third quarter 2026. 1 page(s), 1 page(s) from the text layer (id 7f7de84b-c518-4d25-b279-e98be530690e)

[142] Document page: Quarterly crime and safety briefing, third quarter 2026, page 1. Thefts and robberies remain concentrated around the Central Transit Center at 41.87815, -87.63532, mostly on weekday commuting hours. (id 7f7de84b-c518-4d25-b279-e98be530690e:1)

[143] Document: Hot spot patrol plan. 1 page(s), 1 page(s) from the text layer (id 0bf0414d-d633-4517-a876-66ca320180f3)

[144] Document page: Hot spot patrol plan, page 1. Focus (id 0bf0414d-d633-4517-a876-66ca320180f3:1)

[145] Dataset: Patrol beats. vector, 16 rows (id ba848777-0930-4af3-b069-03edd17a2c3a)

[146] Dataset: Police stations. vector, 3 rows (id d3ceed49-4119-4de8-9218-65b32992e120)

[147] Dataset: CCTV cameras. vector, 60 rows (id 13e9e089-c520-4be6-9034-c0ecaf7790ab)

[148] Dataset: Transit stops. vector, 80 rows (id cc2e635f-1052-402a-82aa-95b2db052e76)

[149] Dataset: Licensed premises. vector, 120 rows (id 1a088947-ca4e-4632-b13d-975d48c05e97)

[150] Dataset: Roads. vector, 1033 rows (id e72c7c55-1cdd-49b2-b75d-3d2ec18b9c1e)

[151] Dataset: Beat staffing by shift. table, 48 rows (id 6abb3c2e-68b3-4a9c-b2a7-ce316203ebe8)

[152] Dataset: Quarterly crime and safety briefing. document, ? rows (id 535a8782-a933-42ff-af25-92ec818afdd6)

[153] Dataset: Hot spot patrol plan. document, ? rows (id 70e64e98-d266-4079-a9a1-7d54ac2c3e96)

[154] Record: Sample: Public safety, Chicago (id fe9df6b9-8a15-4264-946b-4b37b8dbb89d)

[155] Layer: Hot spot analysis: Licensed premises. 112 features (id 90322b1c-a218-4ac5-8478-7f0de2a327dd)

[156] Layer: Emerging hot spots: Incidents. 270 features (id ddbdee29-f892-4397-9f92-4fb6062a0a16)

[157] Layer: Emerging hot spots: Street light outages. 47 features (id 377fb9d7-1ae0-4b9d-b202-467adca71899)

[158] Layer: Find point clusters: Licensed premises. 120 features (id 0f39a418-fa9c-4906-bbe4-7afb6c00ba8c)

[159] Layer: Find point clusters: Incidents. 1,680 features (id 75dd415e-0b2c-4a18-b79c-cc2338385dd5)

[160] Layer: Find point clusters: cluster hulls. 3 features (id 99ba9a84-3453-4bca-a43e-5861ef41c540)

[161] Layer: Find point clusters: Street light outages. 420 features (id 4ac9e9ca-a714-4ec7-9df8-4e3869dbcc58)

[162] Layer: Find point clusters: cluster hulls. 1 features (id 6d783f7e-8f24-4458-8abc-6e3126e9630a)

[163] Layer: Summarize within: Patrol beats. 16 features (id 430dcae6-3721-44c7-9264-40595ff75b4e)

[164] Layer: Summarize within: Patrol beats. 16 features (id fabe7842-f3f5-4d5e-a46f-c3232381dc5f)

[165] Layer: Calculate density: Licensed premises. 164 features (id 76319405-6afb-4505-946b-c33b783be8eb)

[166] Layer: Calculate density: Incidents. 2,874 features (id 8d228b68-9a3d-43fd-96a3-e37297b29f9a)

[167] Layer: Repeat and near repeat classification: Incidents. 1,680 features (id aa6cf905-4fec-4559-9917-c9810ef2a94b)

Appendix: the data behind the charts

Figure 1. Timeline: events per month by dataset [1]

period	series	value
2024-10-01	Incidents	0
2024-10-01	Street light outages	0
2024-10-01	Calls for service by beat and month	16
2024-11-01	Incidents	0
2024-11-01	Street light outages	0
2024-11-01	Calls for service by beat and month	16
2024-12-01	Incidents	0
2024-12-01	Street light outages	0
2024-12-01	Calls for service by beat and month	16
2025-01-01	Incidents	0
2025-01-01	Street light outages	0
2025-01-01	Calls for service by beat and month	16
2025-02-01	Incidents	0
2025-02-01	Street light outages	0
2025-02-01	Calls for service by beat and month	16
2025-03-01	Incidents	0
2025-03-01	Street light outages	0
2025-03-01	Calls for service by beat and month	16
2025-04-01	Incidents	0
2025-04-01	Street light outages	0
2025-04-01	Calls for service by beat and month	16
2025-05-01	Incidents	0
2025-05-01	Street light outages	0
2025-05-01	Calls for service by beat and month	16
2025-06-01	Incidents	0
2025-06-01	Street light outages	0
2025-06-01	Calls for service by beat and month	16
2025-07-01	Incidents	0
2025-07-01	Street light outages	0
2025-07-01	Calls for service by beat and month	16
2025-08-01	Incidents	0
2025-08-01	Street light outages	0
2025-08-01	Calls for service by beat and month	16
2025-09-01	Incidents	0
2025-09-01	Street light outages	0
2025-09-01	Calls for service by beat and month	16
2025-10-01	Incidents	114
2025-10-01	Street light outages	33
2025-10-01	Calls for service by beat and month	16
2025-11-01	Incidents	125
2025-11-01	Street light outages	26

period	series	value
2025-11-01	Calls for service by beat and month	16
2025-12-01	Incidents	119
2025-12-01	Street light outages	40
2025-12-01	Calls for service by beat and month	16
2026-01-01	Incidents	112
2026-01-01	Street light outages	49
2026-01-01	Calls for service by beat and month	16
2026-02-01	Incidents	90
2026-02-01	Street light outages	44
2026-02-01	Calls for service by beat and month	16
2026-03-01	Incidents	126
2026-03-01	Street light outages	37
2026-03-01	Calls for service by beat and month	16
2026-04-01	Incidents	133
2026-04-01	Street light outages	37
2026-04-01	Calls for service by beat and month	16
2026-05-01	Incidents	162
2026-05-01	Street light outages	28
2026-05-01	Calls for service by beat and month	16
2026-06-01	Incidents	143
2026-06-01	Street light outages	33
2026-06-01	Calls for service by beat and month	16
2026-07-01	Incidents	195
2026-07-01	Street light outages	24
2026-07-01	Calls for service by beat and month	16
2026-08-01	Incidents	179
2026-08-01	Street light outages	33
2026-08-01	Calls for service by beat and month	16
2026-09-01	Incidents	182
2026-09-01	Street light outages	36
2026-09-01	Calls for service by beat and month	16

