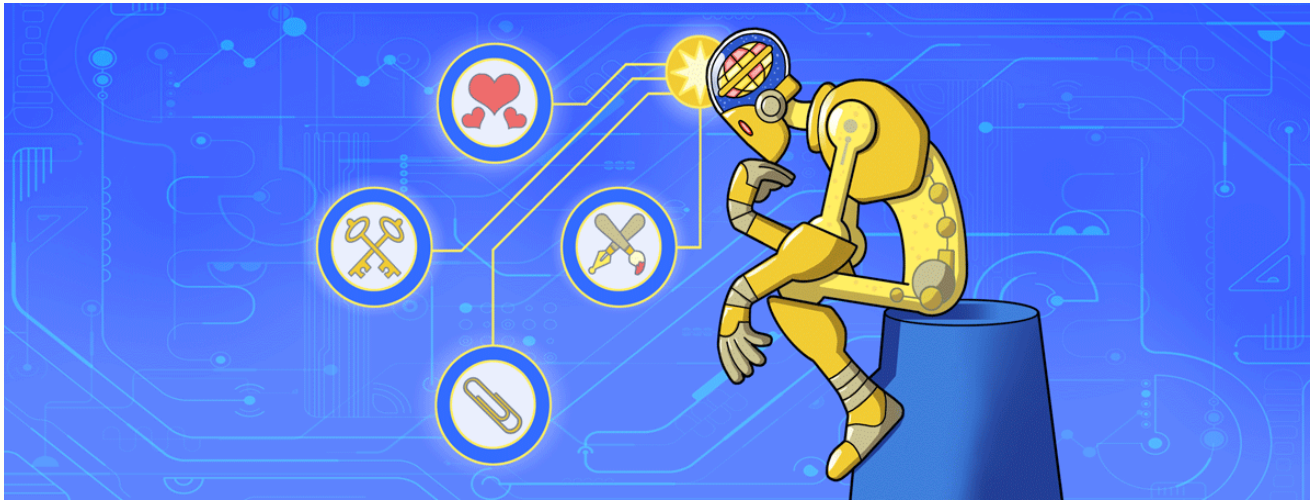# AI AND ETHICS

Predictive Policing in Artificial Intelligence

https://www.eff.org/deeplinks/2018/06/how-good-are-googles-new-ai-ethics-principles

Biased Technology in a Biased World

In light of the black lives matter movement, which shifted into the national spotlight as a result of the death of George Floyd, we decided to focus our project on predictive policing. This new data driven tool was originally intent on making our world safer, but instead harmed those who the algorithms were used on. Continue reading to learn more about this issue!

What is it?

Predictive policing algorithms use a large amount of data to make predictions about future crime and ideally prevent them. The algorithm supposedly uses pre existing data about crime in a certain area or the crime history of a person to assess risk factors. This algorithm is essentially a management tool to collect and interpret data. Although they were initially designed with good intentions, the lack of algorithmic transparency and accountability prevents us from understanding how the algorithms make these predictions, and subsequently increase the difficulty of figuring out why those results might be biased.

When did these algorithms become a standard at precincts?

The earliest use of these algorithms started in 2008, with programs like LASER and PredPol at LAPD. In 2012, NYPD started to test this software, eventually building its own in-house algorithm in 2013. They created algorithms for multiple crime categories such as gun violence, thefts, grand larcenies, etc. Chicago PD also piloted a predictive policing program as early as 2012, and used it quite often until the program was proved to be ineffectual and biased. In 2020, the predictive policing program at Chicago PD was discontinued.
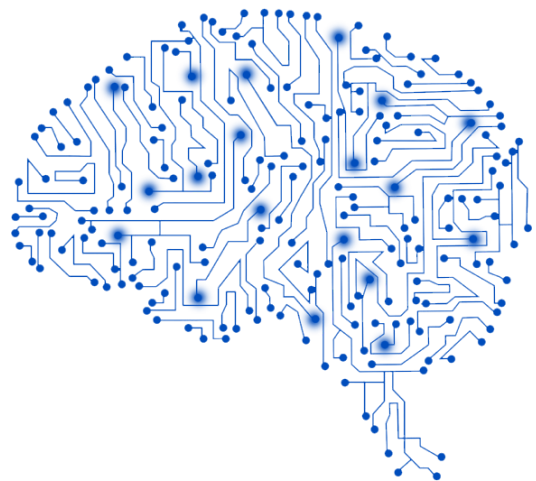
Why is this an issue?

