Due Process and Ethics in an Age of AI, Predictive Analytics and Automation

A Community Discussion

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Who’s afraid of AI and Big Data?
AI?
ODR?
Big Data?
Artificial Intelligence

Machine learning
Natural language processing
Natural language generation
Decision management
Audio/Speech analysis
Virtual assistants
Deep learning
Robotics
...

More data will be created in 2017 than the previous 5,000 years of humanity

Big Data

Volume - amount of data
Variety - types of data
Velocity - speed of processing
Machine Learning

Machine learning is a statistical process that derives rules from data to gain insights or make predictions.
Fairness
Accountability
Transparency

To ensure non-discrimination, due process, and understandability
“We’re in for more than just a world of change and evolution. We’re in for some discussion of what it means to be human.”

Justice Mariano-Florentino Cuéllar
California Supreme Court Justice

https://qz.com/1132418
How does Due Process fit in?
Ex. 1: Court Decisions via ODR

1. What is it? Resolve your traffic ticket, warrant, etc. online by engaging in mediation w/court

2. Potential benefits: convenience to people; efficiency of courts

3. Potential Problems: introduce ex parte communication; rely on algorithms to suggest resolutions; algorithm elements different for each court and each judge

4. How could this be improved? What steps are needed? Who can do them?
Ex. 2: Algorithms used in sentencing, ability to pay, parole

1. What is it? Closed algorithms used to determine a defendant’s ability to pay a fee/fine, suggest a sentence in a criminal case, suggest whether parole should be granted.

2. Potential benefits: removes human bias, efficiency

3. Potential Problems raised by it: lack of validity; codifies human bias by hiding it in an algorithm that no one can know, question, appeal

4. How could this be improved? What steps are needed? Who can do them?
Ex. 3: Mandatory Online Foreclosure Mediation in PA

1. What is it? On-line storage area for exchanging documents

2. Potential benefits: no more “I didn’t receive that fax”

3. Potential Problems raised by it: ex parte communication, loss of flexibility

4. How could this be improved? What steps are needed? Who can do them?
Ex. 4: Unemployment Compensation Benefits “Modernization” in MI and PA

1. What is it? MiDAS, a computerized system for handling unemployment applications and detecting fraud in MI.

2. Potential benefits: efficiency; “curbing waste”;

3. Potential Problems: total lack of human oversight created huge human suffering, system improperly found fraud in 93% of cases

4. How could this be improved? What steps are needed? Who can do them?
Ex. 5: Deployment of AI based tool at a Legal Services Organization (hypothetical)

1. What is it? Automatic document identifier
2. Potential benefits: 24/7 meaningful legal service
3. Potential Problems: it wouldn’t be perfectly accurate
4. How could this be improved? What steps are needed? Who can do them?
Ex. from Audience:

1. What is it?
2. Potential benefits:
3. Potential Problems:
4. How could this be improved? What steps are needed? Who can do them?
Ex. from Audience:

1. What is it?
2. Potential benefits:
3. Potential Problems:
4. How could this be improved? What steps are needed? Who can do them?
Some principles

1. We need education, engagement, and guidelines.
2. Hybrid systems are best: computers help humans, not just one or just the other.
3. All new innovations must be accessible to all who will use it.
4. Algorithms must be transparent, open to review, with plain english explanations publicly available.
5. Algorithms must not codify human biases.
6. Does the innovation promote consistency across a jurisdiction?
7. Include mechanisms for evaluation and improvement, testing validity, etc.
8. Neutral human review of reported problems
What Next?
Additional Reading

Sample Access to Justice Technology Principles
237406-92BF-8F88-D9DF-77505DC54D16/273851English.pdf

AI and ethics:
ProPublica Series: Machine Bias: https://www.propublica.org/series/machine-bias

Code-Dependent: Pros and Cons of the Algorithm Age http://pewrsr.ch/2kslvuK

Top 9 Ethical Issues in Artificial Intelligence

As Computers Get smarter, Who Keeps Tabs On Their Ethics?
https://www.theguardian.com/technology/2017/feb/05/artificial-intelligence-ethics-poker-libratus-texas-holdem-ai-deepstack
Additional Reading

AI watchdog needed to regulate automated decision-making

https://abovethelaw.com/2017/10/fear-not-lawyers-ai-is-not-your-enemy/?rf=1

AI and sentencing in criminal cases:
https://epic.org/algorithmic-transparency/crim-justice/

Robo-fraud chaos created by computers in MI Unemployment Office:
https://www.metrotimes.com/detroit/criminalizing-the-unemployed/Content?oid=2353533
A little more reading

Big Data’s Disparate Impact:

Algorithmic Transparency: End Secret Profiling:
https://epic.org/algorithmic-transparency/
Thanks!

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