Making Artificial Intelligence Inclusive for Hiring and HR

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The Challenges

Disability, AI and Employment: Challenges

- Treatment as subject of data-driven decisions

- Barriers to participation in designing and developing data-science

- Barriers to interpreting the outcomes of data science

- Vulnerability to data abuse and misuse

- Subject to systemic influence or vicious cycles of data science

Stages of Bias

- Data gathering

- Processing of data

- Analysis & interpretation of data

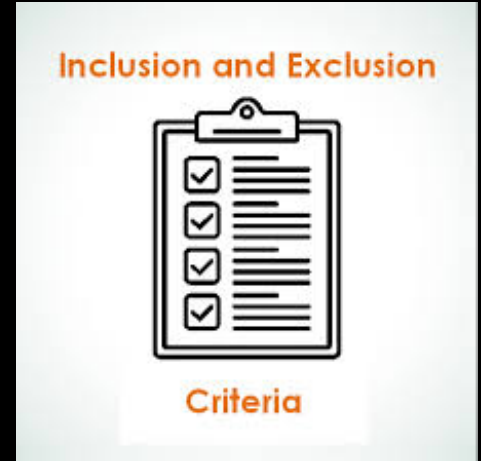- Training or machine learning process

- Decisions based on data

Types of Bias

- Data gaps, misrepresentation and lack of representation

- Embedded bias & engineered bias

- Statistics and the edges

Data Gaps & Representation

- Excluded from studies

- Absent from digital traces

- Inaccurate data proxies
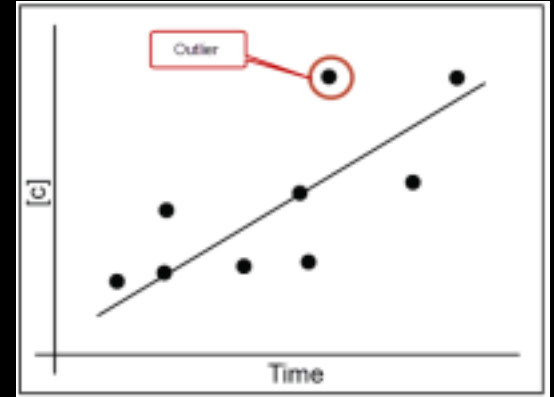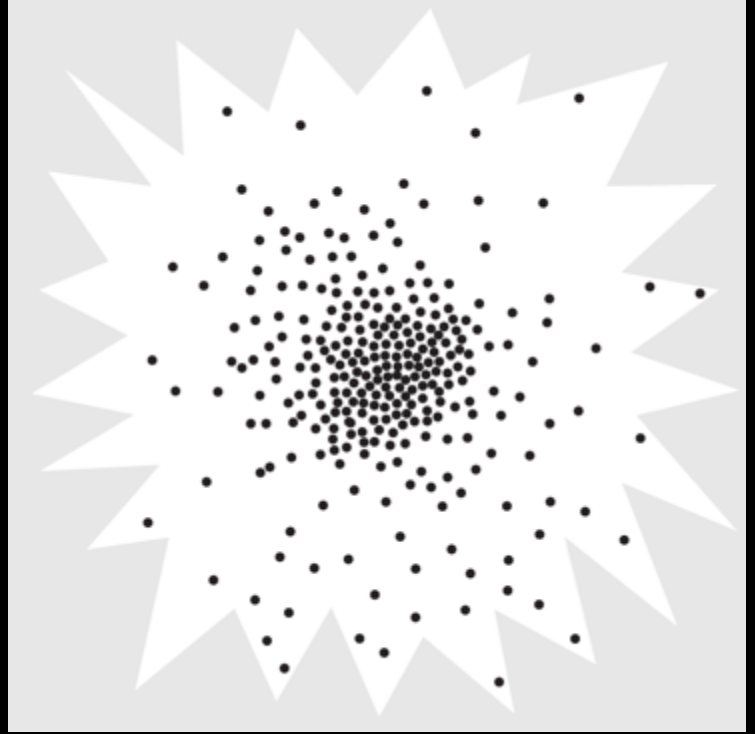

