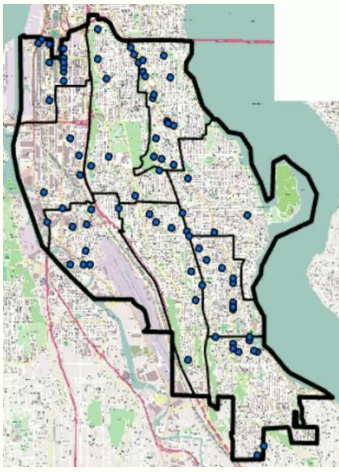


ASSAULTS IN SOUTH SEATTLE

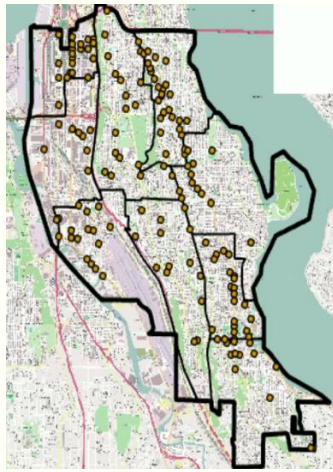
This report is intended to visualize the Assaults that occurred in South Seattle, in the year 2018. The report also highlights the hotspots of crime and predicts the locations of future Assaults. A total of 787 Assault calls were reported in that year.

This report illustrates the concentration of Assaults with respect to beats, splitting the number of Assaults by time intervals in a day, locating the hot spots of crime along with Centro graphic statistics, visualizing the crime hotspots using kernel density surfaces with contours and predicting the location of crime by Risk Terrain Model.

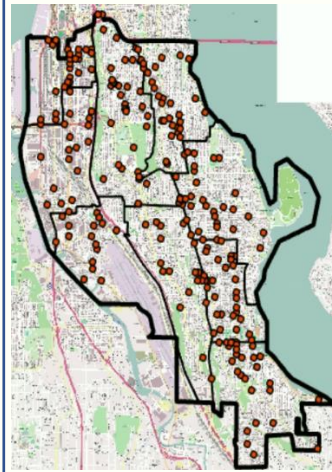
NUMBER OF ASSAULTS FOR EVERY SIX HOURS IN A DAY, FOR A YEAR:



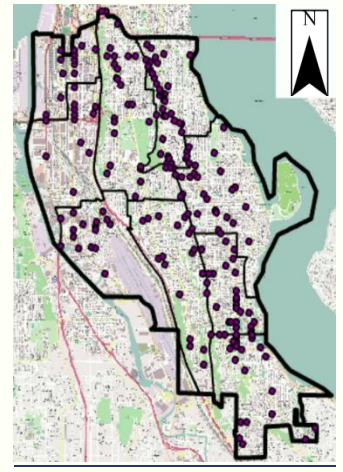
A total of 97 assaults were recorded between 12am and 6am.



A total of 202 assaults were recorded between 6am and 12pm.



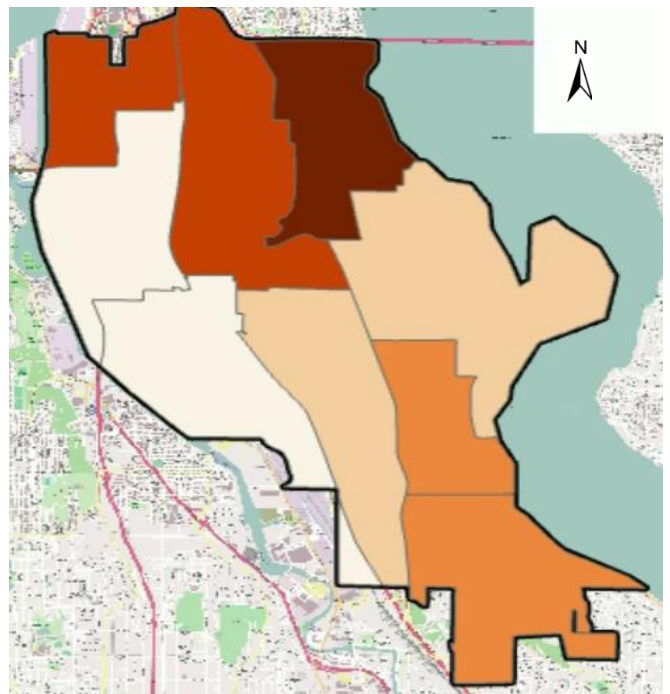
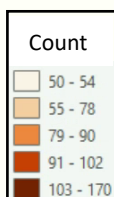
A total of 330 assaults were recorded between 12pm and 6pm. More number of Assaults were recorded at this time interval.



