SOCI2534 Midterm Lecture Notes

Stephen Cole

3553803

An overview of the topic I have chosen and why I think it would fit into our class

I’ve chosen to adapt the algorithmic bias and search engine lecture to focus solely on algorithmic bias. I made this decision because I think it’s of the utmost importance for everyone to understand the algorithms that to some extent define and control our society. For this reason I chose two papers, the first is based on algorithmic bias in the web and is intended to help guide the student into self-directed learning on how data is used on the internet and what factors cause this bias so that they have a better understanding of where these things go wrong in production. The second paper is a study on how advertisement personalization can and has been biased to show content directed to a non-gender specific audience to favor the male population, in the specific case of this paper it is related to STEM career ads. I personally think this is important for a student base to be informed of how and why they are being targeted by ads online so they will be less susceptible to these marketing techniques.

Lecture Notes:

Slide 1:

* Give a brief introduction of what algorithmic bias is.
  + such as “This week we will be diving into algorithmic bias, what it is, how it happens and how it affects our society. algorithmic bias in machine learning is mainly caused by bias in the data that was used to create it. To create an algorithm such as the ones we will be talking about this week a massive amount of data is needed and if it isn’t properly vetted many problems with bias can arise”

Slide 2:

* The plan for today’s lecture is to:
  + Talk about algorithmic bias and its effect on our society
  + Review algorithmic bias articles
  + Talk about this week’s activity

Slide 3:

* To start off today’s class we’re going to watch a video from the YouTube channel Crash Course AI on Algorithmic Bias and Fairness.
* Reflect on the video and talk about some key points such as the downfalls the algorithms we depend on.

Slide 4/5:

* The first paper/article we will be investigating today is titled “Data and Algorithmic Bias In The Web” and is a wonderful resource to help understand some of the largest factors that affect bias in machine learning algorithms and how companies use the internet to gather data for them.

Slide 6:

* Go over the different challenges in creating these algorithms.

Slide 7/8:

* The second paper/article we will be investigating today is titled “Algorithmic Bias? An Empirical Study of Apparent Gender-Based Discrimination in the Display of STEM Career Ads” and gives an in-depth account of how algorithmic bias causes a discrepancy in the ratio of STEM career ads shown to men and women.

Slide 9:

* Now for this week’s activity and readings!

Slide 10:

* For 15 minutes I would like for all the students to join their assigned groups and discuss some of the questions on the slide or any questions/ideas you’re curious about related to this subject. Check on the students and sit in on a few of their conversations, possibly guide conversations that have gone off track

Slide 11:

* By next week I would like for you to review the two papers we discussed in class and write a brief summary along with one or two things you learned during your research.