

Math & Policing

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MIT Mathematics

#ShutDownSTEM

#ShutDownAcademia

#Strike4BlackLives

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Expectations

- We are not experts
- All feelings are welcome
- All questions are welcome
- We are equals in this space
 - You can message Araminta, Peter, or Adela if you want to express something to the group anonymously

Introductions

Overt Racism (Socially Unacceptable)

KKK The N-Word
Swastikas

Lynching
Hate crimes
Racial Slurs

10%

Mass Incarceration

Racial Profiling

Police Brutality

Presumption of Guilt

Implicit bias

90%

Redlining

Housing Discrimination

Hiring Discrimination
based on name

Racist jokes

Covert Racism (Socially acceptable)

Systemic Racism:
The History of Policing

The anti-Black racist history of policing

- The first police forces in America were created to control enslaved Black people
- Surveillance and deputization to dispense corporal punishment on the scene baked in from the very beginning
- 13th Amendment abolished slavery *except as punishment for crime*
- *Jim Crow Laws* were immediately put in place

Sources: ([Throughline](#)) ([Vox](#))

The anti-Black racist history of policing, cont.

- Jim Crow laws started with the *Black codes* in the South.
 - Former Confederate soldiers worked as police and judges to enforce Black codes.
- Those soon spread across the US, e.g. racial segregation and lynching
- Reports found system racism in policing the heart of many problems. They were ignored or dismissed.
- Jim Crow laws were legally banned in 1964 by the Civil Rights Act, but ramifications remain to this day.

Effects of history on modern-day policing:
Racism in predictive policing

Background

- ***Broken-windows policing***: a strategy of pursuing crimes that affect quality of life, such as vandalism and public drinking, on the theory that they are precursors to bigger crimes
 - *Racial profiling and suspicious activities reporting*
 - *Stop-and-frisk (1990s on)*
- What are machine learning algorithms?
- ***Predictive policing***: Roughly, using machine learning algorithms to aid in policing
- ***PredPol***: commonly used predictive policing algorithm

Another way we can think of white privilege: What we're allowed to do in public without being seen as a threat



Breonna Taylor, 26



Ahmaud Arbery, 25



Burrell Ramsey, 26



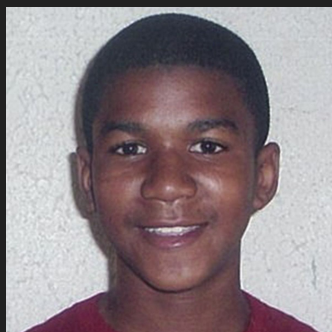
Tamir Rice, 12



George Floyd, 46



Sandra Bland, 28



Trayvon Martin, 17



Tony McDade, 38



David McAtee, 53



Eric Garner, 43

What algorithms are used for: *Predictive Policing*

- Identifying individuals who are purportedly more likely to commit a crime
- Identifying individuals who are purportedly more likely to fall victim to a crime
- Predicting where future crime will happen
- Deciding where to deploy police

Sources: ([MIT Tech Review](#)), ([Lau](#)), ([O'Donnell](#))

Concerns with algorithms

- Neural networks trained on historical crime data determine that race is a good predictor for crime in the United States
- Research shows that PredPol reinforces biases, rather than correcting for the apparent biases in the police data
- Machine learning algorithms in the criminal justice context can learn to be biased against Blacks ([ProPublica](#))

Outcomes of algorithms

- Larger police presence in majority Black neighborhoods
- No statistical evidence that these practices reduce crime (RAND 2014)
- Alternatives to predictive policing?
 - *If there is more illegal drug use in neighborhood X, should more police be sent to neighborhood X?*
 - *Different approaches to different problems?*

Other topics related to
anti-Black racism in
policing