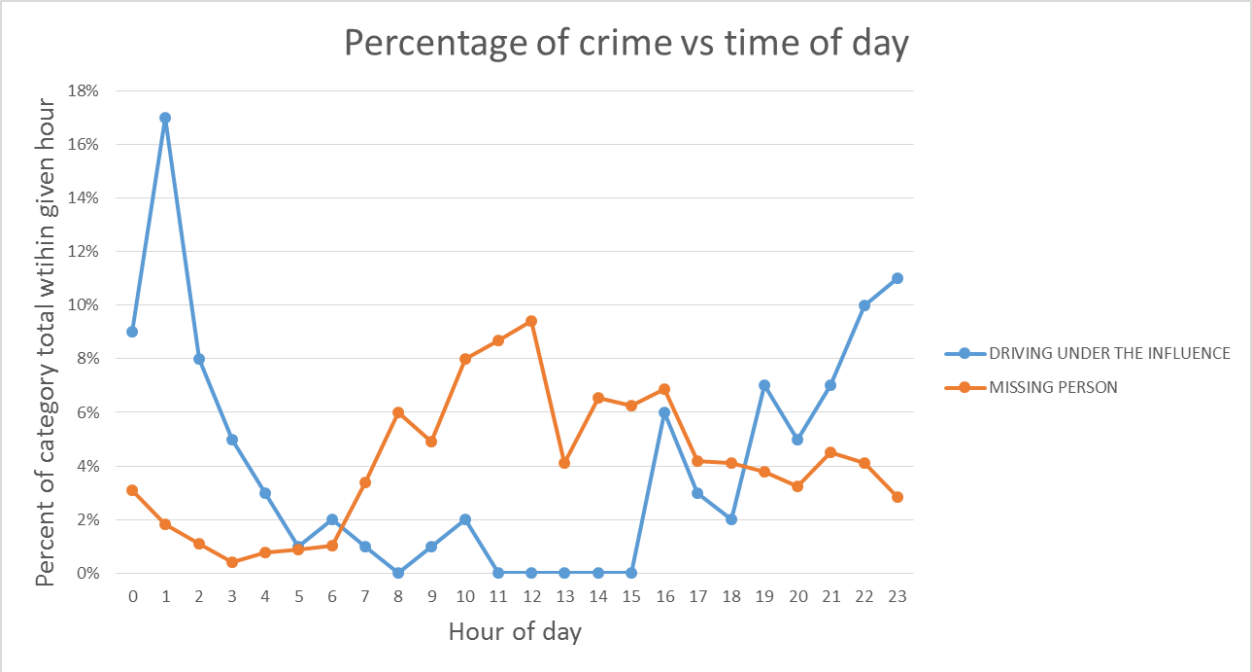
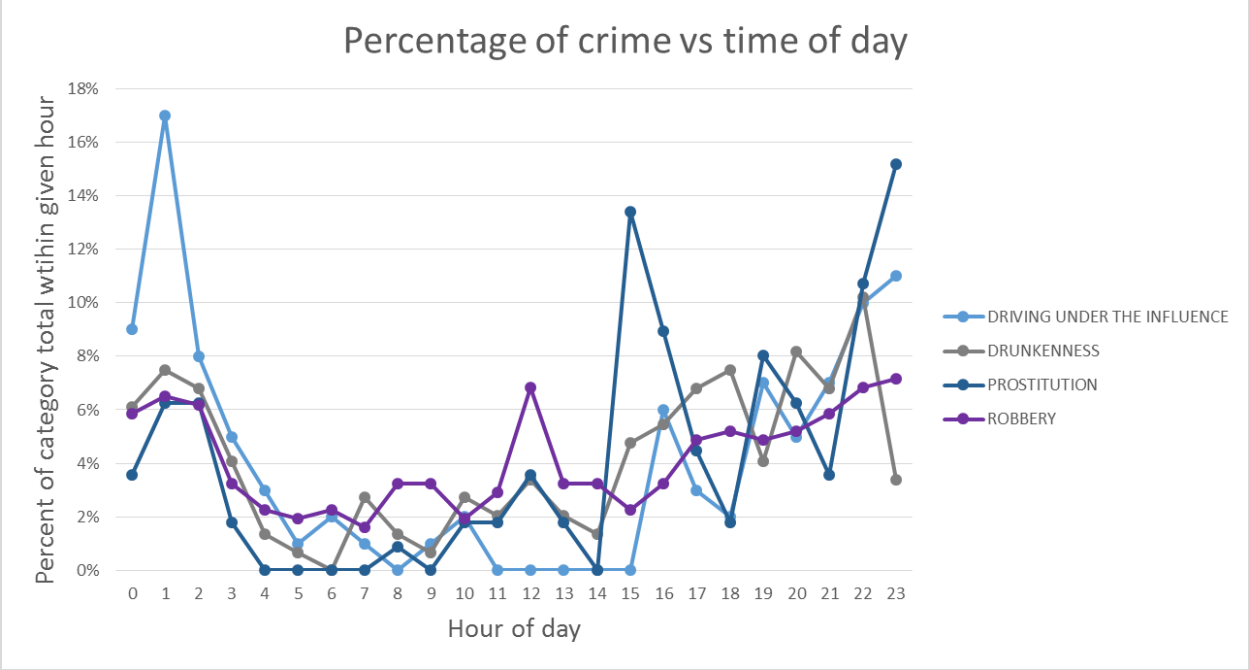
There is Clustering in the Distribution of Crimes over Time of Day in San Francisco

(Method: for each category of crime, I counted all instances of that crime, and all instances within each given hour of the day, then divided the per-hour numbers by the total.)

The figure below shows that some crimes have nearly opposite distributions with respect to time of day. Driving under the influence is low or zero from 5am through 3pm and peaks in the late evening and early morning. In contrast, missing persons reports are higher during the middle part of the day and much lower at night. (This inverse relationship can be quantified by the correlation between the two sets of 24 numbers, which is -0.42.)



However, as the next figure shows, several crimes have distributions similar to that of driving under the influence; drunkenness, prostitution, and robbery are each lower during the middle part of the day and higher at night. (Pairwise correlations in this group range from 0.52 to 0.69.)



Likewise, as the next figure shows, several crimes have distributions similar to that of missing persons reports; warrant matters, non-criminal acts, and suspicious occurrences are each higher during the middle part of the day and lower at night. (Pairwise correlations in this group range from 0.63 to 0.93.)