A total of 274 assaults were recorded between 6pm and 12am.

CONCENTRATION OF ASSAULTS WITH RESPECT TO BEATS:

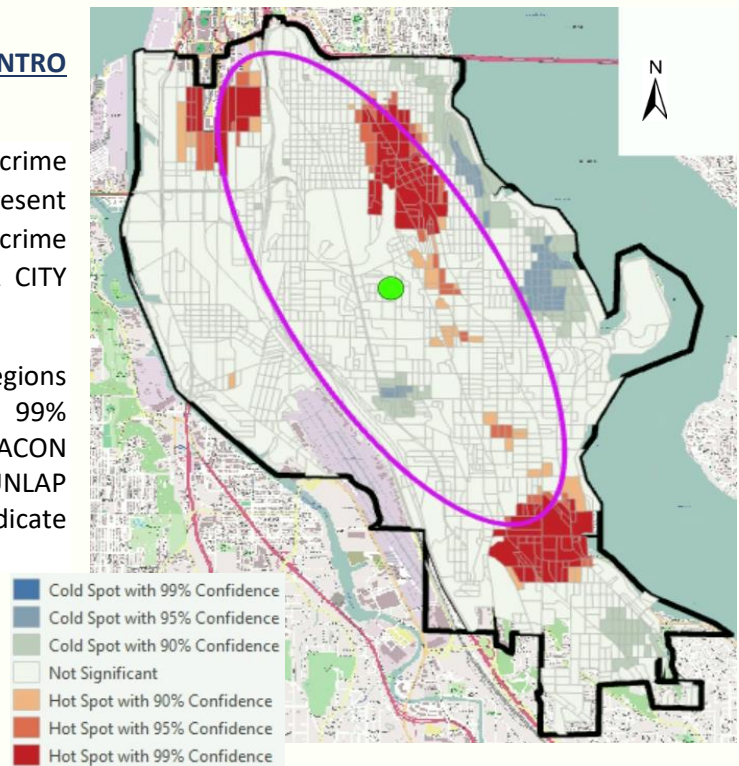
It is observed that the highest number of calls (approximately 103 to 170 calls) regarding Assaults were received from MOUNT BAKER neighborhood. Followed by NORTH BEACON HILL, the northern regions of INDUSTRIAL DISTRICT, DUNLAP, BRIGHTON, and RAINIER BEACH neighborhoods. These are considered as high to moderately concentrated areas for Assaults. GEORGETOWN, MID-BEACON HILL and SEWARD PARK neighborhoods are considered relatively safe.



LOCATING HOT SPOTS OF CRIME ALONG WITH CENTRO GRAPHIC STATISTICS:

The pink ellipse gives the directional distribution of crime hotspots, i.e., locations with high crime intensity are present within this elliptical region, with a mean center of crime locations indicated by the green color in COLUMBIA CITY neighborhood.

'Getis-Ord' hotspot analysis tool is run, and the regions highlighted in dark red color are the hotspots with 99% confidence. These regions include MOUNT BAKER, BEACON HILL, the northern regions of INDUSTRIAL DISTRICT, DUNLAP and RAINIER BEACH neighborhoods. The blue regions indicate the cold spots of crime.

