

## Larceny/Theft Are Most Common In the Afternoon & Evenings near San Francisco Hall of Justice/Country Jail/Traffic Court

The data used in the analysis was the San Francisco Summer 2014 Incident data set. Prior to visualization I augmented the data by adding 'morning', 'afternoon', and 'evening' category. Morning is defined between the hours of 6AM and 12PM. Afternoon is defined as 12PM to 7PM. Evening is defined at 7PM to 6AM.

The approach parsed and formatted the data to be ingested into Elasticsearch using python in Jupyter Notebook. The data was then rapidly visualized through Kibana pulling data from Elasticsearch. The data is 28,993 records and spans June – August of 2014. When the data was ingested into Elasticsearch both time and location were indexed so that aggregations could be done in time and space.



Figure 1 - Incident Volume By Day

In this first visualization we see that the Larceny/Theft is the top incident category across the data with 'OTHER OFFENSES', 'NON-CRIMINAL', 'ASSAULT', and 'VEHICLE THEFT'. With regards to Larceny/Theft, afternoon and evenings have the highest incident counts. No specific day stands out on when Larceny/Theft occur. The bar chart 'Incident Category Count by Day of the Week' shows that there is not specific day when Larceny/Theft occurs. The chart does show that Larceny does not occur on Mondays and Wednesdays.

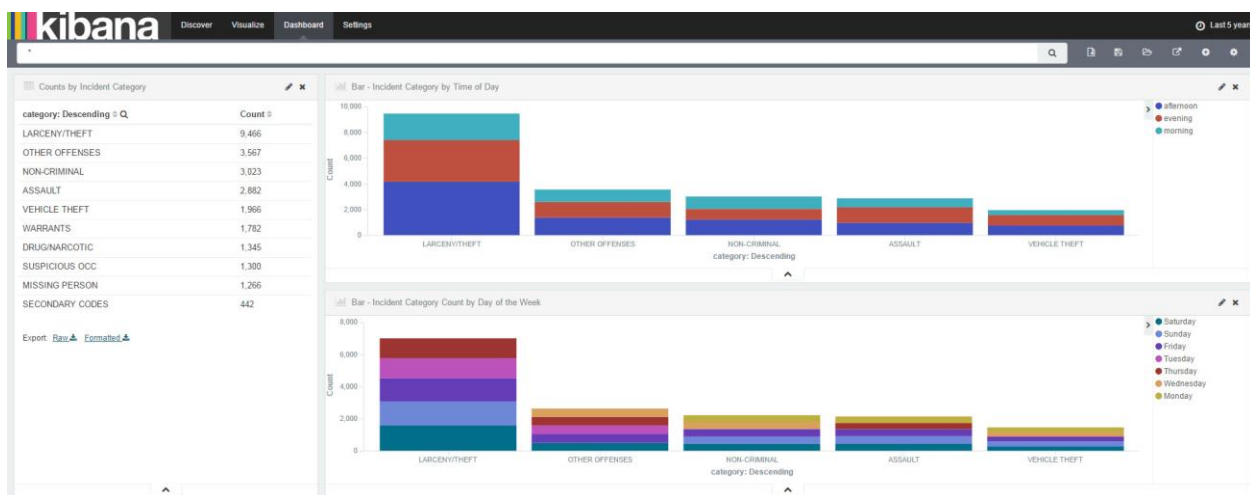


Figure 2 - Top 5 Incidents By Time of Day & Week

When looking closer at Larceny/Theft geospatially we see that 64% of the events are happening at the geohash '9q8yysu9cby5'. When calculating the latitude and longitude for this geohash we see that the incidents are occurring near the Hall of Justice/County Jail/Traffic Court.