Inclusion and Exclusion Criteria

Bias

- Patterns of discrimination reflected in data

- Bias of developers designing the system
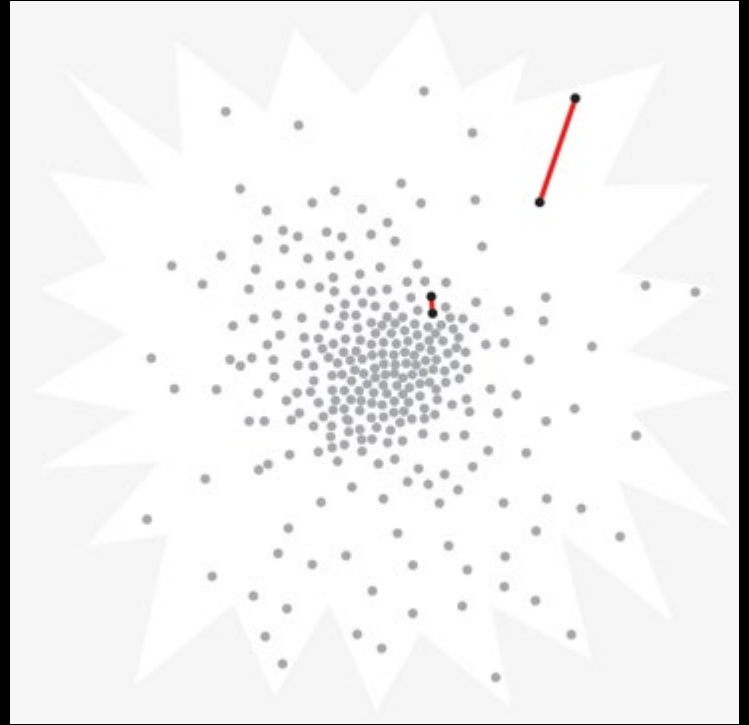
- Algorithmic bias

Statistics and the Edges

- Prediction and probability based on statistical significance or power

- Focused on the majority or average

Our human starburst…

Difference...

