Dan Fanelli

DATA 643 Special Topics: Recommender Systems

Discussion 3

"As more systems and sectors are driven by predictive analytics, there is increasing awareness of the possibility and pitfalls of algorithmic discrimination. In what ways do you think Recommender Systems reinforce human bias? Reflecting on the techniques we have covered, do you think recommender systems reinforce or help to prevent unethical targeting or customer segmentation? Please provide one or more examples to support your arguments."

There are many ways that recommender selection could reinforce human bias. I will just rattle off a few possible examples:

- Advertising unhealthy foods to a demographic thought to be unhealthy
- Advertising violent video games to those thought to be most interested in voilent content
- Advertising healthy lifestyles to people thought to have healthy lifestyles
- Intelligence-building programming to those already watching intelligence-building programs
- Advertising non-intelligence-building programming to viewers that are already watching non-intelligence building programs

I think that the list could go on and on, but maybe we can just look at a few distinctions:

## Is the target of the recommender bias the individual being discriminated against?

If so, then perhaps this at least brings some level of the control back the hands of the target. For example: if the target of the biased system were violent content being targeted to someone watching violent content, then hopefully the cycle could be broken by not watching that content. On the other hand, if a teacher of low-education-level children is being targeted with lower-intelligence content, then it seems the control is not in the hands of the student - ie - the one being biased against is not the one in the driver's seat.

## Are people doing the same things being targeted differently?

For example, violent commercials on violent television shows and peaceful commercials on peaceful television shows: at least the control lies in the viewer (or parent of). On the other hand, if violent content in commercials is being shown to 1 demographic vs another that are all watching the same Sunday football game, then this is case of bias where the control is more out of the viewer's hands.

It probably sounds like a cop-out, but I think this topic is as broad as the "Is the internet bad or good" question. Recommender systems are a tool, and therefore they can and will be used in both ethical and non-ethical fashions, for good and bad purposes, fairly and unfairly.