Deadly Police Encounters

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Metis Project 3

8,485

People killed by police since January 2013

Where do deadly encounters happen?
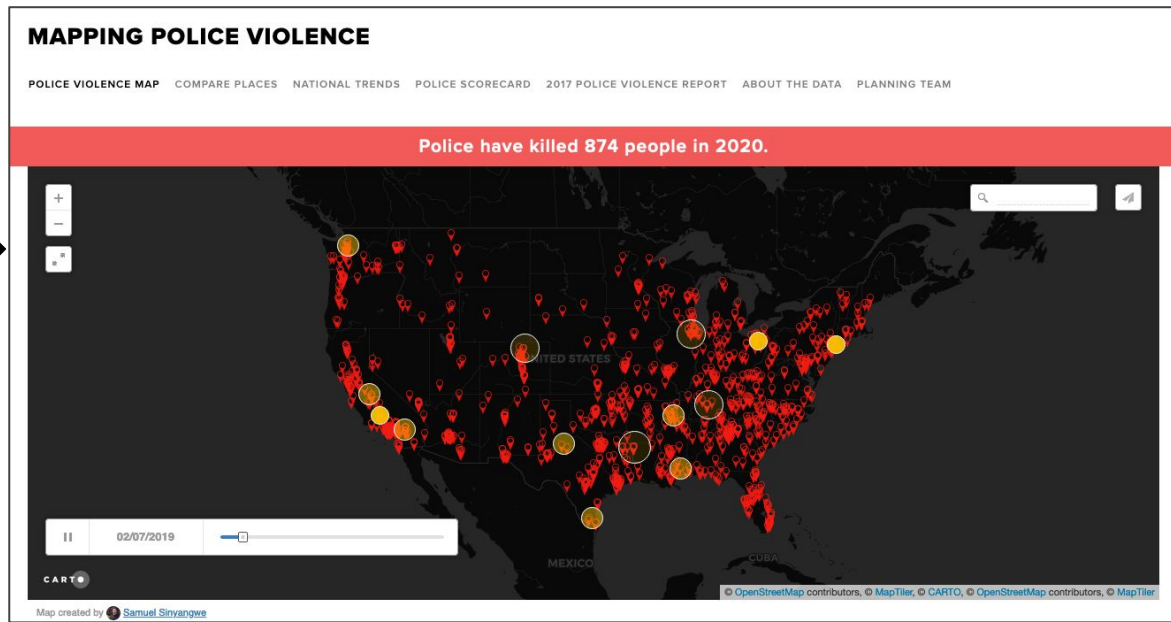
Mapping Police Violence

US Census Bureau

Where do deadly encounters happen?

Gather data on all deadly police encounters
- Location
- Victim's race

Mapping Police Violence

MAPPING POLICE VIOLENCE

POLICE VIOLENCE MAP   COMPARE PLACES   NATIONAL TRENDS   POLICE SCORECARD   2017 POLICE VIOLENCE REPORT   ABOUT THE DATA   PLANNING TEAM

Police have killed 874 people in 2020.

02/07/2019

Map created by Samuel Sinyangwe

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Where do deadly encounters happen?

