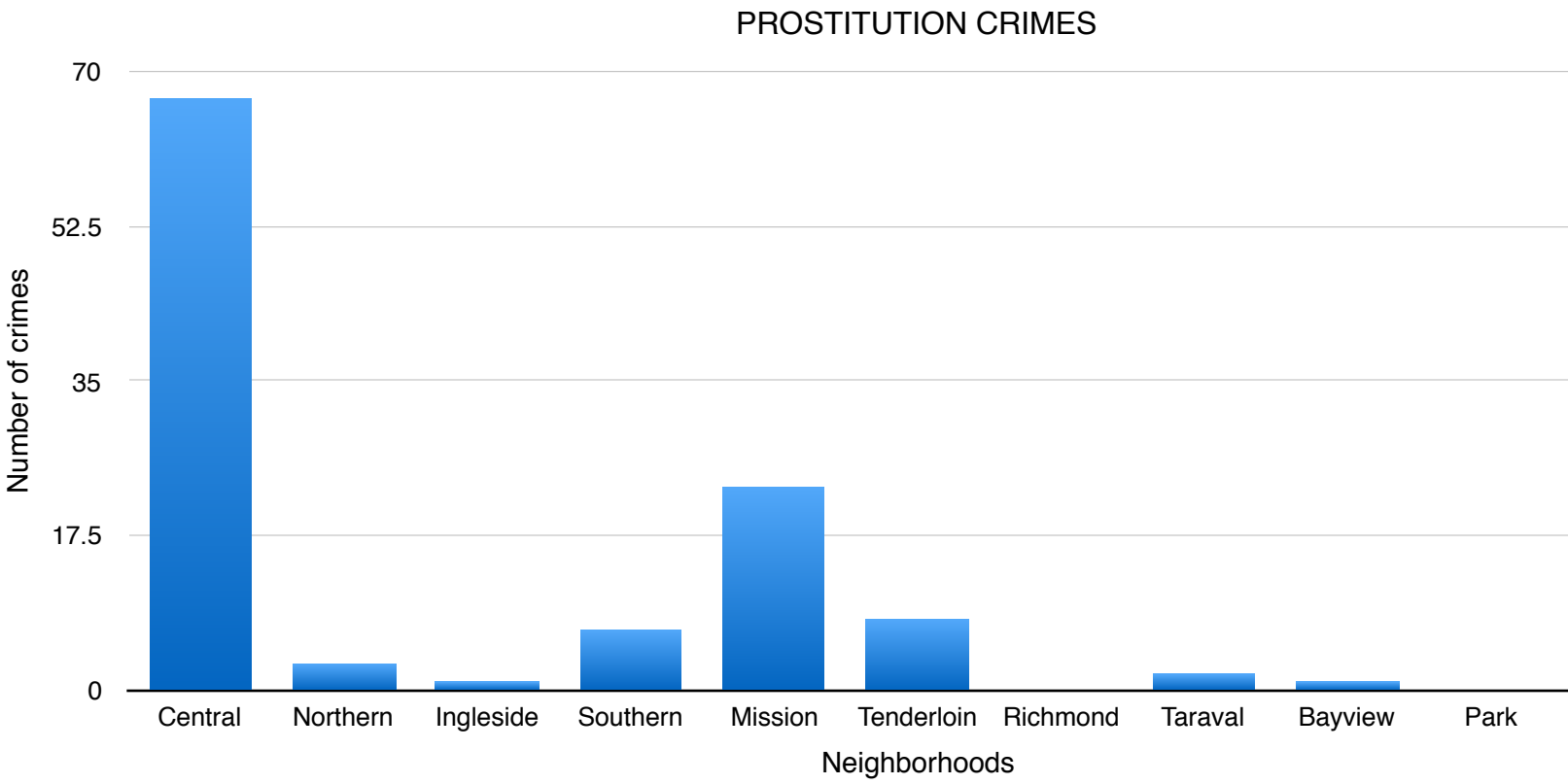
Findings:

