Week 8 Discussion

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What is for this week

- Mon, Feb 26 ASSG **Assignment 2 due**
- Fri, Mar 01 QUIZ **Quiz 5 due**

What is for next week

- Fri, Mar 08 ASSG **Assignment 3 due**

(Assigning correct page/ pages for each question in the submission!!!)

Reading 1: Accountability in Algorithmic Decision Making

- Algorithmic Decision Making
- Accountability
- Transparency

Algorithmic Decision Making: Prioritization

- Emphasize certain information over others.
- Essential in managing information overload.
- Examples include search engines, rankings of schools, hospitals.
- Design considerations include criteria definition, weighting.

Algorithmic Decision Making: Classification

- Mark entities as belonging to specific classes.
- Basis for downstream decisions; potential for bias and errors.
- Importance of training data and cultural context.
- Considerations include accuracy, false positives/negatives.

Algorithmic Decision Making: Association

- Create relationships between entities.
- Can lead to meaningful or unsettling implications.
- Example: search autocomplete linking names to negative terms.
- Challenges in quantification and interpreting correlations.

Algorithmic Decision Making: Filtering

- Involves including or excluding information.
- Essential in moderation and preventing misinformation.
- Risks of censorship and false positives.
- Importance of considering freedom of speech.

Accountability

- Government: Requires transparency and regulation for accountability to citizens.
- Private Sector: Faces market and social pressures for data accuracy and customer satisfaction.
- Transparency: Key for both sectors, but full disclosure not always necessary.
- Legal Frameworks: FOIA allows public access to government data; proposed FOIPA aims for deeper algorithmic transparency.

Transparency Standard

- Human Involvement
- Data
- The Model
- Inferencing
- Algorithmic Presence

Transparency: Human Involvement

Goal: Explain the algorithm's purpose and editorial goals.

Oversight: Detail who controls and oversees the algorithm, promoting accountability.

Team: Identify the creators or team behind the algorithm to highlight responsibility and enhance trust.

Transparency: Data

Quality: Communicate the data's accuracy, completeness, and timeliness.

Process: Describe how data is collected, transformed, and vetted, whether automatically or manually.

Privacy: Address how personal data is used and the safeguards for privacy.

Transparency: Model

Inputs: Clarify which features or variables the algorithm uses.

Weightings: Disclose how features are weighted in the decision-making process.

Tools: Share information about the software or modeling tools used, including their assumptions and limitations.

Transparency: Inferencing

Accuracy: Benchmark accuracy, highlighting error rates like false positives and negatives.

Confidence: Share average confidence values to indicate the level of certainty in the algorithm's outcomes.

Error Handling: Explain steps taken to address and correct known errors, whether due to data inputs or algorithmic process

Transparency: Algorithmic Presence

Usage: Disclose when algorithms are used, especially for personalization or A/B testing.

Filtered Content: Inform users about the content that has been algorithmically curated or omitted from their view.

Reading 1: Discussion Questions

How can we develop mechanisms to ensure the ethical use of algorithms in content creation, considering the balance between efficiency and accuracy? Discuss the potential frameworks that could support ethical algorithmic decision-making in various industries.

Considering the impact of algorithmic decision-making on public opinion and democratic processes, what role should government regulation play in overseeing these systems? Explore the potential benefits and challenges of government intervention in algorithmic transparency and accountability.

Reading 2 Julia Angwin, et al., 2016, Machine Bias

- Risk assessment tool is used by judges
- It is biased towards black people
- Concerns about the hidden effects in sentencing

Examples

- Vernon Prater (Risk 3) v.s. Brisha Borden (Risk 8)
  - Prater: Armed robbery…
  - Borden: took a kid’s bike
- James Rivelli
  - Low risk score
  - aggravated assault, multiple thefts, felony drug trafficking

Discussion questions

1. In light of the errors and corrections associated with automated writing and algorithmic decision-making, what measures can be implemented to enhance the reliability and trustworthiness of these systems? Discuss the balance between human oversight and automated processes.
2. Reflecting on the differences in accountability expectations between the public and private sectors, how can a standard for algorithmic transparency be effectively applied across different domains? Evaluate the potential impact of such a standard on innovation, privacy, and public trust.

Work with your teammates on final project

Feel free to just raise your hand or come up and ask in private