Figure 2. Timeline lanes: events per month by dataset [5]

lane	period	period_end	value
Incidents	2024-10-01	2024-11-01	0
Incidents	2024-11-01	2024-12-01	0
Incidents	2024-12-01	2025-01-01	0
Incidents	2025-01-01	2025-02-01	0
Incidents	2025-02-01	2025-03-01	0
Incidents	2025-03-01	2025-04-01	0
Incidents	2025-04-01	2025-05-01	0
Incidents	2025-05-01	2025-06-01	0
Incidents	2025-06-01	2025-07-01	0
Incidents	2025-07-01	2025-08-01	0

lane	period	period_end	value
Incidents	2025-08-01	2025-09-01	0
Incidents	2025-09-01	2025-10-01	0
Incidents	2025-10-01	2025-11-01	114
Incidents	2025-11-01	2025-12-01	125
Incidents	2025-12-01	2026-01-01	119
Incidents	2026-01-01	2026-02-01	112
Incidents	2026-02-01	2026-03-01	90
Incidents	2026-03-01	2026-04-01	126
Incidents	2026-04-01	2026-05-01	133
Incidents	2026-05-01	2026-06-01	162
Incidents	2026-06-01	2026-07-01	143
Incidents	2026-07-01	2026-08-01	195
Incidents	2026-08-01	2026-09-01	179
Incidents	2026-09-01	2026-10-01	182
Street light outages	2024-10-01	2024-11-01	0
Street light outages	2024-11-01	2024-12-01	0
Street light outages	2024-12-01	2025-01-01	0
Street light outages	2025-01-01	2025-02-01	0
Street light outages	2025-02-01	2025-03-01	0
Street light outages	2025-03-01	2025-04-01	0
Street light outages	2025-04-01	2025-05-01	0
Street light outages	2025-05-01	2025-06-01	0
Street light outages	2025-06-01	2025-07-01	0
Street light outages	2025-07-01	2025-08-01	0
Street light outages	2025-08-01	2025-09-01	0
Street light outages	2025-09-01	2025-10-01	0
Street light outages	2025-10-01	2025-11-01	33
Street light outages	2025-11-01	2025-12-01	26
Street light outages	2025-12-01	2026-01-01	40
Street light outages	2026-01-01	2026-02-01	49
Street light outages	2026-02-01	2026-03-01	44
Street light outages	2026-03-01	2026-04-01	37
Street light outages	2026-04-01	2026-05-01	37
Street light outages	2026-05-01	2026-06-01	28
Street light outages	2026-06-01	2026-07-01	33
Street light outages	2026-07-01	2026-08-01	24
Street light outages	2026-08-01	2026-09-01	33
Street light outages	2026-09-01	2026-10-01	36
Calls for service by beat and month	2024-10-01	2024-11-01	16
Calls for service by beat and month	2024-11-01	2024-12-01	16
Calls for service by beat and month	2024-12-01	2025-01-01	16

lane	period	period_end	value
Calls for service by beat and month	2025-01-01	2025-02-01	16
Calls for service by beat and month	2025-02-01	2025-03-01	16
Calls for service by beat and month	2025-03-01	2025-04-01	16
Calls for service by beat and month	2025-04-01	2025-05-01	16
Calls for service by beat and month	2025-05-01	2025-06-01	16
Calls for service by beat and month	2025-06-01	2025-07-01	16
Calls for service by beat and month	2025-07-01	2025-08-01	16
Calls for service by beat and month	2025-08-01	2025-09-01	16
Calls for service by beat and month	2025-09-01	2025-10-01	16
Calls for service by beat and month	2025-10-01	2025-11-01	16
Calls for service by beat and month	2025-11-01	2025-12-01	16
Calls for service by beat and month	2025-12-01	2026-01-01	16
Calls for service by beat and month	2026-01-01	2026-02-01	16
Calls for service by beat and month	2026-02-01	2026-03-01	16
Calls for service by beat and month	2026-03-01	2026-04-01	16
Calls for service by beat and month	2026-04-01	2026-05-01	16
Calls for service by beat and month	2026-05-01	2026-06-01	16
Calls for service by beat and month	2026-06-01	2026-07-01	16
Calls for service by beat and month	2026-07-01	2026-08-01	16
Calls for service by beat and month	2026-08-01	2026-09-01	16
Calls for service by beat and month	2026-09-01	2026-10-01	16

Figure 3. Timeline: change from one month to the next [6]

period	period_end	value	previous	change
2024-11-01	2024-12-01	16	16	0
2024-12-01	2025-01-01	16	16	0
2025-01-01	2025-02-01	16	16	0
2025-02-01	2025-03-01	16	16	0
2025-03-01	2025-04-01	16	16	0
2025-04-01	2025-05-01	16	16	0
2025-05-01	2025-06-01	16	16	0

period	period_end	value	previous	change
2025-06-01	2025-07-01	16	16	0
2025-07-01	2025-08-01	16	16	0
2025-08-01	2025-09-01	16	16	0
2025-09-01	2025-10-01	16	16	0
2025-10-01	2025-11-01	163	16	147
2025-11-01	2025-12-01	167	163	4
2025-12-01	2026-01-01	175	167	8
2026-01-01	2026-02-01	177	175	2
2026-02-01	2026-03-01	150	177	-27
2026-03-01	2026-04-01	179	150	29
2026-04-01	2026-05-01	186	179	7
2026-05-01	2026-06-01	206	186	20
2026-06-01	2026-07-01	192	206	-14
2026-07-01	2026-08-01	235	192	43
2026-08-01	2026-09-01	228	235	-7
2026-09-01	2026-10-01	234	228	6

Figure 16. Incidents: count per week [55]

period	value
2025-09-29	16
2025-10-06	25
2025-10-13	29
2025-10-20	19
2025-10-27	31
2025-11-03	37
2025-11-10	31
2025-11-17	31
2025-11-24	20
2025-12-01	22
2025-12-08	32
2025-12-15	28
2025-12-22	24
2025-12-29	32
2026-01-05	22
2026-01-12	24
2026-01-19	26
2026-01-26	24
2026-02-02	18
2026-02-09	18
2026-02-16	26
2026-02-23	29
2026-03-02	16
2026-03-09	23
2026-03-16	34

period	value
2026-03-23	39
2026-03-30	25
2026-04-06	41
2026-04-13	22
2026-04-20	36
2026-04-27	36
2026-05-04	36
2026-05-11	32
2026-05-18	40
2026-05-25	37
2026-06-01	22
2026-06-08	37
2026-06-15	42
2026-06-22	33
2026-06-29	72
2026-07-06	34
2026-07-13	36
2026-07-20	36
2026-07-27	40
2026-08-03	31
2026-08-10	24
2026-08-17	46
2026-08-24	55
2026-08-31	41
2026-09-07	41
2026-09-14	49
2026-09-21	47
2026-09-28	13

Figure 17. Incidents: week of 2026-06-22 to week of 2026-06-29 by place [56]

group	period	value
Market West Beat	week of 2026-06-22	7
Market West Beat	week of 2026-06-29	16
Kingsway Beat	week of 2026-06-22	6
Kingsway Beat	week of 2026-06-29	13
Southgate Beat	week of 2026-06-22	2
Southgate Beat	week of 2026-06-29	9
Elm Park Beat	week of 2026-06-22	5
Elm Park Beat	week of 2026-06-29	9
North River Beat	week of 2026-06-22	5
North River Beat	week of 2026-06-29	9
Granary Beat	week of 2026-06-22	2
Granary Beat	week of 2026-06-29	0
Midtown Beat	week of 2026-06-22	1

group	period	value
Midtown Beat	week of 2026-06-29	3
Old Mill Beat	week of 2026-06-22	1
Old Mill Beat	week of 2026-06-29	3
Westbrook Beat	week of 2026-06-22	0
Westbrook Beat	week of 2026-06-29	2
Brickworks Beat	week of 2026-06-22	0
Brickworks Beat	week of 2026-06-29	1
Cedar Heights Beat	week of 2026-06-22	0
Cedar Heights Beat	week of 2026-06-29	1
Foundry Beat	week of 2026-06-22	0
Foundry Beat	week of 2026-06-29	1
Parkview Beat	week of 2026-06-22	2
Parkview Beat	week of 2026-06-29	1
Station Quarter Beat	week of 2026-06-22	1
Station Quarter Beat	week of 2026-06-29	2
Union Yards Beat	week of 2026-06-22	0
Union Yards Beat	week of 2026-06-29	1

