Universidad de
SanAndrés

COMPUTATIONAL TOOLS FOR RESEARCH

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Work N^{o}3

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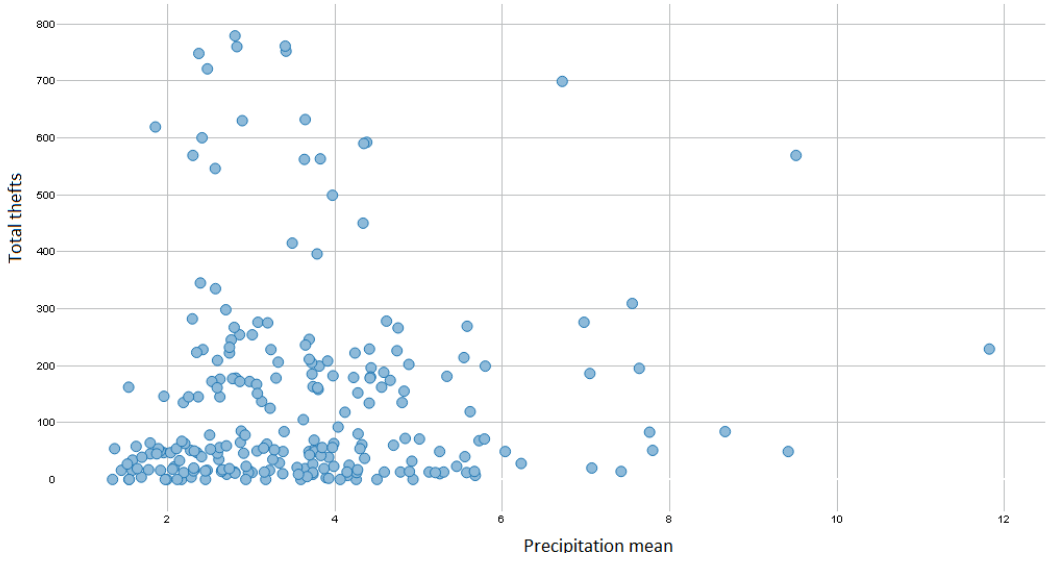
Graphs between rainfall and the four crimes.

Here we will show four graphs that describe the relationship between thefts, assaults, robberies, and breaking enterings with precipitation mean to characterize crime in Maryland.

Figure 1: Thefts and precipitation mean in Maryland



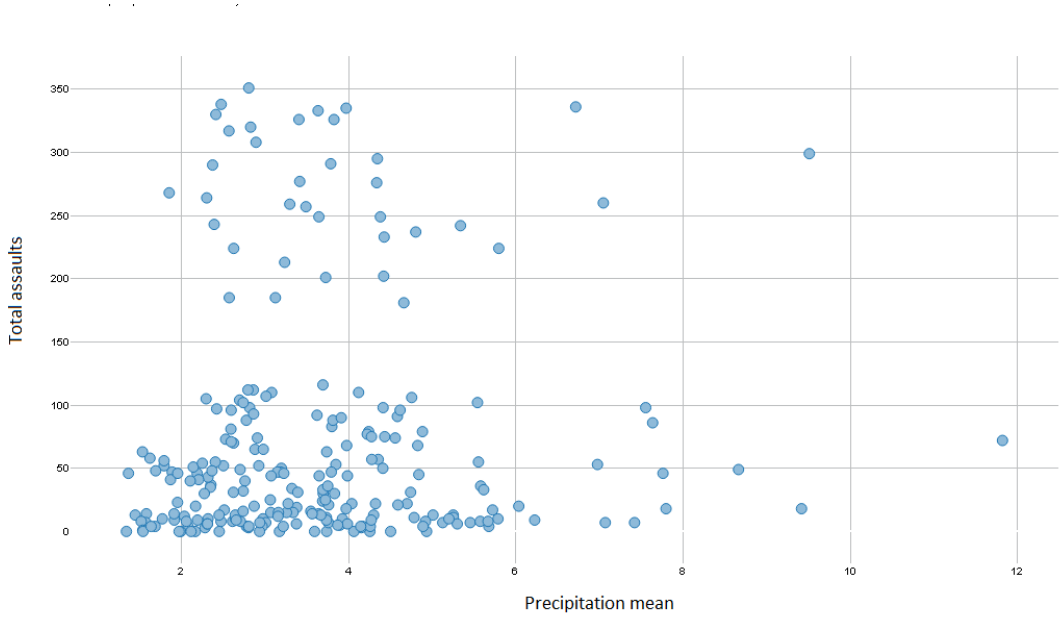
Source: Own elaboration based on weather data of Maryland and National Police Department Crime Rates data based on Socrata.