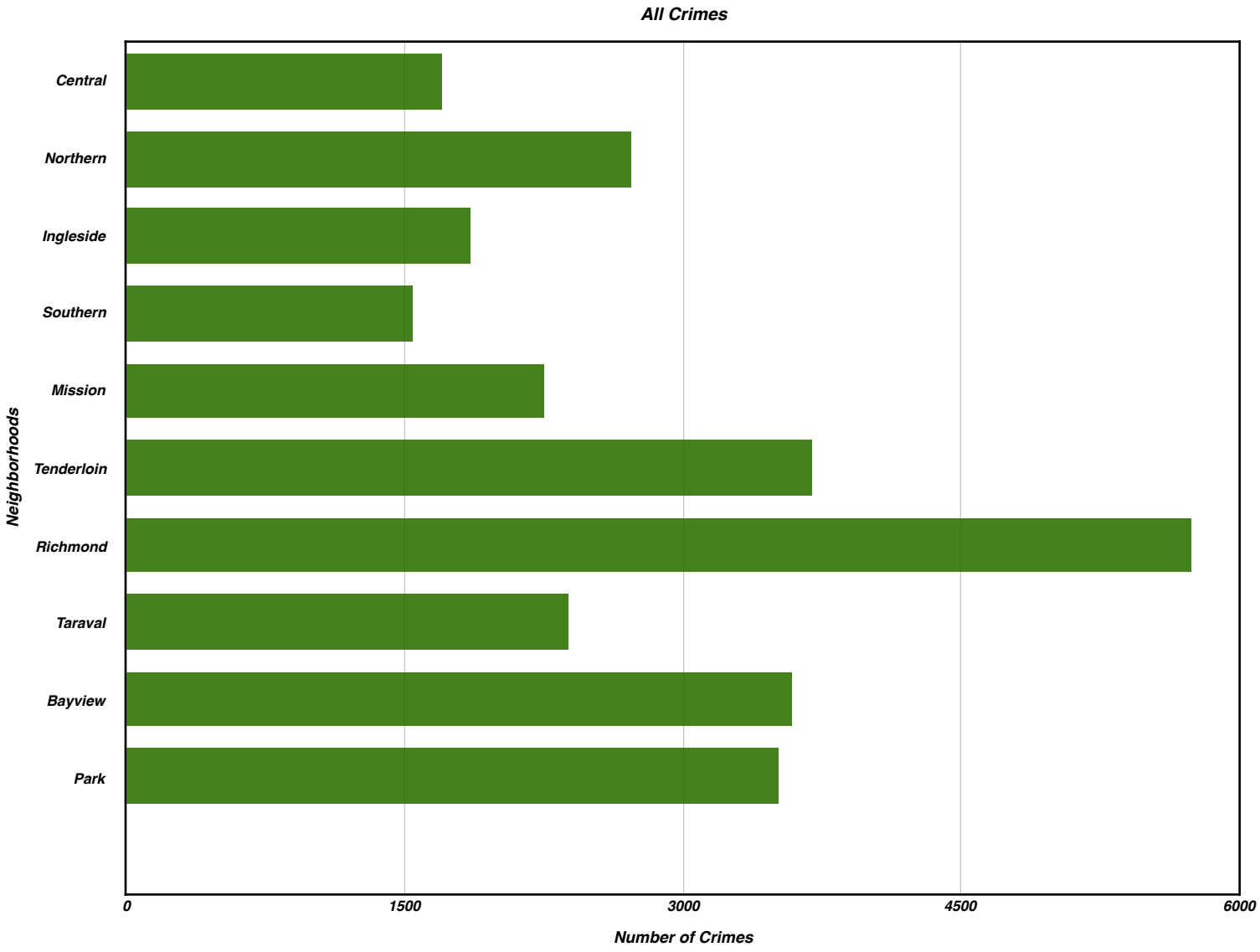
Prostitution Crimes concentrated in two neighborhoods

