CSE 417T: Homework 5

Due: April 12 (Friday), 2019 at 11:59PM

Notes:

- You **must** work in groups of either two or three persons on this homework. Each group only needs to submit one copy of the homework. Homeworks submitted by a single individual will receive no credit. Check the following link on how to submit group assignments on Gradescope:
  `https://www.youtube.com/watch?v=a6DERS94qPY&feature=youtu.be&t=32s`

- Please check the submission instructions for Gradescope provided on the course website. You must follow those instructions exactly.

- There are three PDFs posted in the "Resources" section of Piazza, under "Homework." These are PDF versions of three articles from the media, namely "Academics Confirm Major Predictive Policing Algorithm is Fundamentally Flawed" by Caroline Haskins (Motherboard, February 2019), "A computer program used for bail and sentencing decisions was labeled biased against blacks. Its actually not that clear." by Sam Corbett-Davies, Emma Pierson, Avi Feller and Sharad Goel (Washington Post Monkey Cage Blog, October 2016), and "Automating Bias" by Virginia Eubanks (Scientific American, November 2018). Please read these three articles.

- Homework is due **by 11:59 PM on the due date.** Remember that you may not use more than 2 late days on any one homework, and you only have a budget of 5 in total. Since this is a group homework, you may not use more than $\left(\min_{i \in \text{Your Group}} \text{Late-Days-Remaining}_i\right)$ late days.

- Please keep in mind the collaboration policy as specified in the course syllabus. If you discuss questions with others you **must** write their names on your submission, and if you use any outside resources you **must** reference them. **Do not look at each others' writeups, including code.**

- This homework is worth 50 points and will be graded on a "check-plus, check, check-minus, no-credit" scale.

- **Your writeup must be no longer than 4 pages with 1.5 line spacing.**

Assignment:

After reading the three articles, discuss them with your group, and then prepare a write-up that addresses the following questions (you'll see that some of these questions seem like they are asking about individual opinions or predictions, but it's OK to write them from the group perspective, either by picking one of you to focus on or aggregating your thoughts).

1. Briefly summarize (in 2-3 sentences each) the main points you took away from each of the articles.

2. What was the single most surprising thing you learned from reading these articles?

3. What information did you learn that bothers you the most?

4. In your opinion, what are the (one or two) most important ethical issues in the use of machine learning raised in these articles? How could you, or someone you know, be directly impacted? Be specific.

5. How do these issues interact with the mathematical definitions of fairness we talked about in class? Would satisfying one or more of those notions resolve this problem or these problems? Why or why not?

6. What is the most likely way you see yourself interacting with these ethical issues in your future careers?

7. How would you work towards resolving these issues? Who are the relevant decision-makers? How would you communicate with them? What parts of the solution may be technical / mathematical versus non-technical?