In Figure 1 we show the total thefts and precipitation mean. Generally, the points are strongly concentrated in low values of precipitation (around 3) compared to values of thefts less than one hundred. There is a second group of dots, on average, two hundred thefts and the same low precipitation values as the first group.

In Figure 2 we show the total assaults and precipitation mean. In this graph, we identify two different groups, with a gap in the middle of the transition between the groups.

The first group is characterized by low precipitation mean, between cero and six, and assaults between cero and one hundred. Then, we have a second group of data that respond to the same interval of precipitation mean, between cero and six but with a level of assaults higher than the first group, close to two hundred and fifty.

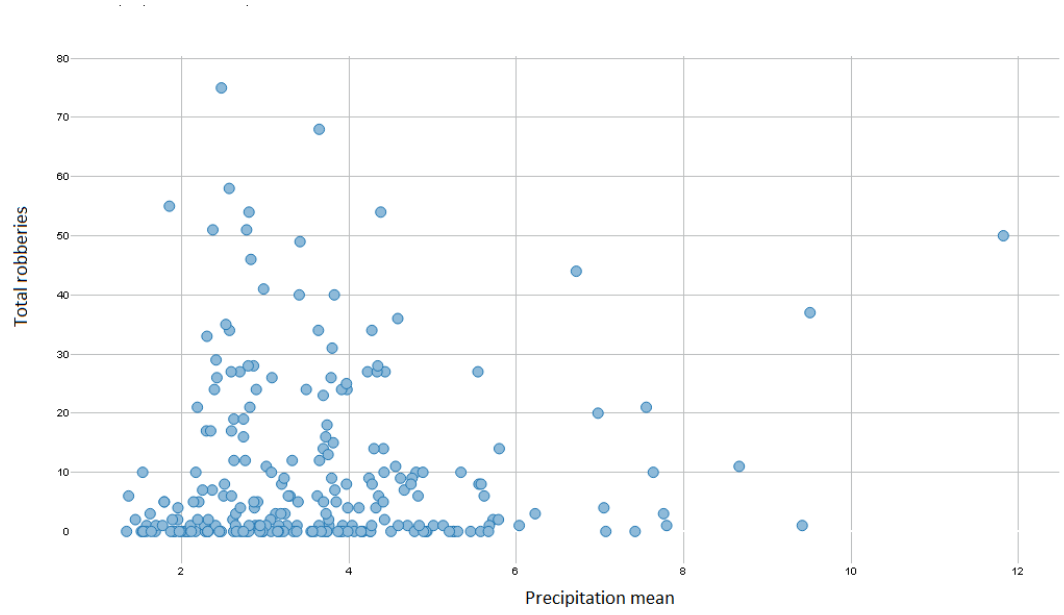
Figure 2: Assaults and precipitation mean in Maryland



Source: Own elaboration based on weather data of Maryland and National Police Department Crime Rates data based on Socrata.

In Figure 3 we show (on the vertical axis) the total robberies and precipitation mean (on the horizontal axis). In this graph, the dots concentrate in the range between two to five precipitation mean that responds to a robbery level of less than 10, with a strong focus on cero to four robberies. Then we can identify that for the same range of low precipitation levels, the distribution verticalizes for those dots of robberies that increase from ten to fifty, responding to average rainfall between two and four.

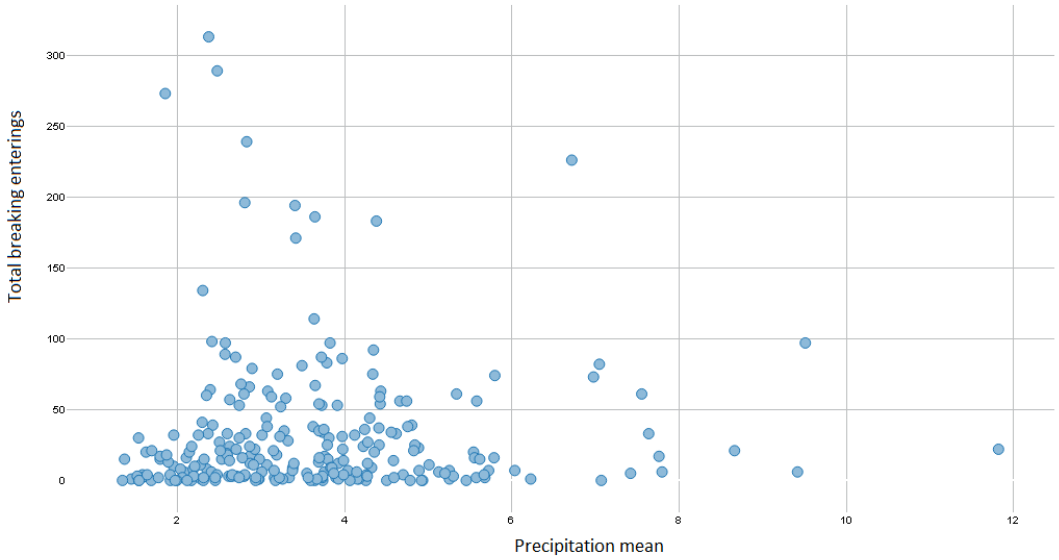
Figure 3: Robberies and precipitation mean in Maryland



Source: Own elaboration based on weather data of Maryland and National Police Department Crime Rates data based on Socrata.