Figure 18. Period change: Incidents (week of 2026-06-22 to week of 2026-06-29) [57]

bin_start	bin_end	count
-1.414	-0.7092	1
-0.7092	-0.00428	1
-0.00428	0.7007	2
0.7007	1.406	8
1.406	2.111	4

Figure 20. Street light outages: count per week [59]

period	value
2025-09-29	4
2025-10-06	6
2025-10-13	6
2025-10-20	10
2025-10-27	10
2025-11-03	7
2025-11-10	7
2025-11-17	4
2025-11-24	5
2025-12-01	14
2025-12-08	11
2025-12-15	7
2025-12-22	7
2025-12-29	11
2026-01-05	9
2026-01-12	9

period	value
2026-01-19	16
2026-01-26	6
2026-02-02	17
2026-02-09	4
2026-02-16	12
2026-02-23	11
2026-03-02	4
2026-03-09	9
2026-03-16	6
2026-03-23	12
2026-03-30	13
2026-04-06	9
2026-04-13	9
2026-04-20	7
2026-04-27	7
2026-05-04	3
2026-05-11	8
2026-05-18	8
2026-05-25	6
2026-06-01	12
2026-06-08	7
2026-06-15	3
2026-06-22	10
2026-06-29	5
2026-07-06	6
2026-07-13	6
2026-07-20	7
2026-07-27	6
2026-08-03	7
2026-08-10	9
2026-08-17	6
2026-08-24	5
2026-08-31	10
2026-09-07	8
2026-09-14	8
2026-09-21	9
2026-09-28	2

Figure 21. Street light outages: week of 2026-02-02 to week of 2026-02-09 by place [60]

group	period	value
Market West Beat	week of 2026-02-02	9
Market West Beat	week of 2026-02-09	2
North River Beat	week of 2026-02-02	3
North River Beat	week of 2026-02-09	0

group	period	value
Parkview Beat	week of 2026-02-02	0
Parkview Beat	week of 2026-02-09	2
Southgate Beat	week of 2026-02-02	2
Southgate Beat	week of 2026-02-09	0
Canal Row Beat	week of 2026-02-02	1
Canal Row Beat	week of 2026-02-09	0
Cedar Heights Beat	week of 2026-02-02	1
Cedar Heights Beat	week of 2026-02-09	0
Westbrook Beat	week of 2026-02-02	1
Westbrook Beat	week of 2026-02-09	0

Figure 22. Period change: Street light outages (week of 2026-02-02 to week of 2026-02-09) [61]

bin_start	bin_end	count
-2.111	-1.406	3
-1.406	-0.7007	3
-0.7007	0.00428	0
0.00428	0.7092	0
0.7092	1.414	1

Figure 29. Hot cells inside each cluster of licensed premises [84]

cluster	features	fraction	share
0	1	0.3333	33.3%
1	1	0.3333	33.3%
2	1	0.3333	33.3%

Figure 31. Change beside the counts per patrol beat [91]

bin_start	bin_end	count
-1.414	-0.7092	1
-0.7092	-0.00428	1
-0.00428	0.7007	2
0.7007	1.406	8
1.406	2.111	4

Figure 33. Change of incidents where density is high [96]

bin_start	bin_end	count
-1.414	-0.7092	1
-0.7092	-0.00428	1
-0.00428	0.7007	2
0.7007	1.406	8
1.406	2.111	4

Figure 35. Hot cells of CCTV cameras per patrol beat [101]

bin_start	bin_end	count
2	3	1
3	4	0
4	5	2

bin_start	bin_end	count
5	6	4
6	7	9

Figure 37. Nearest police station to each cluster of licensed premises [106]

rank	name
1	Central District Station
1	Central District Station
1	Central District Station

Figure 38. Dense areas of street light outages [111]

bin_start	bin_end	count
0	0.8	1
0.8	1.6	1
1.6	2.4	1
2.4	3.2	1
3.2	4	1

Figure 40. Change of street light outages per patrol beat [115]

bin_start	bin_end	count
0	0.2	9
0.2	0.4	0
0.4	0.6	0
0.6	0.8	0
0.8	1	7

Figure 41. Incidents over time (reported_at) [116]

period	series	value
2025-09-29	theft	8
2025-09-29	battery	4
2025-09-29	criminal damage	0
2025-09-29	burglary	1
2025-09-29	motor vehicle theft	0
2025-09-29	Other	3
2025-10-06	theft	8
2025-10-06	battery	1
2025-10-06	criminal damage	3
2025-10-06	burglary	9
2025-10-06	motor vehicle theft	0
2025-10-06	Other	4
2025-10-13	theft	10
2025-10-13	battery	5
2025-10-13	criminal damage	6
2025-10-13	burglary	1
2025-10-13	motor vehicle theft	3
2025-10-13	Other	4

period	series	value
2025-10-20	theft	8
2025-10-20	battery	2
2025-10-20	criminal damage	3
2025-10-20	burglary	2
2025-10-20	motor vehicle theft	2
2025-10-20	Other	2
2025-10-27	theft	11
2025-10-27	battery	5
2025-10-27	criminal damage	3
2025-10-27	burglary	5
2025-10-27	motor vehicle theft	1
2025-10-27	Other	6
2025-11-03	theft	12
2025-11-03	battery	7
2025-11-03	criminal damage	1
2025-11-03	burglary	7
2025-11-03	motor vehicle theft	1
2025-11-03	Other	9
2025-11-10	theft	7
2025-11-10	battery	8
2025-11-10	criminal damage	5
2025-11-10	burglary	2
2025-11-10	motor vehicle theft	4
2025-11-10	Other	5
2025-11-17	theft	9
2025-11-17	battery	4
2025-11-17	criminal damage	5
2025-11-17	burglary	3
2025-11-17	motor vehicle theft	4
2025-11-17	Other	6
2025-11-24	theft	5
2025-11-24	battery	3
2025-11-24	criminal damage	2
2025-11-24	burglary	2
2025-11-24	motor vehicle theft	4
2025-11-24	Other	4
2025-12-01	theft	6
2025-12-01	battery	4
2025-12-01	criminal damage	4
2025-12-01	burglary	3
2025-12-01	motor vehicle theft	0
2025-12-01	Other	5
2025-12-08	theft	8

period	series	value
2025-12-08	battery	3
2025-12-08	criminal damage	8
2025-12-08	burglary	4
2025-12-08	motor vehicle theft	2
2025-12-08	Other	7
2025-12-15	theft	8
2025-12-15	battery	5
2025-12-15	criminal damage	6
2025-12-15	burglary	2
2025-12-15	motor vehicle theft	2
2025-12-15	Other	5
2025-12-22	theft	8
2025-12-22	battery	2
2025-12-22	criminal damage	3
2025-12-22	burglary	5
2025-12-22	motor vehicle theft	2
2025-12-22	Other	4
2025-12-29	theft	11
2025-12-29	battery	2
2025-12-29	criminal damage	6
2025-12-29	burglary	4
2025-12-29	motor vehicle theft	1
2025-12-29	Other	8
2026-01-05	theft	7
2026-01-05	battery	5
2026-01-05	criminal damage	3
2026-01-05	burglary	0
2026-01-05	motor vehicle theft	4
2026-01-05	Other	3
2026-01-12	theft	10
2026-01-12	battery	3
2026-01-12	criminal damage	0
2026-01-12	burglary	5
2026-01-12	motor vehicle theft	3
2026-01-12	Other	3
2026-01-19	theft	10
2026-01-19	battery	1
2026-01-19	criminal damage	1
2026-01-19	burglary	4
2026-01-19	motor vehicle theft	2
2026-01-19	Other	8
2026-01-26	theft	12
2026-01-26	battery	1

