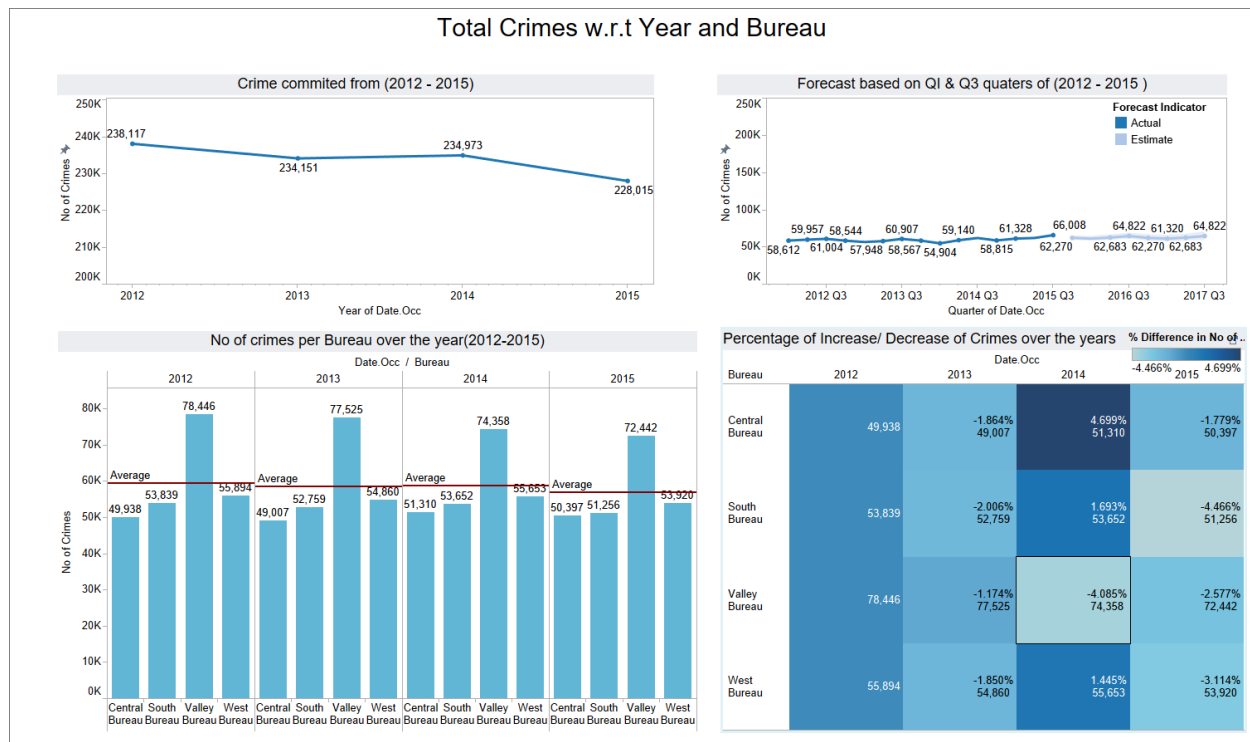# STORY TELLING

LAPD crime dataset consist of all crimes registered from 2012 to 2015 including fields such as date.rptd- date on which crime was reported, dr.no – the crime no, date and time occ - date and time of occurrence, area no and area name, reporting district no , crime code, crime description, status, status description, location , street   and location1 – which is the latitude and longitude details. Some additional research was conducted in order to fetch data that was required for the proper visual analysis, such as grouping the area of crime w.r.t the bureau, then grouping crime codes to crime category and then further grouping into Part I and Part II crime. These groupings have made the visualization of such a huge dataset appeasing and interesting. Some of the interesting analysis made on this data are discussed below with supporting images from Tableau story.

Crime awareness is crucial in today's world and one must always be aware of the criminal activities within the area they live. This is one of the main reason that stirred an interest for data analysis on LAPD crime. The crimes committed can be measured against factors like years, crime types, area, bureau and so on. Based on the data available a simple line chart is plotted displaying the total no of crimes over the years and also a line chart showing predictive analysis based on quarters Q1 and Q3 value over the years is also plotted for the next 2 years. This chart forecast the crime rates over the next 2 years which would be a great help for the law and enforcement team as it makes them well prepared for the future requirements. Below there are graphs plotted bureau and years. This provides us with information on how many crimes are reported at each bureau in a year and we can also analyze fluctuation of the crime rates in each bureau. When is plot a reference line which is the average value of the total no of crimes in that