AI is fed data, and due to past history with racial injustices, data is skewed to harm black and brown communities. Algorithms use large sets of data such as past crimes which make them more likely to use race as a factor to predict crimes. This is an issue because the algorithm is inherently biased due to unfair information it has been given therefore highering the chances of those who are people of color experiencing police brutality and racism.

Who is currently working to find solutions to this issue?

Joy Buolamwini is a Ghanaian-American computer scientist and digital activist based at the MIT Media Lab. She founded the Algorithmic Justice League, an organisation that looks to challenge bias in decision making software. Her research focuses on making AI more accountable and equitable. The accountability part of her research works toward creating meaningful transparency of an algorithm's inner workings. If we know how an algorithm makes decisions, we can eliminate the potentially harmful consequences of decisions it makes. As for equity, AI should be able to equally interact with everyone. Her documentary Coded Bias talks about the issues in facial recognition algorithms where faces that are lighter in skin tone are more accurately recognized in relation to ones that are not.

https://www.ajl.org/spotlight-documentary-coded-bias

Possible Solutions

Some of the solutions we came up with to combat bias and injustice as a result of algorithmic bias:

- Audit the algorithm:
  - Changing the internal logic of the algorithm to make it more fair as well as changing the way criminal records are presented.
- Police bias training:
  - Training officers to not make biased judgements about people as well as teaching them to be more aware of their internal biases so that they don't project them on to civilians they interact with on duty.
- Distributing police resources equally among geographical areas:
  - Some areas have too many police officers while others have little to none. So with more equally distributed resources, algorithms might not be fed data causing unintended bias towards neighborhoods with more officers on duty.
- Changing algorithm implementation:
  - There are applications for these algorithms that don't involve police.

Meet the Team

Supraja Ganti

Rising freshman at the University of Massachusetts at Amherst. I will be majoring in Biomedical Engineering, with a possible minor in cognitive sciences. My involvement in the Race Amity Club (a discussion-based club where difficult topics relating to race, inequality, inclusion, and diversity are at my high school as well as my interest in AI led me to apply for this research project.

Chau Trinh

Currently a junior at El Monte High School in El Monte, California. I am interested in the physical sciences, building, designing, and computer programs. Specifically, my interests peak in Architecture, and hope to learn more about computer science to get an understanding of computer algorithms.

Shrihan Nagarajan

Currently a freshman at Dougherty Valley High School in San Ramon. Interested in AI, CS, machine learning, engineering, and more.

Jazmin Guajardo

Currently a freshman at Dona Aña Community College in New Mexico studying Cyber Security. I am interested in learning about how society is affected by technology as it continues to evolve.

Jaquan Starling

Currently an undergraduate at Florida International University studying Interdisciplinary Engineering with a minor in Computer Science. I'm passionate about giving back to my community, and am interested in the intersection of technology and how technology can reinforce structural inequalities.

Naomi Ephraim

Currently a freshman at Tufts University planning to study Cognitive and Brain Sciences with a minor in either Computer Science or Food Systems and Nutrition. I am interested in the connection between psychology and computer science which encompasses artificial intelligence and its effects on society.

Brennan ChangHo

Freshman in High School at Csarts SGV. I am interested in biotechnology and biology, as well as astronomy. I wanted to know a little more about AI because right now it is starting to get more popular and important.