period	series	value
2026-01-26	criminal damage	3
2026-01-26	burglary	3
2026-01-26	motor vehicle theft	0
2026-01-26	Other	5
2026-02-02	theft	9
2026-02-02	battery	1
2026-02-02	criminal damage	1
2026-02-02	burglary	1
2026-02-02	motor vehicle theft	4
2026-02-02	Other	2
2026-02-09	theft	6
2026-02-09	battery	2
2026-02-09	criminal damage	2
2026-02-09	burglary	3
2026-02-09	motor vehicle theft	3
2026-02-09	Other	2
2026-02-16	theft	9
2026-02-16	battery	3
2026-02-16	criminal damage	2
2026-02-16	burglary	7
2026-02-16	motor vehicle theft	3
2026-02-16	Other	2
2026-02-23	theft	13
2026-02-23	battery	4
2026-02-23	criminal damage	1
2026-02-23	burglary	0
2026-02-23	motor vehicle theft	6
2026-02-23	Other	5
2026-03-02	theft	5
2026-03-02	battery	1
2026-03-02	criminal damage	1
2026-03-02	burglary	4
2026-03-02	motor vehicle theft	3
2026-03-02	Other	2
2026-03-09	theft	7
2026-03-09	battery	4
2026-03-09	criminal damage	2
2026-03-09	burglary	1
2026-03-09	motor vehicle theft	6
2026-03-09	Other	3
2026-03-16	theft	7
2026-03-16	battery	8
2026-03-16	criminal damage	6

period	series	value
2026-03-16	burglary	7
2026-03-16	motor vehicle theft	1
2026-03-16	Other	5
2026-03-23	theft	9
2026-03-23	battery	4
2026-03-23	criminal damage	5
2026-03-23	burglary	5
2026-03-23	motor vehicle theft	7
2026-03-23	Other	9
2026-03-30	theft	6
2026-03-30	battery	8
2026-03-30	criminal damage	2
2026-03-30	burglary	2
2026-03-30	motor vehicle theft	3
2026-03-30	Other	4
2026-04-06	theft	11
2026-04-06	battery	7
2026-04-06	criminal damage	5
2026-04-06	burglary	8
2026-04-06	motor vehicle theft	5
2026-04-06	Other	5
2026-04-13	theft	8
2026-04-13	battery	7
2026-04-13	criminal damage	1
2026-04-13	burglary	2
2026-04-13	motor vehicle theft	2
2026-04-13	Other	2
2026-04-20	theft	9
2026-04-20	battery	9
2026-04-20	criminal damage	5
2026-04-20	burglary	5
2026-04-20	motor vehicle theft	3
2026-04-20	Other	5
2026-04-27	theft	9
2026-04-27	battery	10
2026-04-27	criminal damage	6
2026-04-27	burglary	4
2026-04-27	motor vehicle theft	2
2026-04-27	Other	5
2026-05-04	theft	14
2026-05-04	battery	2
2026-05-04	criminal damage	7
2026-05-04	burglary	4

period	series	value
2026-05-04	motor vehicle theft	4
2026-05-04	Other	5
2026-05-11	theft	11
2026-05-11	battery	4
2026-05-11	criminal damage	2
2026-05-11	burglary	7
2026-05-11	motor vehicle theft	5
2026-05-11	Other	3
2026-05-18	theft	14
2026-05-18	battery	7
2026-05-18	criminal damage	7
2026-05-18	burglary	3
2026-05-18	motor vehicle theft	3
2026-05-18	Other	6
2026-05-25	theft	14
2026-05-25	battery	5
2026-05-25	criminal damage	7
2026-05-25	burglary	3
2026-05-25	motor vehicle theft	3
2026-05-25	Other	5
2026-06-01	theft	6
2026-06-01	battery	3
2026-06-01	criminal damage	6
2026-06-01	burglary	2
2026-06-01	motor vehicle theft	3
2026-06-01	Other	2
2026-06-08	theft	6
2026-06-08	battery	7
2026-06-08	criminal damage	7
2026-06-08	burglary	7
2026-06-08	motor vehicle theft	5
2026-06-08	Other	5
2026-06-15	theft	8
2026-06-15	battery	14
2026-06-15	criminal damage	4
2026-06-15	burglary	4
2026-06-15	motor vehicle theft	6
2026-06-15	Other	6
2026-06-22	theft	12
2026-06-22	battery	6
2026-06-22	criminal damage	10
2026-06-22	burglary	1
2026-06-22	motor vehicle theft	2

period	series	value
2026-06-22	Other	2
2026-06-29	theft	20
2026-06-29	battery	21
2026-06-29	criminal damage	9
2026-06-29	burglary	6
2026-06-29	motor vehicle theft	7
2026-06-29	Other	9
2026-07-06	theft	12
2026-07-06	battery	7
2026-07-06	criminal damage	1
2026-07-06	burglary	7
2026-07-06	motor vehicle theft	3
2026-07-06	Other	4
2026-07-13	theft	9
2026-07-13	battery	4
2026-07-13	criminal damage	4
2026-07-13	burglary	4
2026-07-13	motor vehicle theft	7
2026-07-13	Other	8
2026-07-20	theft	7
2026-07-20	battery	9
2026-07-20	criminal damage	6
2026-07-20	burglary	2
2026-07-20	motor vehicle theft	3
2026-07-20	Other	9
2026-07-27	theft	15
2026-07-27	battery	5
2026-07-27	criminal damage	6
2026-07-27	burglary	3
2026-07-27	motor vehicle theft	7
2026-07-27	Other	4
2026-08-03	theft	11
2026-08-03	battery	7
2026-08-03	criminal damage	4
2026-08-03	burglary	1
2026-08-03	motor vehicle theft	4
2026-08-03	Other	4
2026-08-10	theft	11
2026-08-10	battery	2
2026-08-10	criminal damage	3
2026-08-10	burglary	1
2026-08-10	motor vehicle theft	4
2026-08-10	Other	3

period	series	value
2026-08-17	theft	18
2026-08-17	battery	6
2026-08-17	criminal damage	7
2026-08-17	burglary	5
2026-08-17	motor vehicle theft	6
2026-08-17	Other	4
2026-08-24	theft	18
2026-08-24	battery	7
2026-08-24	criminal damage	5
2026-08-24	burglary	5
2026-08-24	motor vehicle theft	8
2026-08-24	Other	12
2026-08-31	theft	15
2026-08-31	battery	8
2026-08-31	criminal damage	2
2026-08-31	burglary	3
2026-08-31	motor vehicle theft	6
2026-08-31	Other	7
2026-09-07	theft	19
2026-09-07	battery	3
2026-09-07	criminal damage	3
2026-09-07	burglary	5
2026-09-07	motor vehicle theft	2
2026-09-07	Other	9
2026-09-14	theft	15
2026-09-14	battery	12
2026-09-14	criminal damage	4
2026-09-14	burglary	7
2026-09-14	motor vehicle theft	4
2026-09-14	Other	7
2026-09-21	theft	17
2026-09-21	battery	9
2026-09-21	criminal damage	1
2026-09-21	burglary	5
2026-09-21	motor vehicle theft	7
2026-09-21	Other	8
2026-09-28	theft	1
2026-09-28	battery	5
2026-09-28	criminal damage	1
2026-09-28	burglary	0
2026-09-28	motor vehicle theft	1
2026-09-28	Other	5

