Predictive Policing and the Displayed Behavioral Changes in Law Enforcement Operations

Senior Thesis by *Stephen Conway* | Thesis Advisor: *Sameer Patil*

Purpose:

The use of predictive policing software in police operations has been every present topic for debate. Technology has been subject to the allegations of propagating racial biases and having questionable efficiency. The research project aims to determine if predictive policing tools have a significant impact on police behavior when it comes to arrests.

Methods:

The methods used to construct various heat maps and line graphs to compare arrest rates prior to implementation of predictive policing tools and after.

Challenges:

Limited availability of data sets and information regarding the working of predictive tools leave room of speculation.
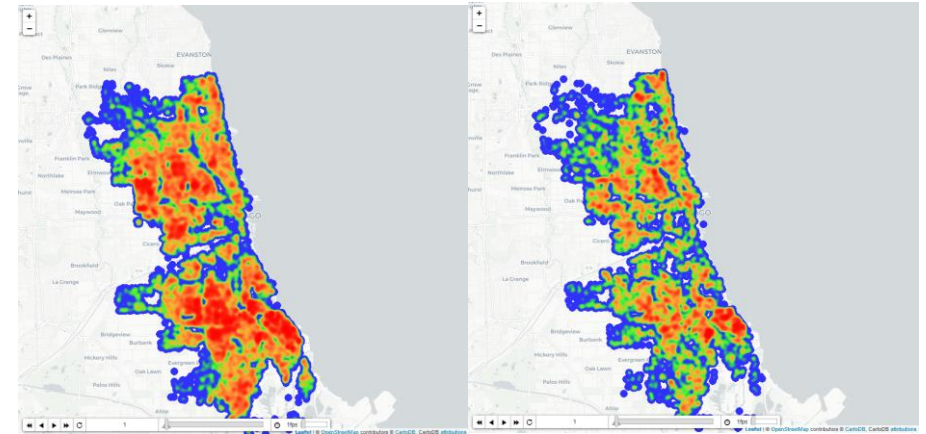

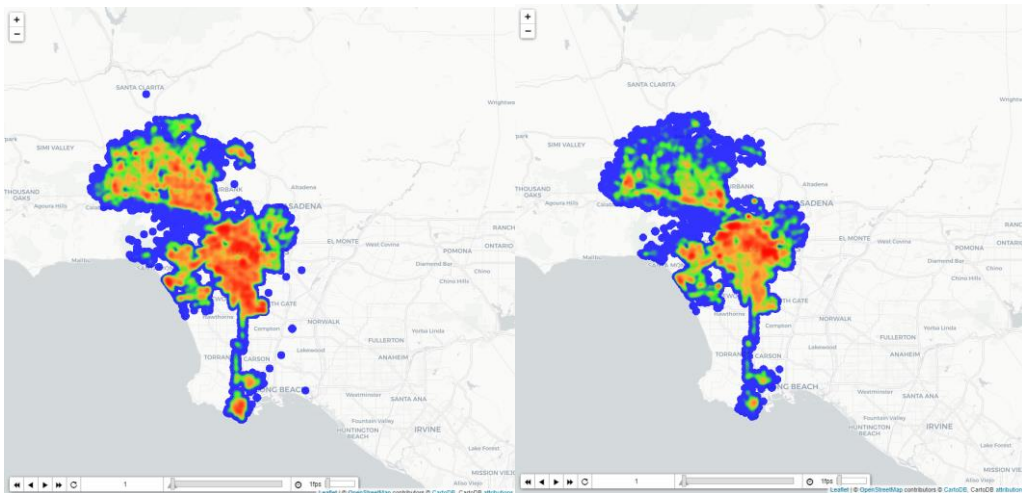Figure 2: Heat Map of Chicago Burglaries (2010 v. 2019)

Results:

Research focused on cities using predictive policing tools in police operations, such as Los Angeles and Chicago. As a control group, the city of Austin, Texas, was used as a control group. The research has found that while violent type of crimes exhibited little to no change between the years of 2010 and 2019; property crimes experienced a significant change in the crime reporting pattern. The research paper concludes that this may be emblematic of feedback loops present in that lead police patrols to certain area of the city. In turn, larger police presence in the area generates additional data, that further is fed into the algorithm, leading the predictive tools to believe that a neighborhood is experiencing heightened risk of crime.

Figure 1: Heat Map of LA Burglaries (2010 v. 2019)