Draft: Predictors of Domestic Violence in Washington, D.C.
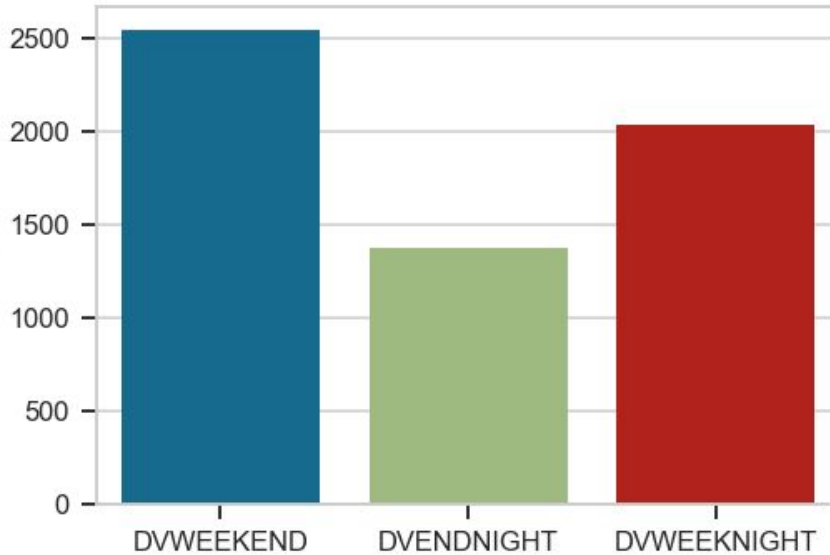
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Goal

Which factors are most efficient in predicting domestic violence incidents in Washington, D.C.?

Data Source

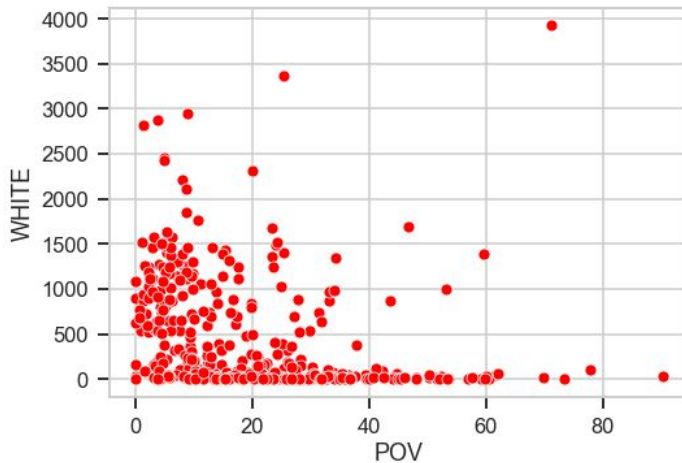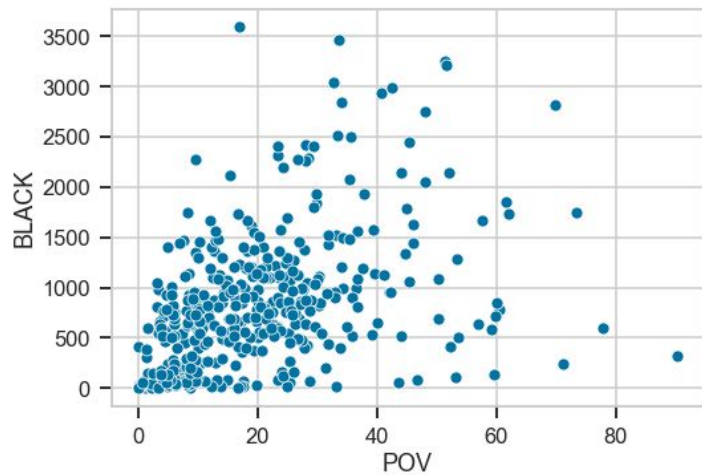Block-level data from D.C. from a study by Caterina Goman of the Urban Institute

Data

Weekends tend to have more incidents of **domestic violence** than weeknights (Mon - Thurs).
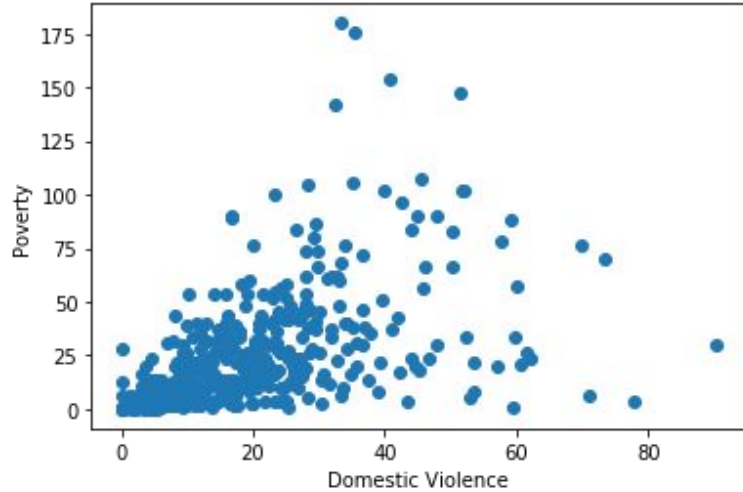
Data

Race interacts with **Poverty** in D.C.

Data
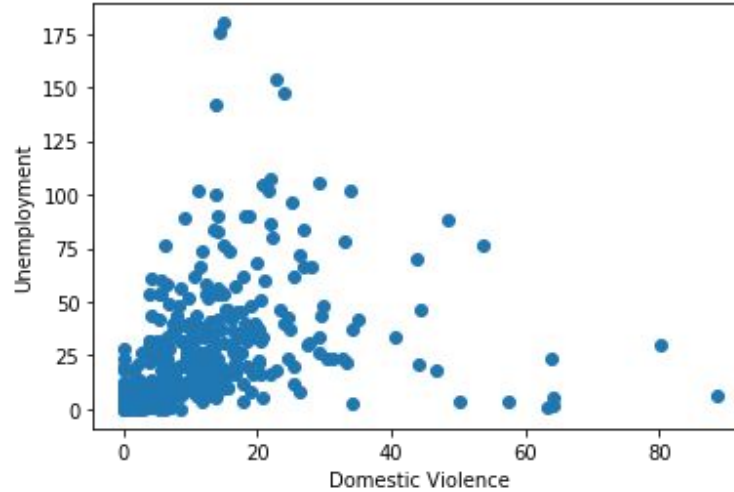
There seems to be a positive correlation between both **Poverty** & **Unemployment** with **Domestic Violence**

Feature Selection: Recursive Feature Elimination (RFE)

- Poverty
- Unemployment
- Physical Disorder
- Concentrated Disadvantage

Feature Selection: Lasso Regression

- Poverty
- Young Population
- Physical Disorder
- Concentrated Disadvantage

Feature Selection: Forward Selection

- Poverty
- Young Population

Conclusion & Recommendations

- We were not able to make any interpretations from the data using the statistical models.
- For future analysis, we recommend to:
  - Understand common features.
  - Explore complex interactions between variables.
  - Use different tools to better fit the data and make predictions.
  - Gather more data on different potential variables that could affect rates of domestic violence.