Figure 42. Street light outages over time (reported_at) [117]

period	series	value
2025-09-29	lamp failure	2
2025-09-29	cable fault	1
2025-09-29	vandalism	1
2025-09-29	collision	0
2025-10-06	lamp failure	4
2025-10-06	cable fault	0
2025-10-06	vandalism	2
2025-10-06	collision	0
2025-10-13	lamp failure	4
2025-10-13	cable fault	0
2025-10-13	vandalism	2
2025-10-13	collision	0
2025-10-20	lamp failure	6
2025-10-20	cable fault	3
2025-10-20	vandalism	0
2025-10-20	collision	1
2025-10-27	lamp failure	3
2025-10-27	cable fault	3
2025-10-27	vandalism	3
2025-10-27	collision	1
2025-11-03	lamp failure	4
2025-11-03	cable fault	2
2025-11-03	vandalism	1
2025-11-03	collision	0
2025-11-10	lamp failure	5
2025-11-10	cable fault	1
2025-11-10	vandalism	1
2025-11-10	collision	0
2025-11-17	lamp failure	2
2025-11-17	cable fault	1
2025-11-17	vandalism	1
2025-11-17	collision	0
2025-11-24	lamp failure	2
2025-11-24	cable fault	0
2025-11-24	vandalism	2
2025-11-24	collision	1
2025-12-01	lamp failure	6
2025-12-01	cable fault	4
2025-12-01	vandalism	2
2025-12-01	collision	2
2025-12-08	lamp failure	6
2025-12-08	cable fault	1
2025-12-08	vandalism	2

period	series	value
2025-12-08	collision	2
2025-12-15	lamp failure	2
2025-12-15	cable fault	2
2025-12-15	vandalism	2
2025-12-15	collision	1
2025-12-22	lamp failure	2
2025-12-22	cable fault	4
2025-12-22	vandalism	0
2025-12-22	collision	1
2025-12-29	lamp failure	7
2025-12-29	cable fault	3
2025-12-29	vandalism	0
2025-12-29	collision	1
2026-01-05	lamp failure	5
2026-01-05	cable fault	3
2026-01-05	vandalism	1
2026-01-05	collision	0
2026-01-12	lamp failure	5
2026-01-12	cable fault	1
2026-01-12	vandalism	1
2026-01-12	collision	2
2026-01-19	lamp failure	6
2026-01-19	cable fault	6
2026-01-19	vandalism	3
2026-01-19	collision	1
2026-01-26	lamp failure	1
2026-01-26	cable fault	2
2026-01-26	vandalism	1
2026-01-26	collision	2
2026-02-02	lamp failure	8
2026-02-02	cable fault	1
2026-02-02	vandalism	5
2026-02-02	collision	3
2026-02-09	lamp failure	2
2026-02-09	cable fault	1
2026-02-09	vandalism	0
2026-02-09	collision	1
2026-02-16	lamp failure	4
2026-02-16	cable fault	1
2026-02-16	vandalism	4
2026-02-16	collision	3
2026-02-23	lamp failure	6
2026-02-23	cable fault	2

period	series	value
2026-02-23	vandalism	1
2026-02-23	collision	2
2026-03-02	lamp failure	1
2026-03-02	cable fault	3
2026-03-02	vandalism	0
2026-03-02	collision	0
2026-03-09	lamp failure	4
2026-03-09	cable fault	4
2026-03-09	vandalism	0
2026-03-09	collision	1
2026-03-16	lamp failure	3
2026-03-16	cable fault	2
2026-03-16	vandalism	1
2026-03-16	collision	0
2026-03-23	lamp failure	8
2026-03-23	cable fault	1
2026-03-23	vandalism	3
2026-03-23	collision	0
2026-03-30	lamp failure	10
2026-03-30	cable fault	1
2026-03-30	vandalism	1
2026-03-30	collision	1
2026-04-06	lamp failure	3
2026-04-06	cable fault	3
2026-04-06	vandalism	2
2026-04-06	collision	1
2026-04-13	lamp failure	6
2026-04-13	cable fault	2
2026-04-13	vandalism	1
2026-04-13	collision	0
2026-04-20	lamp failure	4
2026-04-20	cable fault	1
2026-04-20	vandalism	2
2026-04-20	collision	0
2026-04-27	lamp failure	3
2026-04-27	cable fault	3
2026-04-27	vandalism	1
2026-04-27	collision	0
2026-05-04	lamp failure	0
2026-05-04	cable fault	1
2026-05-04	vandalism	0
2026-05-04	collision	2
2026-05-11	lamp failure	5

period	series	value
2026-05-11	cable fault	1
2026-05-11	vandalism	2
2026-05-11	collision	0
2026-05-18	lamp failure	5
2026-05-18	cable fault	2
2026-05-18	vandalism	0
2026-05-18	collision	1
2026-05-25	lamp failure	5
2026-05-25	cable fault	1
2026-05-25	vandalism	0
2026-05-25	collision	0
2026-06-01	lamp failure	9
2026-06-01	cable fault	1
2026-06-01	vandalism	1
2026-06-01	collision	1
2026-06-08	lamp failure	4
2026-06-08	cable fault	0
2026-06-08	vandalism	3
2026-06-08	collision	0
2026-06-15	lamp failure	0
2026-06-15	cable fault	1
2026-06-15	vandalism	1
2026-06-15	collision	1
2026-06-22	lamp failure	4
2026-06-22	cable fault	3
2026-06-22	vandalism	1
2026-06-22	collision	2
2026-06-29	lamp failure	2
2026-06-29	cable fault	1
2026-06-29	vandalism	1
2026-06-29	collision	1
2026-07-06	lamp failure	4
2026-07-06	cable fault	1
2026-07-06	vandalism	0
2026-07-06	collision	1
2026-07-13	lamp failure	4
2026-07-13	cable fault	1
2026-07-13	vandalism	1
2026-07-13	collision	0
2026-07-20	lamp failure	1
2026-07-20	cable fault	4
2026-07-20	vandalism	0
2026-07-20	collision	2

period	series	value
2026-07-27	lamp failure	4
2026-07-27	cable fault	0
2026-07-27	vandalism	1
2026-07-27	collision	1
2026-08-03	lamp failure	5
2026-08-03	cable fault	1
2026-08-03	vandalism	0
2026-08-03	collision	1
2026-08-10	lamp failure	3
2026-08-10	cable fault	6
2026-08-10	vandalism	0
2026-08-10	collision	0
2026-08-17	lamp failure	2
2026-08-17	cable fault	2
2026-08-17	vandalism	1
2026-08-17	collision	1
2026-08-24	lamp failure	3
2026-08-24	cable fault	0
2026-08-24	vandalism	1
2026-08-24	collision	1
2026-08-31	lamp failure	4
2026-08-31	cable fault	5
2026-08-31	vandalism	0
2026-08-31	collision	1
2026-09-07	lamp failure	2
2026-09-07	cable fault	3
2026-09-07	vandalism	2
2026-09-07	collision	1
2026-09-14	lamp failure	4
2026-09-14	cable fault	1
2026-09-14	vandalism	2
2026-09-14	collision	1
2026-09-21	lamp failure	4
2026-09-21	cable fault	3
2026-09-21	vandalism	1
2026-09-21	collision	1
2026-09-28	lamp failure	1
2026-09-28	cable fault	0
2026-09-28	vandalism	0
2026-09-28	collision	1

