Grid-Partitioned Incident Occurrences in Greater Nashville Area

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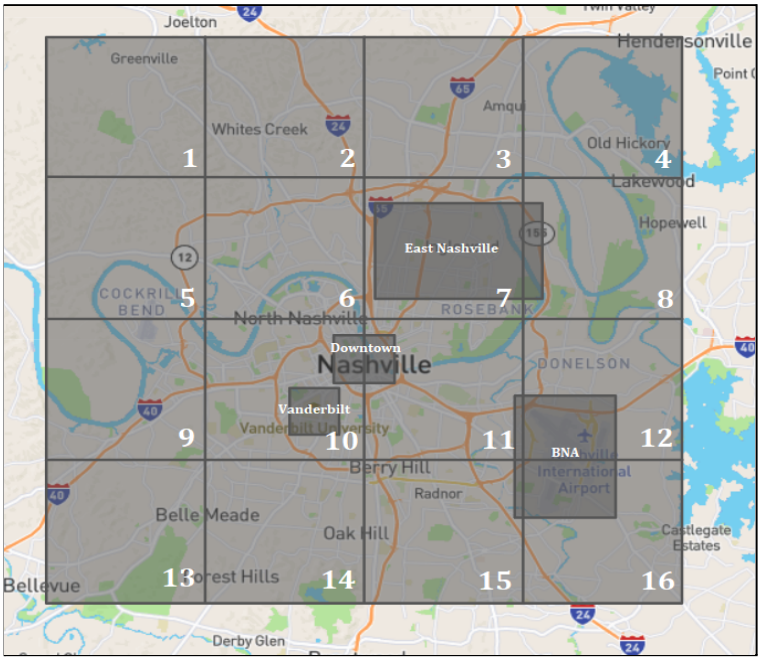
Query #1: Partitioning Nashville into 16 Grids and Further Areas of Interest

```
SELECT * FROM "incidents"."showdown_merge"
WHERE latitude >= XXXX AND latitude < YYYY
AND longitude >= ZZZZ AND longitude < WWWW;
```

Explanation: For further querying areas of interest (e.g. Vanderbilt, Downtown, BNA, and East Nashville), as well as for further ML processing, we use geojson.io to extract latitude boundaries (XXXX, YYYY) and longitude boundaries (ZZZZ, WWWW) to split up the dataset by geolocation.

Quadrant Grid



Results for Quadrant 1 stored in**: geo_q1**
Results for Quadrant 2 stored in**: geo_q2**
Results for Quadrant 3 stored in**: geo_q3**
Results for Quadrant 4 stored in**: geo_q4**
Results for Quadrant 5 stored in**: geo_q5**
Results for Quadrant 6 stored in**: geo_q6**
Results for Quadrant 7 stored in**: geo_q7**
Results for Quadrant 8 stored in**: geo_q8**
Results for Quadrant 9 stored in**: geo_q9**
Results for Quadrant 10 stored in**: geo_q10**
Results for Quadrant 11 stored in**: geo_q11**
Results for Quadrant 12 stored in**: geo_q12**
Results for Quadrant 13 stored in**: geo_q13**
Results for Quadrant 14 stored in**: geo_q14**
Results for Quadrant 15 stored in**: geo_q15**
Results for Quadrant 16 stored in**: geo_q16**

Results for Vanderbilt Quadrant: **geo_vanderbilt** | View Name: **vanderbilt**
Results for Downtown Quadrant: **geo_downtown** | View Name: **downtown**
Results for BNA Quadrant: **geo_bna_airport** | View Name: **bna**
Results for East Nashville Quadrant: **geo_east_nash** | View Name: **eastnashville**

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Query #2: Incident Frequency by Area of Interest

```
SELECT COUNT(distinct incident_id) as num_incidents, month FROM "incidents".”XXXX”
```

Explanation: Count unique incident IDs for a region, where XXXX is the View Name

Results for Vanderbilt Quadrant stored in: **geo_qnum_vandy**
Results for Downtown Quadrant stored in: **geo_qnum_dtown**
Results for BNA Quadrant stored in: **geo_qnum_bna**
Results for Vanderbilt Quadrant stored in: **geo_qnum_east**

Query #3: Incident Frequency by Month for Vanderbilt

```
SELECT COUNT(distinct incident_id) as num_incidents, month FROM "incidents"."vanderbilt"
GROUP BY month ORDER BY month;
```

Results stored in: **geo_qnum_vandy_month**

Query #4: Incident Frequency by Window for Vanderbilt

```
SELECT COUNT(distinct incident_id) as num_incidents FROM "incidents"."vanderbilt"
WHERE month = 8 GROUP BY window_of_day ORDER BY window_of_day;
```

Results stored in: **geo_qnum_vandy_window**

Query #5: Incident Frequency by Year for Vanderbilt

```
SELECT COUNT(distinct incident_id) as num_incidents, year FROM "incidents"."vanderbilt"
GROUP BYyear ORDER BY year;
```

Results stored in :**geo_qnum_vandy_year**

Query #6: Incident Frequency by Hour for Downtown

```
SELECT COUNT(distinct incident_id) as num_incidents, hour_of_day FROM "incidents"."downtown"
GROUP BY hour_of_day ORDER BY hour_of_day;
```

Results stored in: **geo_qnum_dtown_hour**

Query #7: Incident Frequency by Month for BNA

```
SELECT COUNT(distinct incident_id) as num_incidents, month FROM "incidents"."bna"
GROUP BY month ORDER BY month;
```

Results stored in: **geo_qnum_bna_month**