Gather data on all deadly police encounters
- Location
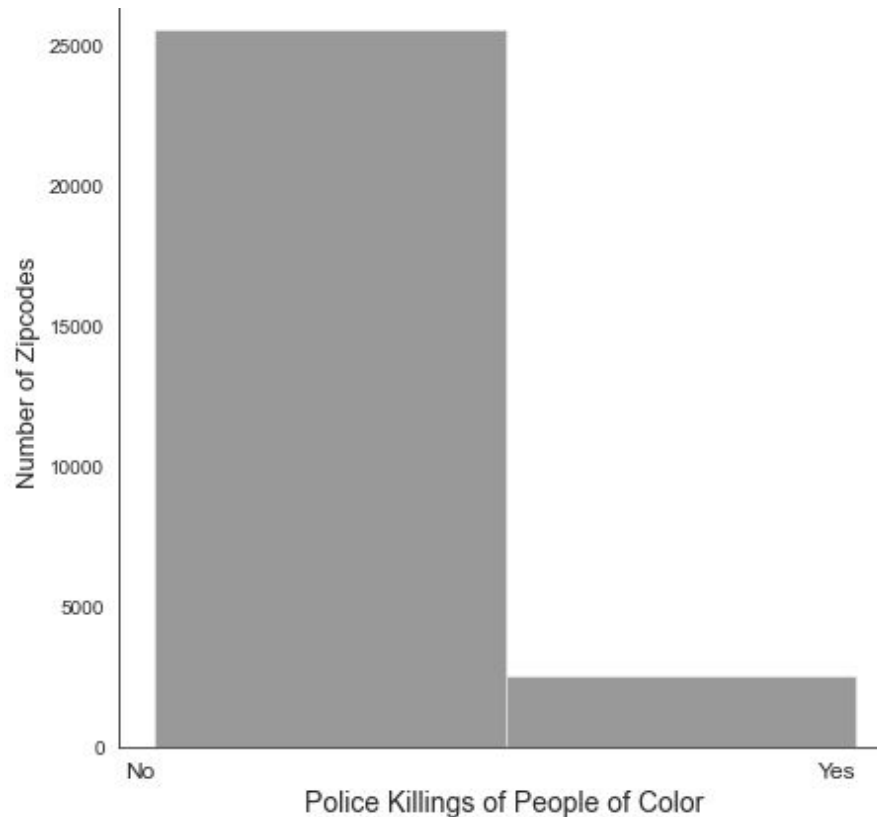- Victim's race

Mapping Police Violence → US Census Bureau

Collect nationwide socio-economic data on same scale as location data of deadly encounters

AMERICAN COMMUNITY SURVEY
U.S. CENSUS BUREAU

Where do deadly encounters happen?

9% of all US zip codes account for all police killings of people of color between 2013-2020.

Where do deadly encounters happen?

Gather data on all deadly police encounters
- Location
- Victim's race

Identify as many deadly
encounter locations as possible
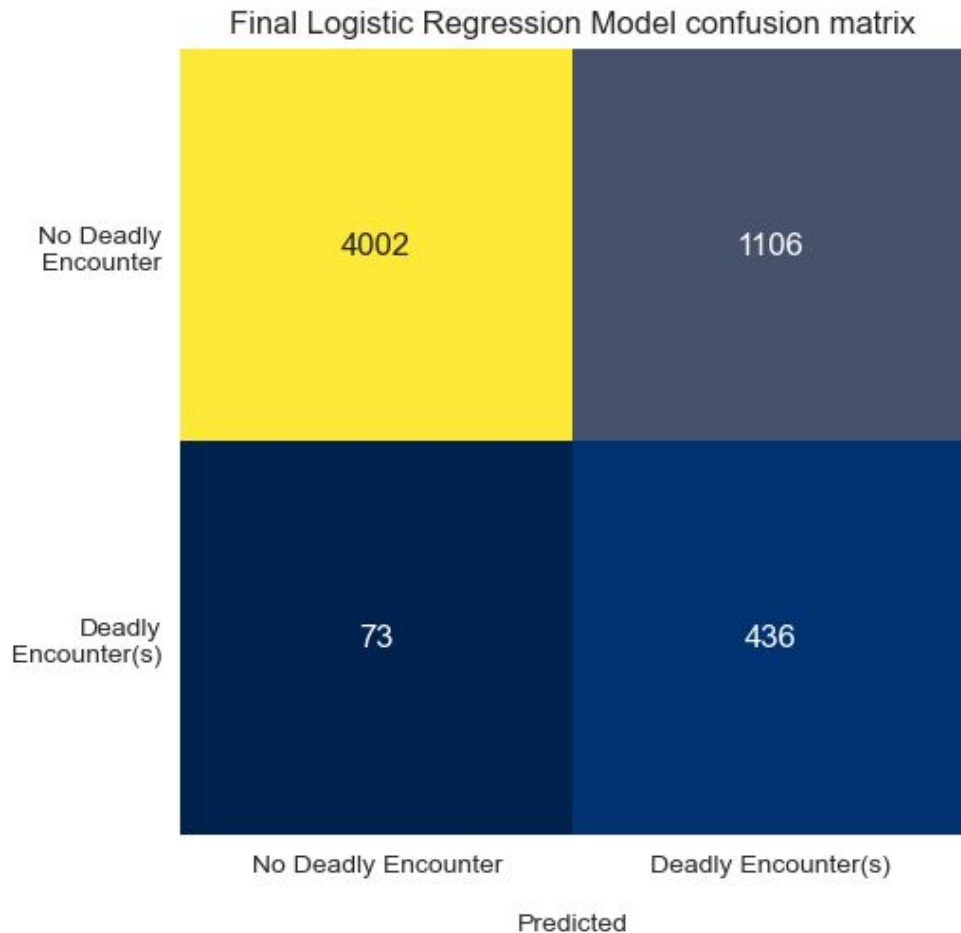(maximize recall)

