EAS 503/CDA 501

Final Project Report

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Project Description:

Crime in Los Angeles, California

Data set acknowledgement:

This dataset has been taken from the below mentioned site:

https://www.kaggle.com/cityofLA/crime-in-los-angeles

FINAL PROJECT REPORT

This report focuses on analyzing the crime statistics in the city of Los Angeles, California with the help of Python. In order to recognize the crime pattern in the given dataset, certain operations like comparing different predictors in terms of graphs were performed so that their relationship can be understood visually. Details like date and time of occurrence, weapon, premise, victim, area, age groups, gender etc. are covered to give us a clear picture of the crime. For privacy reasons, the address has been limited to a hundred block radius.

The dataset has been taken from Kaggle which involves the crime incidents between 2010 - 2017 in Los Angeles, California. This analysis was carried out using Python as the main language with the Jupyter Notebooks. The libraries used are, Numpy, Pandas, Matplots, Folium, etc.

At first, we have taken the dataset csv file from Kaggle and imported it to sqlite by creating a db file named as "**LA_Crime .db**" for it. The chosen database is SQLite. Then, we have imported the data csv file into sqlite table named **LA_Crime** in order to have access to the data from sqlite and then jupyter notebook. Our main focus for this project was to get the answers of few questions like what are the highest and lowest crime impacted areas in Los Angeles or what are the highest and lowest crime impacted years from 2010 to 2017 in Los Angeles. We were also able to find the ratio of various age groups of the victims of the crimes in Los Angeles. With this analysis, we can predict the chance of being a victim of crime in Los Angeles. Moreover, we can also draw conclusions such as how safe Los Angeles is for settling down or during which part of a year the crime rate is less or more. For instance, we found that the maximum crime reported was in the year of **2016**. Similarly, after the analysis, it came to our attention that the maximum number of people are targeted from the age group of **25-64 years i.e. Adult age group**. Also, we found out that the gender which is more crime impacted is **Male,** although it's almost same for women also. We also successfully found out that the frequency of the crimes during the various regions of Los Angeles in the afternoon. Then, we analyzed about the kind of crimes that have reoccurred over the years which might further help in identifying the criminal. But it came to us as a surprise that over the last 8 years, the kind of crimes which has occurred the most is **Theft.** With this, we also observed the various variations in the types of crimes and their frequencies for the 8 years as well. Through our analysis, we were able to find out the topmost crime impacted areas in Los Angeles. This analysis helped in recognizing the areas which need more vigilance. Also, if someone is thinking of traveling or settling down in Los Angeles, the person can check out how far are these crime spots from their place and plan accordingly to avoid such places.

Conclusion

This analysis can also be used by the Los Angeles Police Department which can take further actions according to this analysis in order to avoid or decrease the crime rates in Los Angeles. This analysis is a granular report for the crime rates in the last 8 years i.e. from the year 2010 to 2017 in Los Angeles. With the help of these libraries, it was really helpful to draw out conclusions so fast and clear. It has helped us to get the accurate results with such a clarity that it can help in serving the process of bringing down the crime rates as it can be a great asset in understanding the crime patterns in Los Angeles. With our crime dataset, we were able to visualize the overall crime pattern which will, in further, help us to control the crime rate in Los Angeles and this can be further analyzed with more detailed dataset and can be passed onto the Los Angeles Police Department as well as Government.