

Module 4.1

Hello and welcome back for week four, the last week of this MOOC.

Today we're going to talk about the emerging new beat on algorithms, which is less about using algorithms to create journalism as we've discussed in past weeks, and more about actually covering algorithms as part of journalism.

Before you get into that, I want to remind you that there are a couple of other video lectures for you to watch this week, as well as some readings that I posted in the syllabus for you, including a chapter from the data journalism handbook, an example of an investigative report on this beat from ProPublica, and another article on the challenges and ethics of transparency when using algorithms for editorial purposes. Also, don't forget to engage in the forums this week and to take the quiz.

So for the rest of this video today I want to tell you a bit more about this emerging algorithm speed, and to give you some ideas for how you might try to find angles for your own coverage on this beat.

So, algorithms are pretty much everywhere in society now. They're used throughout the public and private sectors for all kinds of decision making purposes, but we see more and more examples of algorithms throughout society every day.

They're being used to optimize all kinds of things from inspection processes to transportation planning, welfare systems management, as well as of course throughout the media system. They're even being used in domains like romantic dating and I wanted to show you this clever New Yorker cartoon because it really puts its finger on an important point here.

We have this woman on a date with a man and she's kind of annoyingly looking back at him saying "I'd like to meet the algorithm that thought we'd be a good match." And it kind of drives home this underlying issue with algorithms making decisions which is that, their decisions aren't accountable. We don't really know how they came to those decisions.

Now whether that be a romantic match, or a search ranking, or some other algorithmically informed decision, it's time to start thinking about how we can scrutinize the decisions that algorithms make a little bit more carefully. So, the ProPublica Machine Bias series is a great example of journalists starting to do some of this scrutinizing of algorithms in society.

In their investigation they looked at criminal risk assessment algorithms which calculate a score indicating when someone is at a high risk for committing a crime again. These scores can then be used in probation, parole or even sentencing decisions in the criminal justice system in the U.S.

Now what the investigation found was that black defendants tended to be assigned higher risk scores than white defendants, and that they were more likely to be incorrectly labeled as high risk when in fact after two years they hadn't been rearrested.

Now you can see in these charts that black defendants are in the top panel and the white defendants are in the bottom panel. You can see that the scores for white people tended to skew toward the lower end of the risk score spectrum whereas the scores for the black people in the top panel tended to be more evenly distributed.

So you have both low and high risk scores there. So, this is pretty clearly unfair, and it's a good example of how algorithms can create discrimination if we're not careful about how they're used and deployed.

So, the ProPublica piece is actually a really good example of this broader idea of algorithmic accountability reporting. It gets at the notion of you know how do we investigate and explain these algorithmic decisions that arise throughout public and private sectors, and how can journalists and others characterize the bias, the power, and the influence of algorithms throughout society.

Algorithmic accountability really entails understanding how and when people exercise power within and through algorithms and society. More broadly we can speak of an emerging algorithms beat in journalism which is oriented around auditing and critiquing the use of algorithms in society, and of course reporting is only one mechanism to achieve algorithmic accountability.

There are other avenues through political, legal, academic or even artistic contexts that may also matter, but my focus here is really on algorithmic accountability reporting as a journalistic endeavor.

So there's really a couple aspects that I want to talk to you about when it comes to the algorithms beat. Today I'm going to talk about different angles that you can take in covering algorithms in terms of what's newsworthy about algorithms? Where's the story? And in the next video I'll talk more about the methods, how do you get that story?

So the crux of algorithmic power often boils down to computer's ability to make decisions very quickly and at scale potentially affecting large numbers of people. Practice algorithmic accountability isn't just about the technical side of algorithms though, we have to understand algorithms as composites of technology and people working together.

This goes back to that early idea in Week 1 on hybridization, blending of algorithms and humans working together. There are people woven throughout these systems including designers, operators, owners and maintainers, and they have all kinds of impacts and how these systems operate.

So algorithmic accountability is really about understanding how these people exercise power within and through the system. So, what exactly makes an algorithm newsworthy? Oftentimes this boils down to identifying whether or not the algorithm has made a quote unquote bad decision. What's the potential for harm here of that bad decision? What is its failure of that decision mean for an individual or for society?

Violations of an established expectation for how an algorithm ought to be operating are typically interesting for the public and so they might be newsworthy. This could include an algorithm both doing something it wasn't supposed to do as well as one not doing something it was supposed to do.

The question of public significance and the consequences of a bad decision are also key factors here. The severity and prevalence of the decision are important aspects to consider. An algorithm that recommends a bad movie on Friday night is probably less newsworthy than one that unjustly contributes to an individual's spending more time in prison than is warranted.

So If you've already read the chapter from the data journalism handbook that I assign this week, this slide should look pretty familiar.

Here I just want to briefly outline some of the interesting angles that I think could be used to cover algorithms. So the first angle is to look for instances of discrimination, bias or unfairness.

The ProPublica story that I just talked about is a great example of this kind of angle because it shows pretty clearly that there is a disparate impact in how the criminal risk assessment algorithm treats different types of people.

Another angle that can be used to cover algorithms is to look for errors and mistakes that are consequential to people. So for example, there was a story a few years ago published in The Boston Globe newspaper about a guy who had his driver's license revoked because of fraud detection algorithm misrecognized his image on his driver's license. So, that's the kind of mistake that can have some real impacts for an individual and which makes for a good story.

Another angle is to look for whether an algorithm has violated some legal or social norm. So, in the data journalism handbook chapter I gave some examples of an algorithm defaming someone or violating someone's privacy.

Personally I think that we should expect algorithms to adhere to basic human rights norms, and so really any example that you can find of an algorithm violating some norms around human rights I think makes for a really great story.

The last angle to mention relates back to the idea that algorithmic decisions are often embedded in larger decision making processes involving both people and algorithms. So if algorithms are misused by people in these systems that can also be a newsworthy angle to cover the algorithm.

Actually the ProPublica story also included this angle. The company that had created the risk assessment score had actually created two versions of the score. One that was appropriate for men and one that was appropriate for women, and the county that ProPublica was investigating was actually misusing the scores by calculating the men's version of the score for women.

So in closing today I want to point you to a resource in case you're interested in learning more about covering algorithms. The site is called Algorithm Tips and you can check it out online at: www.algorithmstips.org.

This is a site that my research group at Northwestern maintains to try to help make it easier for journalists who are getting into doing algorithmic accountability reporting. The site has a variety of examples, some methods tips, and some other readings there for you to learn more.

If you're in the U.S. we also curate a database of hundreds of examples of algorithms used in the U.S. government which might provide a starting point for you to investigate an algorithm.

So that's it for today, but in the next video lecture I'll get into more detail on the methods associated with this type of reporting. So I'll see you there.