year, we can determine which bureau has crimes above and below the reference line. We can further perform the same function over the years too. Once we have the knowledge about crime rates in our area with respect to year and bureau, it is interesting to find the percentage difference in crime rates relative to the previous years. It tells us by what percentage there is an increase or decrease in the crime rates over the years under each bureau.
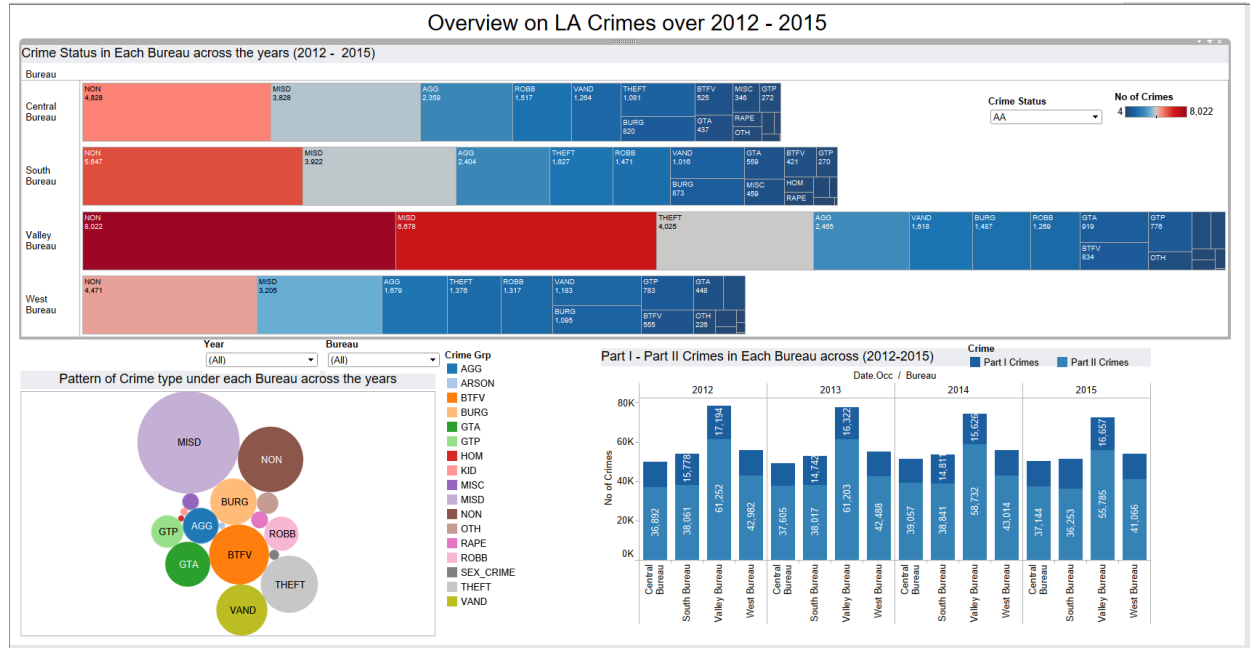

Crime Pattern Theory is a way of explaining why crimes are committed in certain areas. This theory has inspired me to analyze the dataset based on the crime patterns. Visually displaying all the crime codes in the dataset would snatch away the essence of data visualization and hence crime codes are grouped into crime categories and further grouped into Part I and Part II crimes. The grouping pattern has been discussed earlier in this document. The below graphs depicts the crime pattern in LA city over the years 2012 to 2015. The first graph displays the crime status for each crime category under each bureau for each year. This graph illustrates the actions and the

efforts taken by each bureau in order to solve the crimes reported at their division. The status

AA resembles an adult arrested for the crime. From the graph we can see the various crime

categories under each bureau and the no of adults arrested in each crime categories. The color

variation in the tree graph makes it a cake walk to determine which bureau has the maximum