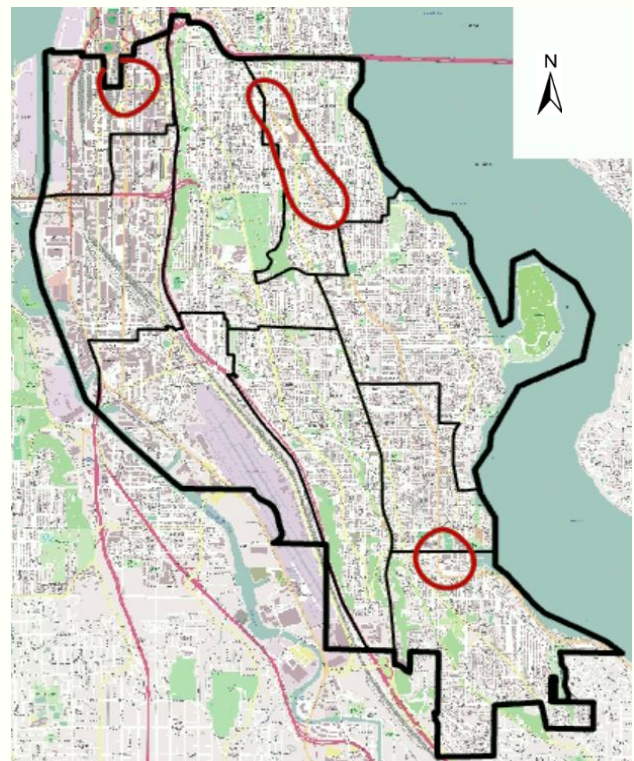


VISUALIZING CRIME HOTSPOTS USING KERNEL DENSITY SURFACES WITH COUNTOURS:

Kernel density surfaces are drawn to identify crime hotspots and 'Contour with barriers' tool is used to draw an outline around these hotspots. The regions within the red color contours are identified as the crime density hotspots for Assaults. At these contours, there is statistical evidence of clustering of crime locations.

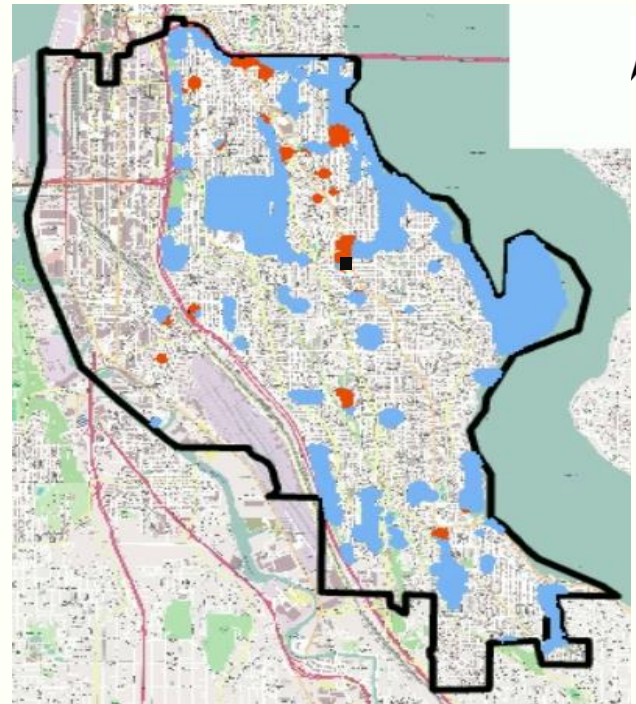
These hotspots for Assaults are located in MOUNT BAKER, BEACON HILL, northern regions of INDUSTRIAL DISTRICT, DUNLAP, and RAINIER BEACH neighborhoods.

The police could be instructed to pay special attention in these areas, especially.



PREDICTING THE LOCATIONS OF CRIME BY RISK TERRAIN MODELLING:

Drug activity and Parks can be considered as risk factors for the Assaults to occur. Hence, considering Bars, Marijuana, Narcotic retail stores and Parks to identify the risk factors involved for Assaults to occur. These risk factors act as predictors for crime to happen. The regions highlighted in red color have one or more risk factors involved, and police can predict that future crime may happen at these locations. The regions highlighted in blue color has one of the risk factors (one among Bars, Marijuana, Narcotic stores, and Parks) involved. These high-risk regions are located in MOUNT BAKER, HOLLY PARK, NORTH BEACON HILL, GEORGETOWN and RAINIER BEACH neighborhoods. COLUMBIA CITY which is spotted in black color, has all the risk factors and is considered as the neighborhood with greater risk.



CONCLUSION:

In the year 2018, a greater number of Assaults were recorded between 12pm and 6pm. MOUNT BAKER is the neighborhood with the highest number of Assaults. GEORGETOWN, MID-BEACON HILL and SEWARD PARK neighborhoods are considered relatively safe. COLUMBIA CITY neighborhood is the mean center for all the crime locations. MOUNT BAKER, BEACON HILL, northern regions of INDUSTRIAL DISTRICT, DUNLAP and RAINIER BEACH neighborhoods are considered as crime hotspots with 99% confidence. Hence, the police could be instructed to pay special attention in these areas. COLUMBIA CITY is a neighborhood that has all the risk factors for assaults (Bars, Marijuana, Narcotic retail stores and Parks) and the future crime can be predicted at these locations.

A report by RAMGOPAL REDDY PUTTA