In Figure 4 the graph presents the total breaking enterings and precipitation mean in Maryland. The distribution of dots is grouped in the range between one to six precipitation mean and cero to one hundred breaking enterings. Then we find two small groups of points, the first one, precipitation mean with average values between six to eight with a low level of breaking enterings. The second group, we found only nine dots with breaking entries greater than one hundred and fifty and low average of precipitation mean.

Figure 4: Breaking enterings and precipitation mean in Maryland

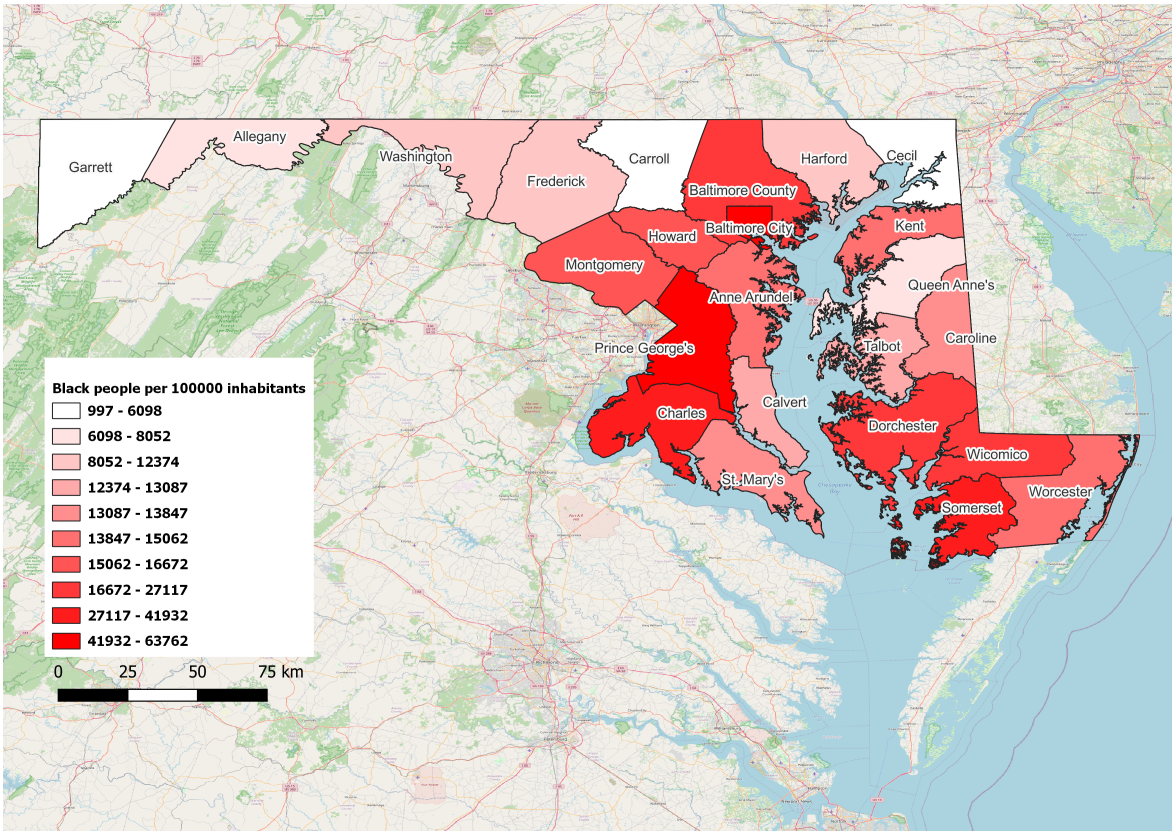


Source: Own elaboration based on weather data of Maryland and National Police Department Crime Rates data based on Socrata.

Map of Black people.

In Figure 5 The map shows the distribution of black people per hundred thousand inhabitants.The states that have the most significant number of people are Charles, Prince George's, and Baltimore. It would be inappropriate to argue that a higher proportion of blacks in those states explains the higher crime rate. To have a complete analysis on which we can conclude, we should be able to analyze the link between crimes and the population density of this minority.

Figure 5: Map of Black people per one hundred thousand inhabitants



Source: Own elaboration based on weather data of Maryland and National Police Department Crime Rates data based on Socrata.