Mapping Police Violence

US Census Bureau

Fit classification algorithms

Collect nationwide
socio-economic data on same
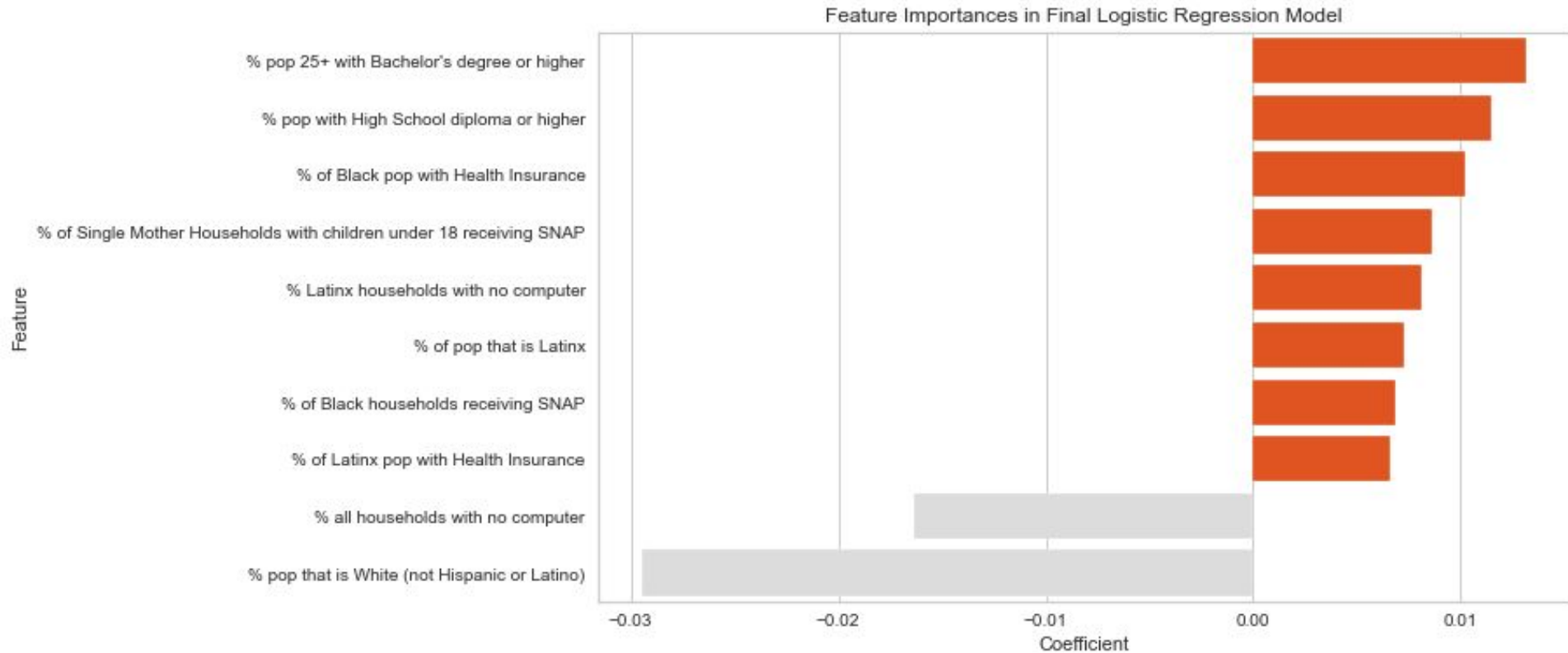scale as location data of
deadly encounters