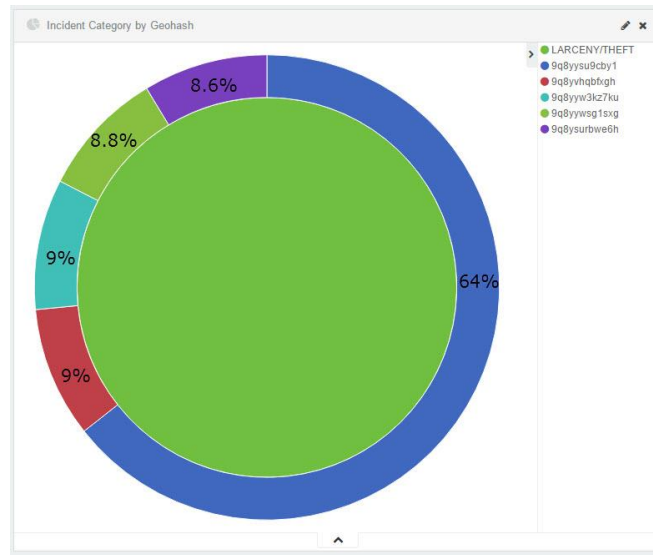


Figure 3 - Pie Chart for Larceny/Theft by Geohash

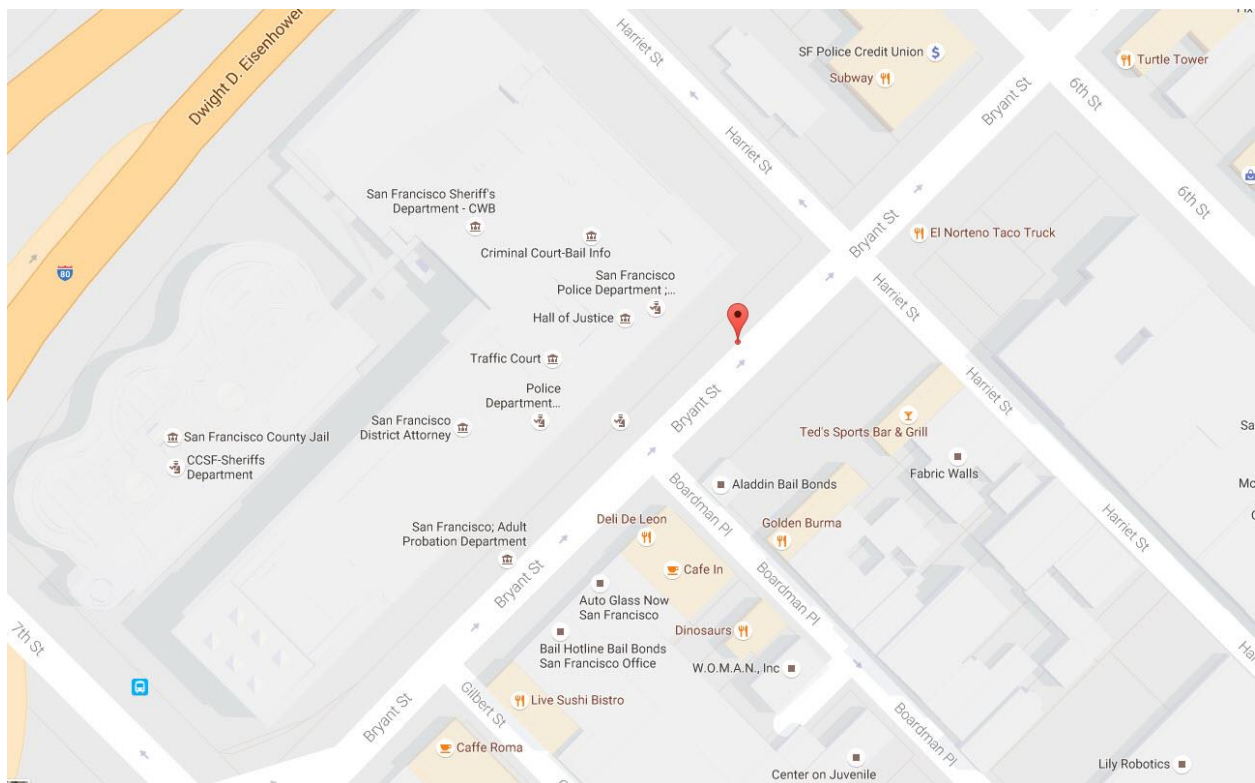


Figure 4 - Larceny/Theft Geohash Lat/Long Plotted