Figure 43. CCTV cameras over time (installed_year) [118]

bin_start	bin_end	count
2,012	2,014	9

bin_start	bin_end	count
2,014	2,016	7
2,016	2,018	8
2,018	2,019	11
2,019	2,021	11
2,021	2,023	8
2,023	2,025	6

Figure 44. Calls for service by beat and month over time (month) [119]

period	value
2024-10-01	3,466
2024-11-01	3,080
2024-12-01	2,721
2025-01-01	2,613
2025-02-01	2,623
2025-03-01	2,843
2025-04-01	3,288
2025-05-01	3,726
2025-06-01	4,161
2025-07-01	4,458
2025-08-01	4,448
2025-09-01	4,171
2025-10-01	3,824
2025-11-01	3,418
2025-12-01	2,939
2026-01-01	2,808
2026-02-01	2,892
2026-03-01	3,079
2026-04-01	3,632
2026-05-01	4,128
2026-06-01	4,507
2026-07-01	4,792
2026-08-01	4,812
2026-09-01	4,551

Figure 45. Hot spot analysis: CCTV cameras [120]

bin_start	bin_end	band	band_label	count
-2	-1.5	cold_90	Cold spot, 90% confidence	1
-2	-1.5	not_significant	Not significant	1
-1.5	-1	not_significant	Not significant	1
-1	-0.5	not_significant	Not significant	10
-0.5	0	not_significant	Not significant	4
0	0.5	not_significant	Not significant	5
0.5	1	not_significant	Not significant	2
1	1.5	not_significant	Not significant	4

bin_start	bin_end	band	band_label	count
1.5	2	hot_90	Hot spot, 90% confidence	1
1.5	2	hot_95	Hot spot, 95% confidence	1
2	2.5	hot_95	Hot spot, 95% confidence	5
2.5	3	hot_99	Hot spot, 99% confidence	1

Figure 46. Hot spot analysis: Licensed premises [121]

bin_start	bin_end	band	band_label	count
-1.5	-1	not_significant	Not significant	12
-1	-0.5	not_significant	Not significant	49
-0.5	0	not_significant	Not significant	28
0	0.5	not_significant	Not significant	2
0.5	1	not_significant	Not significant	2
1	1.5	not_significant	Not significant	2
1.5	2	hot_90	Hot spot, 90% confidence	2
1.5	2	not_significant	Not significant	1
2	2.5	hot_95	Hot spot, 95% confidence	2
3	3.5	hot_99	Hot spot, 99% confidence	3
3.5	4	hot_99	Hot spot, 99% confidence	1
4	4.5	hot_99	Hot spot, 99% confidence	2
4.5	5	hot_99	Hot spot, 99% confidence	2
5	5.5	hot_99	Hot spot, 99% confidence	1
5.5	6	hot_99	Hot spot, 99% confidence	3

Figure 47. Emerging hot spots: Incidents [122]

bin_start	bin_end	count
-0.659	-0.1378	163
-0.1378	0.3834	72
0.3834	0.9046	2
0.9046	1.426	0
1.426	1.947	19
1.947	2.468	6
2.468	2.989	0
2.989	3.511	0
3.511	4.032	6
4.032	4.553	2

Figure 48. Emerging hot spots: Street light outages [123]

bin_start	bin_end	count
-0.707	-0.2919	28
-0.2919	0.1233	0
0.1233	0.5384	14
0.5384	0.9536	0
0.9536	1.369	4
1.369	1.784	0
1.784	2.199	1

Figure 49. Find point clusters: Licensed premises [124]

cluster	features	fraction	share
Noise	61	0.5083	50.8%
0	53	0.4417	44.2%
1	3	0.025	2.5%
2	3	0.025	2.5%

Figure 50. Find point clusters: cluster hulls [125]

cluster	features	fraction	share
0	1	0.3333	33.3%
1	1	0.3333	33.3%
2	1	0.3333	33.3%

Figure 51. Find point clusters: Incidents [126]

cluster	features	fraction	share
Noise	1,609	0.9577	95.8%
0	30	0.01786	1.8%
1	21	0.0125	1.2%
2	20	0.01191	1.2%

Figure 52. Find point clusters: cluster hulls [127]

cluster	features	fraction	share
0	1	0.3333	33.3%
1	1	0.3333	33.3%
2	1	0.3333	33.3%

Figure 53. Find point clusters: Street light outages [128]

cluster	features	fraction	share
Noise	410	0.9762	97.6%
0	10	0.02381	2.4%

Figure 54. Find point clusters: cluster hulls [129]

cluster	features	fraction	share
0	1	1	100.0%

Figure 55. Summarize within: Patrol beats [130]

bin_start	bin_end	count
1	3.4	11
3.4	5.8	3

bin_start	bin_end	count
5.8	8.2	1
8.2	10.6	0
10.6	13	1

Figure 56. Summarize within: Patrol beats [131]

bin_start	bin_end	count
1	7	10
7	13	4
13	19	0
19	25	1
25	31	1

Figure 57. Summarize within: Patrol beats [132]

bin_start	bin_end	count
18	80.8	10
80.8	143.6	2
143.6	206.4	2
206.4	269.2	0
269.2	332	2

Figure 58. Calculate density: Licensed premises [133]

bin_start	bin_end	count
0	1.556	15
1.556	3.111	22
3.111	4.667	13
4.667	6.222	26
6.222	7.778	14
7.778	9.333	26
9.333	10.89	10
10.89	12.44	23
12.44	14	15

Figure 59. Calculate density: Incidents [134]

bin_start	bin_end	count
0	4.846	172
4.846	9.692	242
9.692	14.54	246
14.54	19.38	260
19.38	24.23	260
24.23	29.08	240
29.08	33.92	204
33.92	38.77	261
38.77	43.62	264
43.62	48.46	266
48.46	53.31	262

bin_start	bin_end	count
53.31	58.15	153
58.15	63	44

Figure 60. Calculate density: Street light outages [135]

bin_start	bin_end	count
0	2.909	59
2.909	5.818	84
5.818	8.727	82
8.727	11.64	85
11.64	14.55	79
14.55	17.45	85
17.45	20.36	86
20.36	23.27	87
23.27	26.18	87
26.18	29.09	80
29.09	32	34