53% of prostitution crimes happen on Fridays

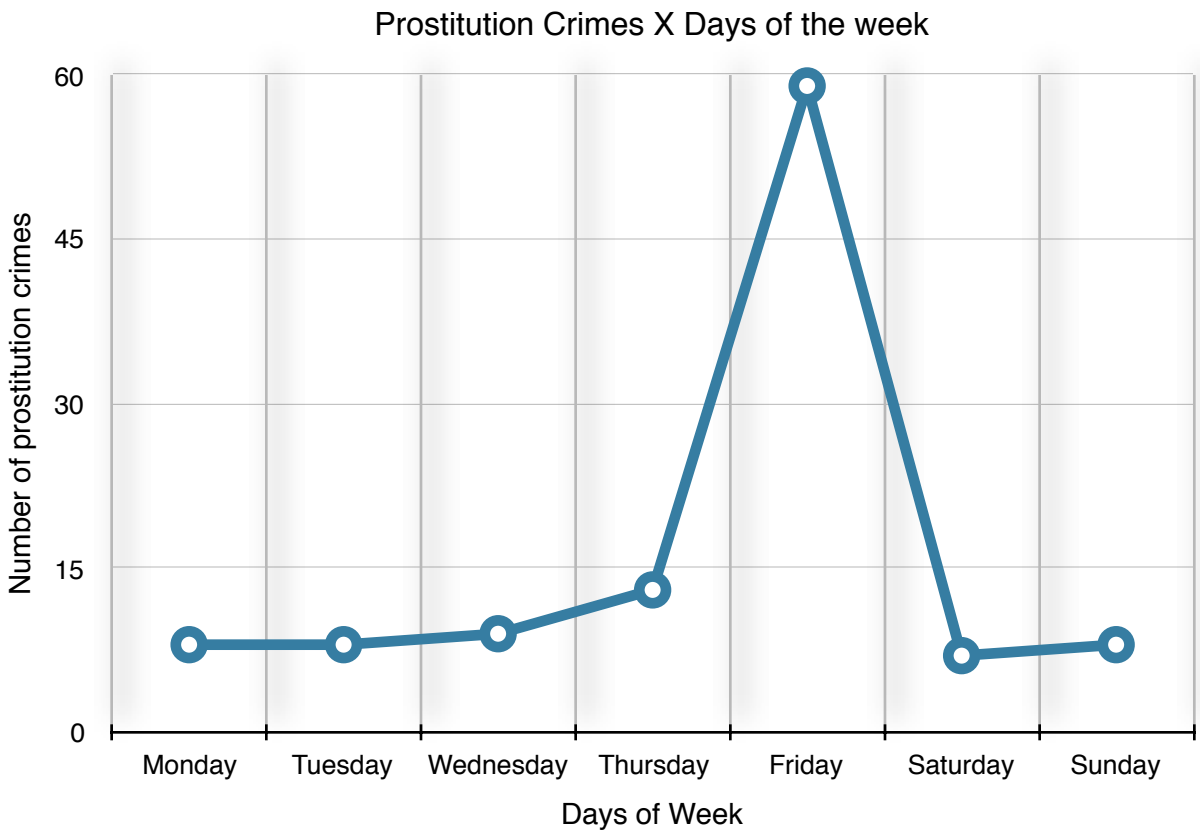
Even though crimes, in general, are somewhat distributed across the various different regions of the city, prostitution crimes show a fairly eccentric pattern in this dataset. It is worth mentioning that prostitution crimes are fairly rare, composing 117 of the almost 30.000 crimes in the database, and those are highly concentrated in the Mission and Central areas of San Francisco, corresponding to almost the entirety of occurrences in the dataset, while areas such as Park and Richmond have no registered crimes. Now, the exact reason why this pattern stands is very hard to determine without other data sources, but it seems that the highly ethnical area of Richmond has no crimes reported. This area has Estate that is often visited by tourists and a Chinatown surrounded by Asian restaurants. On the other hand, the Central area of San Francisco contains a lot of businesses and professionals, so it makes intuitive sense that some prostitutes could choose to approach clients in the central area due to their financial conditions or to some other reasons that are impossible to extrapolate from the current data. Also, the Mission area of San Francisco is the second area with the most prostitution crimes reported. This area is characterized by the presence of young audiences and a plethora of different bars, so this may be a factor responsible for attracting more prostitutes to the area.