arrest under various crimes categories. The status is a dropdown filter with the following values
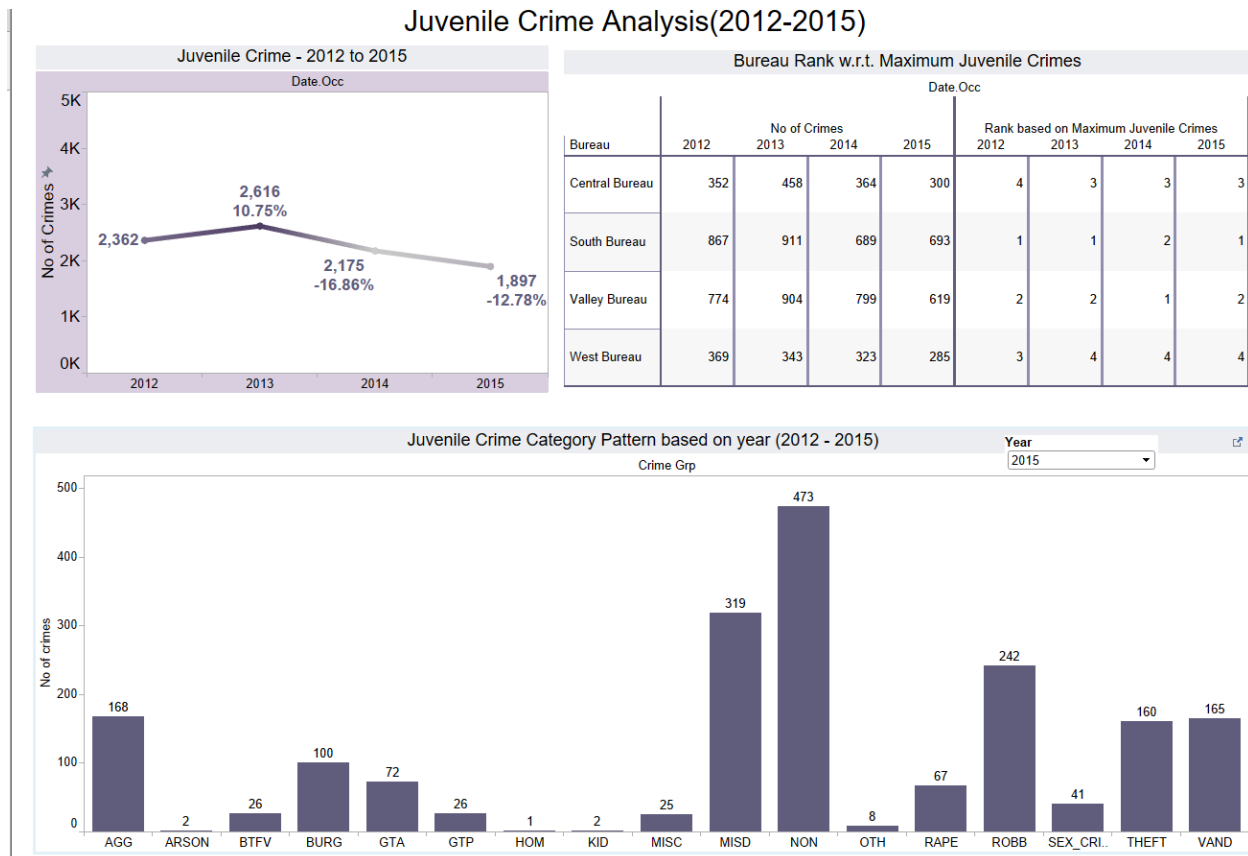
– AA,AO,JA,JO,CC,IC.

The bubbe chart shows the no of crimes committed per crime categories under each bureau for

each year. This gives us an idea about the most prevalent crime type in the LA city and whether

these have decreased or increased over years. The stacked vertical bar chart is a representation of

Part I and Part II in each bureau. The grouping of crime categories into Part I and Part II is done

based on the mapping provided in LAPD online website. This provides us with the information

on the no of violent crimes reported in these 4 bureaus over the years. It is a releif to see that

though the no of crimes on an average is more than 40k the violent crimes or Part I crimes

constitute a smaller region. These three analysis potrays the crime pattern under different

criterias.

Another major issue our society is facing today is Juvenile crimes. It is unfortunate to see young minds committing crimes voluntarily or unvoluntarily and thus putting their future at stake. An analysis on the Juvenile crimes will provide us the insight about the future of our society. The below graphs represent juvenile crimes committed over the years 2012 to 2015. The total no of juvenile crimes are measured against various factors like crime category, bureau, and years. A ranking is performed on the bureau with maximum no of crimes over the years, this will give us a better insight on understanding which bureau has taken efforts to minimize juvenile crimes over the years. In general without applying an filters on crime category from those 3 graphs on the dashboard we can determine that which bureau had the maximum juvenile crime and what was the overall juvenile crime, it also helps us to compare the juvenile crimes per bureau with the maximum juvenile crimes in that year. The juvenile crime category graph helps us to understand what type of crime category was the most predominant in the year 2015. When we apply a filter on the crime category field we will be able to determine determine the bureau

ranking for the selected category field and we will be able to compare the percentage difference of crime relative to the previous years.

Juvenile Crime Analysis(2012-2015)

Juvenile Crime - 2012 to 2015

Bureau Rank w.r.t. Maximum Juvenile Crimes

Date.Occ

Bureau	No of Crimes				Rank based on Maximum Juvenile Crimes			
	2012	2013	2014	2015	2012	2013	2014	2015
Central Bureau	352	458	364	300	4	3	3	3
South Bureau	867	911	689	693	1	1	2	1
Valley Bureau	774	904	799	619	2	2	1	2
West Bureau	369	343	323	285	3	4	4	4

Juvenile Crime Category Pattern based on year (2012 - 2015)

Year: 2015

Crime and criminal activities can never be eradicated from our society but it can be curbed to a greater extend by the efforts from the law and enforcement department and the citizens. We as citizens do have responsibility in creating a safe living enviroment and one of the steps that we should diligently follow is to report crime if we come across one. It is not necessary that we should be the victims but we can prevents other people from being victims but reporting crimes on the spot.

10.28.2016