Logistic Regression
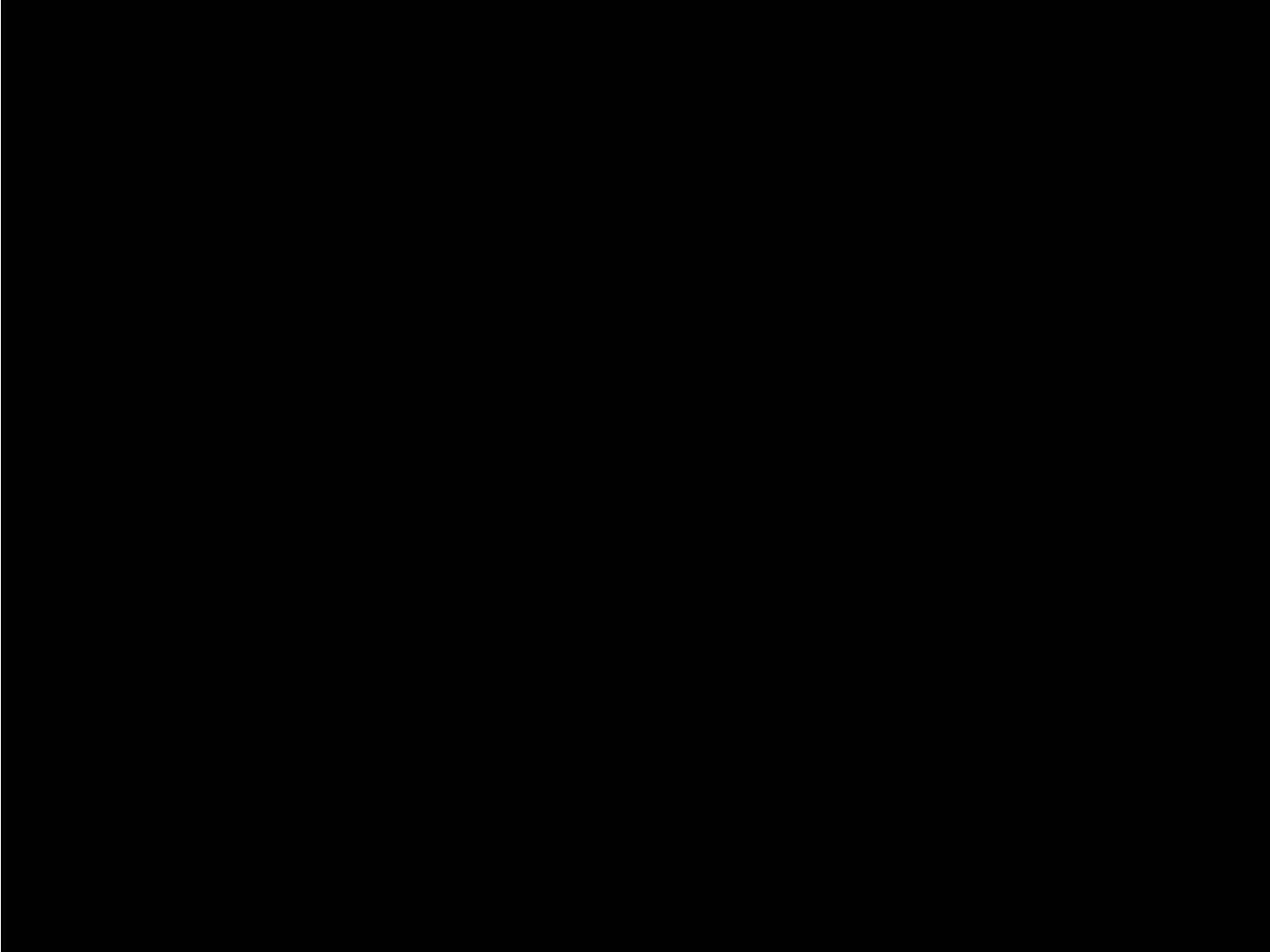
Correctly classifies 87.5% of deadly encounters.

Given the value of a human life, recall is 10x more important than precision.

