CAIS 117: Intro to Programming with Python

Spring 2024

Code For Good Activity 1: Algorithmic Bias

This is a group assignment. *You should complete it and submit it with 1-2 partners.*

Part 1

Today we looked at Dr. Joy Buolamwini (https://poetofcode.com/about/)'s work uncovering widespread algorithmic bias in facial recognition software, and the Algorithmic Justice League (https://www.ajl.org/), which she founded to work towards equitable and accountable AI.

On the Algorithmic Justice League's website, there is a tool that displays output from the analysis Dr. Buolamwini did on facial recognition software. Today your task is to use the tool to recreate some of the analysis Dr. Buolamwini did.

Navigate to the tool: https://gs.ajl.org/ (bottom of this page). By changing values in the drop-down menus on top of the tool, you can see the data laid out in various ways. Play with the tool a bit to figure out how it works and what it's doing.

Once you understand the tool, use it to explore the data. Find at least one interesting pattern in the data that illuminates algorithmic bias in facial recognition. Start a document and add a screenshot of the pattern to your document. In the document also:

- Explain the pattern shown in the screenshot and what bias it shows
- Explain what issues with the training data you think would have caused this bias
- Explain how you could improve the training data to address the bias
- ID one situation in where the bias present in this technology could impact life

Submission

Save your document as a PDF and submit it on Gradescope as a group.