Final Project Proposal

San Francisco Incidents Rate Analysis

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The proposal of final project is about the crime rate in San Francisco from 2003 to 2018. The data set, *‘Police Department Incident Reports: Historical 2003 to May 2018’*, was downloaded from [DataSF](https://data.sfgov.org/Public-Safety/Police-Department-Incident-Reports-Historical-2003/tmnf-yvry). The main goal of this project is to analyze the trend of incidence rate, what times of a day can be more dangerous and the resolution rate of incidents. Here are three questions we would like to answer by doing analysis from this dataset.

1. What is the total incident rate from 2003-2018? And what are the trends of different types of incidents?

We will check the total incident rate and the occurrence rate of every type of incident reports from 2003 to 2018 ,thus the trends of incident rate and which incident was more likely to happen from 2003-2018 could be the answer. We will use matplotlib.pyplot module to draw diagrams. X-axis will be years and Y-axis will be different categories of incident.

2. What is the most dangerous moment in San Francisco?

Separating 24 hours into 12 time period (e.g. 0:00am-2:00am), then calculate different incidents rate in each time period. Based on the results of our research, a predict of what time of day is more dangerous will be given, suggesting citizens avoid staying outside in these time periods.

3. Display the distribution of crimes categories and resolution rate in SF districts. What is the most frequently occurring crimes in each district and the resolution results accordingly?

Calculating the resolution rate of incidents in SF, display in different districts, crime categories and the results of the crimes, etc. Analysis the most frequently occurring crimes in each district and the efficiency of related district Police Department.