However, one should not be naive to automatically outlaw the possibility that some neighborhoods have exponentially more criminal activity than others. In order to confirm this hypothesis,I plotted the yearly distribution of crimes. The distribution is fairly normal, showcasing Richmond as one of the areas with the most criminal activity and the other regions had fairly similar levels of criminal activity when compared to each other. This also shows that the prostitution crimes mainly occurred in some of the least violent parts of San Francisco, as it can be inferred from the graph below, showing a negative correlation between an area's number of crimes with prostitution crimes.



Another interesting fact corresponds to the distribution of prostitution arrests. The arrests numbers are roughly the same for most days of the week, with the obvious exception of Friday. As it can be seen from the data, 53% of all prostitution arrests happen on Fridays



Here lies the code used for this assignment. The visualizations were built through the use of Apple Numbers for OS X

```
import pandas


# Loading data into the 2 dataframes
sanfran_df = pandas.DataFrame.from_csv("/Users/ralphblanes/
PycharmProjects/Data-Science-Projects/Crime Visualizations/
sanfrancisco_incidents_summer_2014.csv")
```

```
prostitutabase = sanfran_df[sanfran_df['Category']=='PROSTITUTION']
print prostitutabase.head()

prostituctionary = {}
keys = sanfran_df['DayOfWeek'].unique()
for key in keys:
    prostituctionary[key] = 0

for row in prostitutabase.iterrows():
   #Counting crimes per region
   if row[1][2] in prostituctionary.keys():
      prostituctionary[row[1][2]] = prostituctionary[row[1][2]] + 1

print "Days of week and prostitution"
print prostituctionary

crime_count_dict = {}

for key in keys:
   crime_count_dict[key] = 0
# Counting all types of incidents
crime_count_dict = {}
region_count_dict = {}
keys = sanfran_df['Category'].unique()
for key in keys:
   crime_count_dict[key] = 0

for i,key in enumerate(sanfran_df['PdDistrict'].unique()):
   region_count_dict[key] = {'KIDNAPPING': 0, 'WEAPON LAWS': 0,
'SECONDARY CODES': 0, 'WARRANTS': 0, 'LOITERING': 0, 'EMBEZZLEMENT':
0, 'PORNOGRAPHY/OBSCENE MAT': 0, 'SUICIDE': 0, 'DRIVING UNDER THE
INFLUENCE': 0, 'ROBBERY': 0, 'BURGLARY': 0, 'SUSPICIOUS OCC': 0, 'ARSON':
0, 'BRIBERY': 0, 'FORGERY/COUNTERFEITING': 0, 'DRUNKENNESS': 0,
'GAMBLING': 0, 'OTHER OFFENSES': 0, 'FRAUD': 0, 'FAMILY OFFENSES': 0,
'DRUG/NARCOTIC': 0, 'TRESPASS': 0, 'LARCENY/THEFT': 0, 'VANDALISM': 0,
'NON-CRIMINAL': 0, 'EXTORTION': 0, 'LIQUOR LAWS': 0, 'VEHICLE THEFT': 0,
```

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'STOLEN PROPERTY': 0, 'ASSAULT': 0, 'RUNAWAY': 0, 'MISSING PERSON': 0,
'DISORDERLY CONDUCT': 0, 'PROSTITUTION': 0}

#Counting the distribution of different types of crimes
for key in crime_count_dict.keys():
   for row in sanfran_df.iterrows():
      if row[1][0] == key:
         crime_count_dict[key] += 1



for row in sanfran_df.iterrows():
    #Counting crimes per region
      if row[1][5] in region_count_dict.keys():
         cur_region = row[1][5]
         cur_crime = row[1][0]
         region_dict = region_count_dict[cur_region]
         region_vals = region_count_dict[cur_region][cur_crime]
         region_count_dict[cur_region][cur_crime] =
region_count_dict[cur_region][cur_crime] + 1

print crime_count_dict
print("Regions")
for key in region_count_dict.keys():
   print key
   print(region_count_dict[key])
```