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MUSA Capstone

Proposal 1

NFL Football is a sport filled with passion and aggression. These qualities are shared by the fans. While passion at the stadium can make for a fun and competitive atmosphere, these qualities can just as easily result in antinormative behavior such as crime. Exploring crime incidents across time and space in cities with professional football teams answers questions about the effect of NFL football on crime. Furthermore, patterns of spatial distribution and fluctuations in offense type totals can be connected to the result of that city’s team.

Research has been conducted on this topic in the past, however most of this research has been strictly on levels of crime and included no spatial analysis. My project would fill this void by observing clustering and hot/cold spots of crime in each city. While the analysis will include basic measurements and comparisons of crime that is covered in previous research, this hot spot analysis will add a new component to NFL-related crime. I hypothesize that crime such as theft and assault will increase in density or cluster closer around each team’s stadium on game days. In addition to the spatial components of this analysis, it would be interesting to view scatter plots of points allowed by the home team and counts of crime, specifically violent crimes, to see if there is a correlation between performance and criminality.

This analysis will complete an in-depth analysis of four NFL teams from the NFC East Division based on the 2019 regular season: The Dallas Cowboys, New York Giants, Philadelphia Eagles, and the Washington Redskins (now the Commanders). Crime will be analyzed in the cities of these four teams with specific tests and figures showing concentration and clustering of crime around the stadium, bars, subway stops, and other local features. These crime levels and patterns will then be compared between each city, painting a picture of how these teams affect their cities.

Data included in this analysis are city boundaries, available from open data portals from departments from each city, city crime incidents, NFL schedules and scores, and stadium locations. Some of this data is available through open data portals, as previously mentioned, while other data is available from <https://www.pro-football-reference.com> or <https://tinyurl.com/yc629jr7>.

The methodology of this analysis will first include the gathering and cleaning of data. Working the datasets into desired formats will be vital to ensure data is ready for analysis despite being from many different sources. Then, data will need to be separated into home games and away games for each team. This will be done by selecting only the observations in which the desired team is the home team. Once the NFL games have been wrangled, city/regional boundaries and stadium locations can be plotted with density of crimes for both gamedays and non-gamedays.

This analysis will be best delivered in either an interactive dashboard or scrollable R Markdown document for neat and tidy visualizations. The markdown can include more narrative on the connection NFL Football has with crime, drawing from the NFL-specific work by Kalist & Lee (2014) and general sports-related work by Marie (2016), Merlo, Hong, & Cotter (2009), Rees & Schnepel (2009), and Sivarajasingam, Moore, & Shepherd (2005). These works can give insight to theories and findings of sports and crime. For instance, assaults, vandalism, arrests for disorderly conduct, and arrests for alcohol-related offenses are all common arrests on football game days according to Rees & Schnepel (2009) which Deindividuation Theory would attribute to due to large crowds and stadium atmospheres. These settings and circumstances contribute to a collective mind, which can cause individuals to lose the ability of evaluating themselves or their actions and result in irrational or irresponsible behavior.

References

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