Final Logistic Regression Model confusion matrix

	No Deadly Encounter	Deadly Encounter(s)
No Deadly Encounter	4002	1106
Deadly Encounter(s)	73	436

Actual

Predicted

Minority Class Recall: 0.857, Minority Class Precision: 0.283, Minority Class F-beta: 0.840

Socio-Economic Factors that make deadly encounters more or less likely

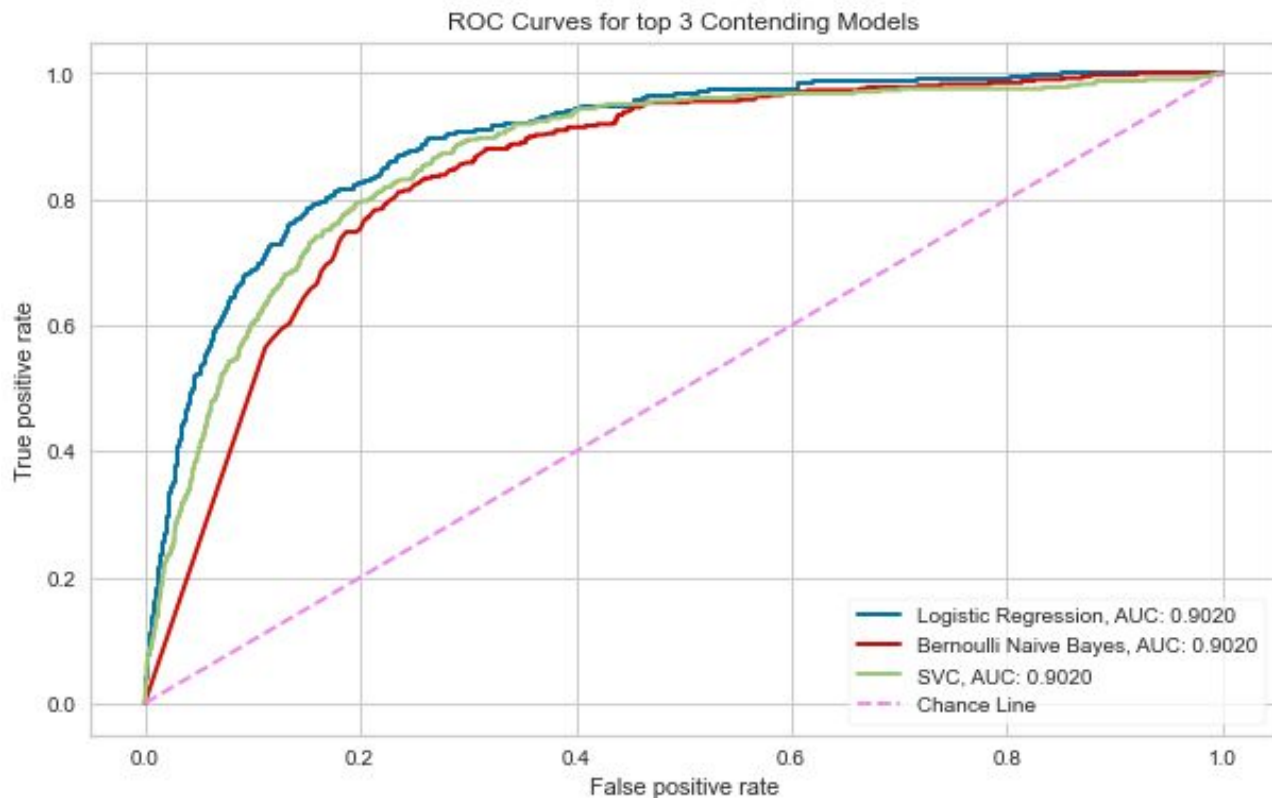Feature Importances in Final Logistic Regression Model

Counter-intuitive takeaways

- Police killings of people of color are more likely to occur in zip codes where people of color experience poverty and utilize social safety net
- ... as well as in zip codes with higher numbers of overall population with Bachelor's degree or higher
  - Suggests external, unobserved causes beyond community socio-economic characteristics

Future Work

- Characteristics of law enforcement agencies responsible for deadly encounters rather than characteristics of communities within which they exist
- More granular location-based data:
  - Measures of racial inequality **within** zip codes
  - Socio-economic data by census tracts rather than zip codes

Appendix

ROC Curves for top 3 Contending Models

3,896

People of color killed by police since January 2013

51% of people killed by police are people of color although they are only 40% of the population.