San Francisco Crime Data Visualization

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About the project

 Dataset
   San Francisco Police Dept. (SFPD)
   Data Format: CSV files

 User
   Chief of the San Francisco Police Department.

 Tools used
   Pig, Splunk Enterprise to query the data, Netbeans, JS
   Tableau, HighCharts and Google API to Visualization.

 Data Visualization method – Dashboard
   Chief is a busy person
   Dashboard gives him Real time visualization of Crimes
Analysis of Crimes Over The Past Decade

Major Concern: Number of crimes in San Francisco have seen an upward trend since 2011.
Why does the Chief want this Dashboard?

Data for 2014 is only till Mid November. Another 45 days could increase these values immensely.

- Devise strategies to reduce crimes
Major Crimes that have plagued San Francisco

- Larceny/theft and vehicular theft account for 27% of the City's reported crime incidents.
How are we doing currently: 2014!!

- Southern San Francisco tops the list!
Monthwise analysis of Crimes

- December is the Safest month !!!
Days you need to be Careful on:

- Not everybody is partying, like you do..!!

Whenever the 49ers or the Giants have a home game, there's a 20% spike in crime.
Crimes per hour in 2014:

12PM

4-8 PM When everyone is trying to get back home!
4:00 pm – 8:00 pm

![Graph showing crime data for different districts and times of the day. The graph is highlighted for the period 4:00 pm to 8:00 pm.](image-url)
Famous neighborhoods = More Crime

Hot Spot for Crimes:
Southern San Francisco

Why???
-San Francisco International Airport
-Financial District
-6 of San Francisco’s Fortune 500 companies
-Luxury Hotels
Top 3 streets with Maximum Crimes

1. Bryant Street
2. Market Street
3. Potrero Av
Interesting Facts: Analysing of Crimes over the Past Decade

- **800 block of Bryant Street** has had over 30,000 documented instances of crime in the last 10 years, which translates to about 1 crime every 3 hours.

- Next on the list is the **800 Block of Market Street** with about 7,000 crimes, or a crime every 12 hours.

- Larceny/theft and vehicular theft account for **27%** of the City’s reported crime incidents.

- There are **10 liquor stores** where a vast majority of crime occurs — within a mere **0.2 mile radius**.
Analysis of Crimes in Bryant Street

Your belongings in Car are at RISK!!
Park in a nearby Garage. Central Parking/ Ace parking

Be mindful of Muggers/pick-pockets

<table>
<thead>
<tr>
<th>Crime</th>
<th>Number of Records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grand Theft from Locked Auto</td>
<td>653</td>
</tr>
<tr>
<td>Lost Property</td>
<td>265</td>
</tr>
<tr>
<td>Petty Theft of Property</td>
<td>171</td>
</tr>
<tr>
<td>Drivers License Suspended or Revoked</td>
<td>160</td>
</tr>
<tr>
<td>Petty Theft from Locked Auto</td>
<td>157</td>
</tr>
<tr>
<td>Warrant Arrest</td>
<td>155</td>
</tr>
<tr>
<td>Found Property</td>
<td>151</td>
</tr>
<tr>
<td>Suspicious Occurrence</td>
<td>102</td>
</tr>
<tr>
<td>Aided Case, Mental Disturbed</td>
<td>84</td>
</tr>
<tr>
<td>Grand Theft of Property</td>
<td>83</td>
</tr>
<tr>
<td>Grand Theft from Unlocked Auto</td>
<td>82</td>
</tr>
<tr>
<td>Battery</td>
<td>81</td>
</tr>
<tr>
<td>Malicious Mischief, Vandalism</td>
<td>78</td>
</tr>
<tr>
<td>Enroute to Outside Jurisdiction</td>
<td>77</td>
</tr>
<tr>
<td>Malicious Mischief, Vandalism of Vehicles</td>
<td>65</td>
</tr>
</tbody>
</table>
Something to worry about!!

Why are More than 61% of crimes, have Resolution as “None”.

Crime Resolution rates in 2013

<table>
<thead>
<tr>
<th>Resolution</th>
<th>% crime</th>
</tr>
</thead>
<tbody>
<tr>
<td>NONE</td>
<td>61.02%</td>
</tr>
<tr>
<td>ARREST BOOKED</td>
<td>21.29%</td>
</tr>
<tr>
<td>ARREST CITED</td>
<td>7.47%</td>
</tr>
<tr>
<td>PSYCHOPATHIC CASE</td>
<td>3.26%</td>
</tr>
<tr>
<td>LOCATED</td>
<td>2.54%</td>
</tr>
<tr>
<td>COMPLAINANT REFUSES TO PROSECUTE</td>
<td>1.11%</td>
</tr>
</tbody>
</table>
Demo
Conclusion

• This is the recipe for living safely in San Francisco.
• Be careful when you go to Bryant and Market street.
• Try to have early lunch.
• Try to start early or late from the office.
References

- http://kb.tableausoftware.com/articles/knowledgebase/mapping-basics
- http://www.highcharts.com/
Thank you!