Figure 61. Hot spot analysis: Incidents [136]

bin_start	bin_end	band	band_label	count
-1.5	-1	not_significant	Not significant	685
-1	-0.5	not_significant	Not significant	757
-0.5	0	not_significant	Not significant	714
0	0.5	not_significant	Not significant	318
0.5	1	not_significant	Not significant	104
1	1.5	not_significant	Not significant	125
1.5	2	hot_90	Hot spot, 90% confidence	13
1.5	2	not_significant	Not significant	27
2	2.5	hot_95	Hot spot, 95% confidence	35
2.5	3	hot_99	Hot spot, 99% confidence	26
3	3.5	hot_99	Hot spot, 99% confidence	8
3.5	4	hot_99	Hot spot, 99% confidence	8
4	4.5	hot_99	Hot spot, 99% confidence	5
4.5	5	hot_99	Hot spot, 99% confidence	7
5	5.5	hot_99	Hot spot, 99% confidence	2
5.5	6	hot_99	Hot spot, 99% confidence	4
6	6.5	hot_99	Hot spot, 99% confidence	3
6.5	7	hot_99	Hot spot, 99% confidence	5

bin_start	bin_end	band	band_label	count
7	7.5	hot_99	Hot spot, 99% confidence	5
7.5	8	hot_99	Hot spot, 99% confidence	3
8	8.5	hot_99	Hot spot, 99% confidence	2
8.5	9	hot_99	Hot spot, 99% confidence	4
9	9.5	hot_99	Hot spot, 99% confidence	2
9.5	10	hot_99	Hot spot, 99% confidence	2
10.5	11	hot_99	Hot spot, 99% confidence	1
11	11.5	hot_99	Hot spot, 99% confidence	3
11.5	12	hot_99	Hot spot, 99% confidence	3
12	12.5	hot_99	Hot spot, 99% confidence	4
12.5	13	hot_99	Hot spot, 99% confidence	4
13	13.5	hot_99	Hot spot, 99% confidence	3
13.5	14	hot_99	Hot spot, 99% confidence	2
14.5	15	hot_99	Hot spot, 99% confidence	3
15	15.5	hot_99	Hot spot, 99% confidence	2
15.5	16	hot_99	Hot spot, 99% confidence	1
16	16.5	hot_99	Hot spot, 99% confidence	1
16.5	17	hot_99	Hot spot, 99% confidence	2
17	17.5	hot_99	Hot spot, 99% confidence	1
18	18.5	hot_99	Hot spot, 99% confidence	1
19	19.5	hot_99	Hot spot, 99% confidence	1
20.5	21	hot_99	Hot spot, 99% confidence	5
21	21.5	hot_99	Hot spot, 99% confidence	2
21.5	22	hot_99	Hot spot, 99% confidence	2
22	22.5	hot_99	Hot spot, 99% confidence	2
22.5	23	hot_99	Hot spot, 99% confidence	1

bin_start	bin_end	band	band_label	count
23.5	24	hot_99	Hot spot, 99% confidence	1
24	24.5	hot_99	Hot spot, 99% confidence	1
24.5	25	hot_99	Hot spot, 99% confidence	1
26	26.5	hot_99	Hot spot, 99% confidence	1

Figure 62. Repeat and near repeat classification: Incidents [137]

period	series	value
2025-09-29	no arrest	13
2025-09-29	arrest	3
2025-10-06	no arrest	20
2025-10-06	arrest	5
2025-10-13	no arrest	24
2025-10-13	arrest	5
2025-10-20	no arrest	19
2025-10-20	arrest	0
2025-10-27	no arrest	25
2025-10-27	arrest	6
2025-11-03	no arrest	31
2025-11-03	arrest	6
2025-11-10	no arrest	28
2025-11-10	arrest	3
2025-11-17	no arrest	24
2025-11-17	arrest	7
2025-11-24	no arrest	16
2025-11-24	arrest	4
2025-12-01	no arrest	21
2025-12-01	arrest	1
2025-12-08	no arrest	29
2025-12-08	arrest	3
2025-12-15	no arrest	26
2025-12-15	arrest	2
2025-12-22	no arrest	23
2025-12-22	arrest	1
2025-12-29	no arrest	27
2025-12-29	arrest	5
2026-01-05	no arrest	19
2026-01-05	arrest	3
2026-01-12	no arrest	17
2026-01-12	arrest	7
2026-01-19	no arrest	22
2026-01-19	arrest	4

period	series	value
2026-01-26	no arrest	22
2026-01-26	arrest	2
2026-02-02	no arrest	17
2026-02-02	arrest	1
2026-02-09	no arrest	16
2026-02-09	arrest	2
2026-02-16	no arrest	25
2026-02-16	arrest	1
2026-02-23	no arrest	29
2026-02-23	arrest	0
2026-03-02	no arrest	13
2026-03-02	arrest	3
2026-03-09	no arrest	22
2026-03-09	arrest	1
2026-03-16	no arrest	31
2026-03-16	arrest	3
2026-03-23	no arrest	32
2026-03-23	arrest	7
2026-03-30	no arrest	20
2026-03-30	arrest	5
2026-04-06	no arrest	37
2026-04-06	arrest	4
2026-04-13	no arrest	19
2026-04-13	arrest	3
2026-04-20	no arrest	34
2026-04-20	arrest	2
2026-04-27	no arrest	33
2026-04-27	arrest	3
2026-05-04	no arrest	31
2026-05-04	arrest	5
2026-05-11	no arrest	25
2026-05-11	arrest	7
2026-05-18	no arrest	39
2026-05-18	arrest	1
2026-05-25	no arrest	34
2026-05-25	arrest	3
2026-06-01	no arrest	21
2026-06-01	arrest	1
2026-06-08	no arrest	33
2026-06-08	arrest	4
2026-06-15	no arrest	34
2026-06-15	arrest	8
2026-06-22	no arrest	28

period	series	value
2026-06-22	arrest	5
2026-06-29	no arrest	58
2026-06-29	arrest	14
2026-07-06	no arrest	29
2026-07-06	arrest	5
2026-07-13	no arrest	36
2026-07-13	arrest	0
2026-07-20	no arrest	27
2026-07-20	arrest	9
2026-07-27	no arrest	36
2026-07-27	arrest	4
2026-08-03	no arrest	27
2026-08-03	arrest	4
2026-08-10	no arrest	21
2026-08-10	arrest	3
2026-08-17	no arrest	43
2026-08-17	arrest	3
2026-08-24	no arrest	48
2026-08-24	arrest	7
2026-08-31	no arrest	38
2026-08-31	arrest	3
2026-09-07	no arrest	35
2026-09-07	arrest	6
2026-09-14	no arrest	43
2026-09-14	arrest	6
2026-09-21	no arrest	38
2026-09-21	arrest	9
2026-09-28	no arrest	11
2026-09-28	arrest	2

Figure 63. Repeat and near repeat classification: Incidents over time [138]

period	series	value
2025-09-29	no arrest	13
2025-09-29	arrest	3
2025-10-06	no arrest	20
2025-10-06	arrest	5
2025-10-13	no arrest	24
2025-10-13	arrest	5
2025-10-20	no arrest	19
2025-10-20	arrest	0
2025-10-27	no arrest	25
2025-10-27	arrest	6
2025-11-03	no arrest	31
2025-11-03	arrest	6

period	series	value
2025-11-10	no arrest	28
2025-11-10	arrest	3
2025-11-17	no arrest	24
2025-11-17	arrest	7
2025-11-24	no arrest	16
2025-11-24	arrest	4
2025-12-01	no arrest	21
2025-12-01	arrest	1
2025-12-08	no arrest	29
2025-12-08	arrest	3
2025-12-15	no arrest	26
2025-12-15	arrest	2
2025-12-22	no arrest	23
2025-12-22	arrest	1
2025-12-29	no arrest	27
2025-12-29	arrest	5
2026-01-05	no arrest	19
2026-01-05	arrest	3
2026-01-12	no arrest	17
2026-01-12	arrest	7
2026-01-19	no arrest	22
2026-01-19	arrest	4
2026-01-26	no arrest	22
2026-01-26	arrest	2
2026-02-02	no arrest	17
2026-02-02	arrest	1
2026-02-09	no arrest	16
2026-02-09	arrest	2
2026-02-16	no arrest	25
2026-02-16	arrest	1
2026-02-23	no arrest	29
2026-02-23	arrest	0
2026-03-02	no arrest	13
2026-03-02	arrest	3
2026-03-09	no arrest	22
2026-03-09	arrest	1
2026-03-16	no arrest	31
2026-03-16	arrest	3
2026-03-23	no arrest	32
2026-03-23	arrest	7
2026-03-30	no arrest	20
2026-03-30	arrest	5
2026-04-06	no arrest	37

period	series	value
2026-04-06	arrest	4
2026-04-13	no arrest	19
2026-04-13	arrest	3
2026-04-20	no arrest	34
2026-04-20	arrest	2
2026-04-27	no arrest	33
2026-04-27	arrest	3
2026-05-04	no arrest	31
2026-05-04	arrest	5
2026-05-11	no arrest	25
2026-05-11	arrest	7
2026-05-18	no arrest	39
2026-05-18	arrest	1
2026-05-25	no arrest	34
2026-05-25	arrest	3
2026-06-01	no arrest	21
2026-06-01	arrest	1
2026-06-08	no arrest	33
2026-06-08	arrest	4
2026-06-15	no arrest	34
2026-06-15	arrest	8
2026-06-22	no arrest	28
2026-06-22	arrest	5
2026-06-29	no arrest	58
2026-06-29	arrest	14
2026-07-06	no arrest	29
2026-07-06	arrest	5
2026-07-13	no arrest	36
2026-07-13	arrest	0
2026-07-20	no arrest	27
2026-07-20	arrest	9
2026-07-27	no arrest	36
2026-07-27	arrest	4
2026-08-03	no arrest	27
2026-08-03	arrest	4
2026-08-10	no arrest	21
2026-08-10	arrest	3
2026-08-17	no arrest	43
2026-08-17	arrest	3
2026-08-24	no arrest	48
2026-08-24	arrest	7
2026-08-31	no arrest	38
2026-08-31	arrest	3

period	series	value
2026-09-07	no arrest	35
2026-09-07	arrest	6
2026-09-14	no arrest	43
2026-09-14	arrest	6
2026-09-21	no arrest	38
2026-09-21	arrest	9
2026-09-28	no arrest	11
2026-09-28	arrest	2

Figure 64. Find point clusters: Street light outages over time [139]

period	series	value
2025-10-01	lamp failure	15
2025-10-01	cable fault	3
2025-10-01	vandalism	6
2025-10-01	collision	1
2025-11-01	lamp failure	16
2025-11-01	cable fault	8
2025-11-01	vandalism	5
2025-11-01	collision	1
2025-12-01	lamp failure	17
2025-12-01	cable fault	11
2025-12-01	vandalism	8
2025-12-01	collision	7
2026-01-01	lamp failure	22
2026-01-01	cable fault	13
2026-01-01	vandalism	6
2026-01-01	collision	4
2026-02-01	lamp failure	19
2026-02-01	cable fault	6
2026-02-01	vandalism	9
2026-02-01	collision	9
2026-03-01	lamp failure	15
2026-03-01	cable fault	11
2026-03-01	vandalism	2
2026-03-01	collision	3
2026-04-01	lamp failure	23
2026-04-01	cable fault	6
2026-04-01	vandalism	8
2026-04-01	collision	2
2026-05-01	lamp failure	17
2026-05-01	cable fault	8
2026-05-01	vandalism	3
2026-05-01	collision	3
2026-06-01	lamp failure	20

period	series	value
2026-06-01	cable fault	4
2026-06-01	vandalism	5
2026-06-01	collision	3
2026-07-01	lamp failure	13
2026-07-01	cable fault	8
2026-07-01	vandalism	3
2026-07-01	collision	4
2026-08-01	lamp failure	13
2026-08-01	cable fault	8
2026-08-01	vandalism	3
2026-08-01	collision	4
2026-09-01	lamp failure	15
2026-09-01	cable fault	11
2026-09-01	vandalism	5
2026-09-01	collision	4
2026-10-01	lamp failure	4
2026-10-01	cable fault	3
2026-10-01	vandalism	1
2026-10-01	collision	2

Figure 65. Find point clusters: Incidents over time [140]

period	series	value
2025-09-29	no arrest	13
2025-09-29	arrest	3
2025-10-06	no arrest	20
2025-10-06	arrest	5
2025-10-13	no arrest	24
2025-10-13	arrest	5
2025-10-20	no arrest	19
2025-10-20	arrest	0
2025-10-27	no arrest	25
2025-10-27	arrest	6
2025-11-03	no arrest	31
2025-11-03	arrest	6
2025-11-10	no arrest	28
2025-11-10	arrest	3
2025-11-17	no arrest	24
2025-11-17	arrest	7
2025-11-24	no arrest	16
2025-11-24	arrest	4
2025-12-01	no arrest	21
2025-12-01	arrest	1
2025-12-08	no arrest	29
2025-12-08	arrest	3

period	series	value
2025-12-15	no arrest	26
2025-12-15	arrest	2
2025-12-22	no arrest	23
2025-12-22	arrest	1
2025-12-29	no arrest	27
2025-12-29	arrest	5
2026-01-05	no arrest	19
2026-01-05	arrest	3
2026-01-12	no arrest	17
2026-01-12	arrest	7
2026-01-19	no arrest	22
2026-01-19	arrest	4
2026-01-26	no arrest	22
2026-01-26	arrest	2
2026-02-02	no arrest	17
2026-02-02	arrest	1
2026-02-09	no arrest	16
2026-02-09	arrest	2
2026-02-16	no arrest	25
2026-02-16	arrest	1
2026-02-23	no arrest	29
2026-02-23	arrest	0
2026-03-02	no arrest	13
2026-03-02	arrest	3
2026-03-09	no arrest	22
2026-03-09	arrest	1
2026-03-16	no arrest	31
2026-03-16	arrest	3
2026-03-23	no arrest	32
2026-03-23	arrest	7
2026-03-30	no arrest	20
2026-03-30	arrest	5
2026-04-06	no arrest	37
2026-04-06	arrest	4
2026-04-13	no arrest	19
2026-04-13	arrest	3
2026-04-20	no arrest	34
2026-04-20	arrest	2
2026-04-27	no arrest	33
2026-04-27	arrest	3
2026-05-04	no arrest	31
2026-05-04	arrest	5
2026-05-11	no arrest	25

period	series	value
2026-05-11	arrest	7
2026-05-18	no arrest	39
2026-05-18	arrest	1
2026-05-25	no arrest	34
2026-05-25	arrest	3
2026-06-01	no arrest	21
2026-06-01	arrest	1
2026-06-08	no arrest	33
2026-06-08	arrest	4
2026-06-15	no arrest	34
2026-06-15	arrest	8
2026-06-22	no arrest	28
2026-06-22	arrest	5
2026-06-29	no arrest	58
2026-06-29	arrest	14
2026-07-06	no arrest	29
2026-07-06	arrest	5
2026-07-13	no arrest	36
2026-07-13	arrest	0
2026-07-20	no arrest	27
2026-07-20	arrest	9
2026-07-27	no arrest	36
2026-07-27	arrest	4
2026-08-03	no arrest	27
2026-08-03	arrest	4
2026-08-10	no arrest	21
2026-08-10	arrest	3
2026-08-17	no arrest	43
2026-08-17	arrest	3
2026-08-24	no arrest	48
2026-08-24	arrest	7
2026-08-31	no arrest	38
2026-08-31	arrest	3
2026-09-07	no arrest	35
2026-09-07	arrest	6
2026-09-14	no arrest	43
2026-09-14	arrest	6
2026-09-21	no arrest	38
2026-09-21	arrest	9
2026-09-28	no arrest	11
2026-09-28	arrest	2