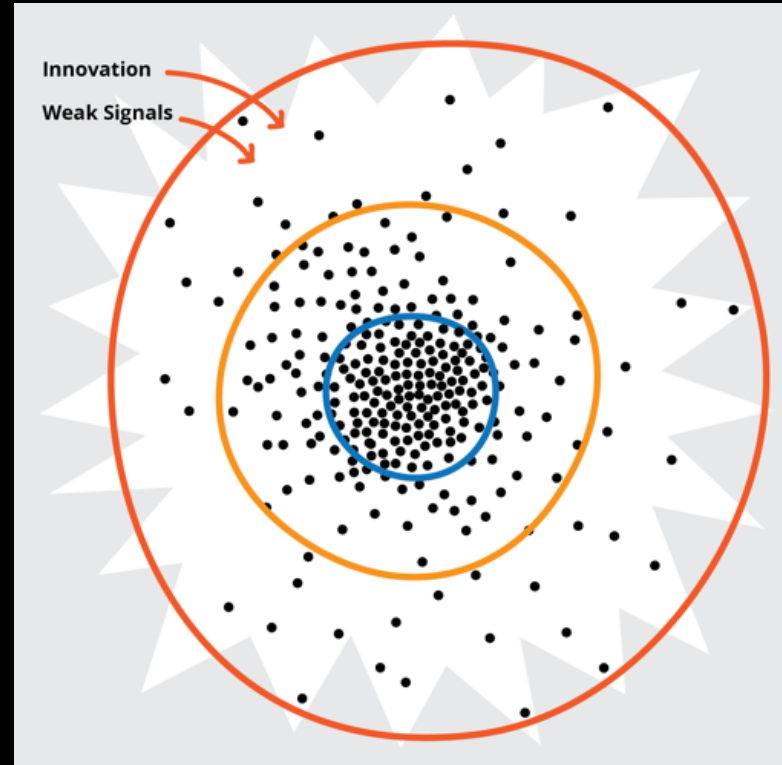# Representation…

- Requires large homogeneous group

- Disability, for example, often results in n=1

- Data eliminated or overwhelmed

- Data-driven decisions means the majority rules

- Statistical significance cannot be reached by the edges or small minorities

Predictions…

Where you find…

Innovation
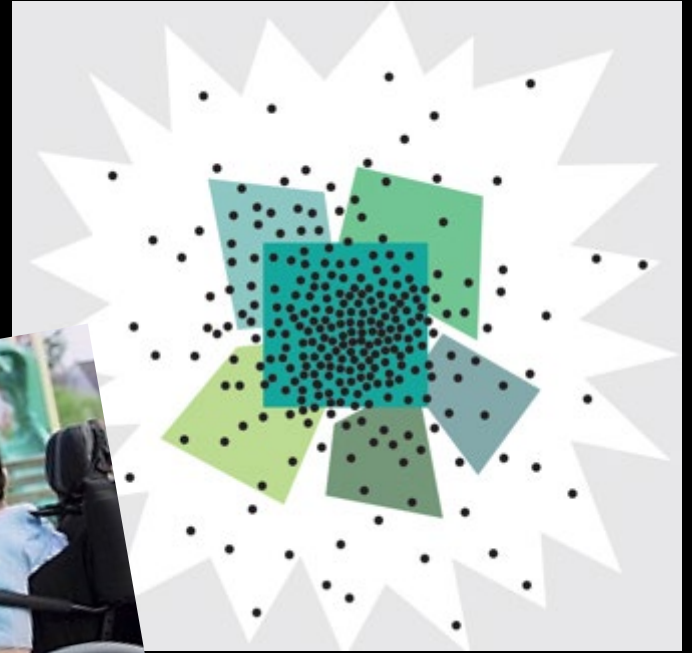
Weak Signals
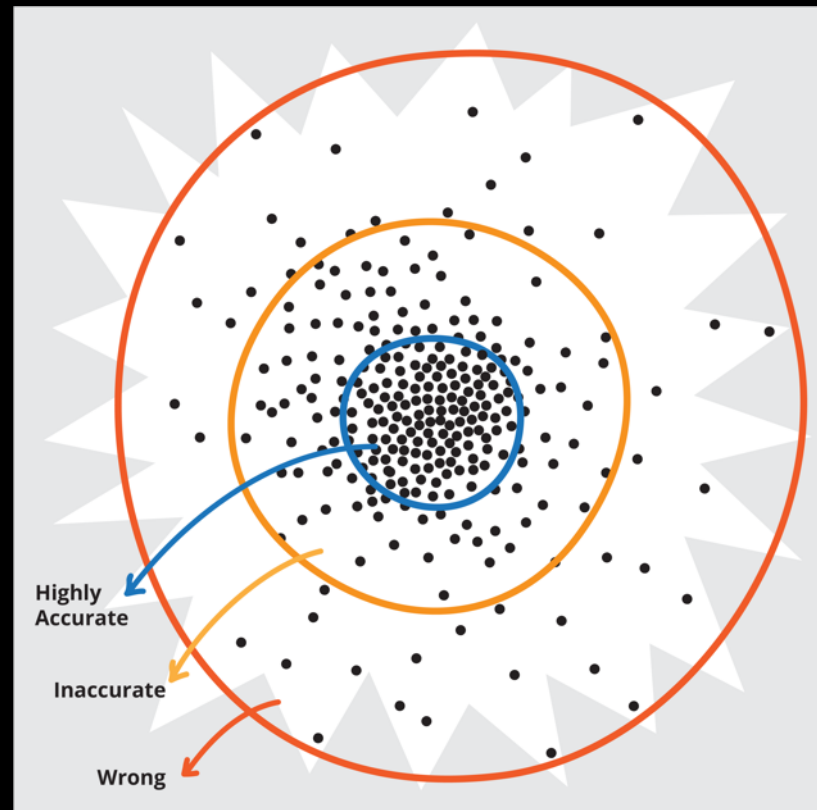
Social justice strategies based on data…

Data abuse & misuse

- People experiencing disability are most vulnerable to data abuse & misuse

- Data protections don't work

- Privacy is bartered for essential services

- Accessibility requests confound de-identification

Impact on Employment & HR

Impact on Hiring…

- Recruitment channels chosen based on popularity metrics and profiling

- Selective filtering of applications for competitive jobs

- Application tests, screening for competencies, psychometrics

- Interview analysis

Impact on Training & Onboarding

- Learning analytics used for training and upgrading

- Inaccessible training interfaces

- Misfit for ongoing machine learning

Impact on Participation

- Data science tools

- Data visualization tools

Impact on Performance & Promotion

- Workplace optimization based on data

- Incentives to ignore difficult clients/employees

- Evaluation based on work surveillance

- Promotion based on productivity & efficiency metrics

Impact on Discipline & Termination

- Analysis to assign and address responsibility based on dominant patterns

- Producing justification for severance or termination

Choosing to deploy AI..

Considerations..

- What data was used?

- How was the data processed?

- What classification was used?

- How were data gaps addressed?

- What were the assumptions applied in the analysis?

Considerations..

- Is the learning model adaptive and what data will it use for adaptation?

- What decisions will it support, how is this delegated?

- How are errors processed?

- How can the tool be refined, and bugs fixed?

Practices..

- Don't choose automated decisions based on overall accuracy

- Perform disability impact assessment before deploying

- Assume a data breach and develop plan for preventing abuse and misuse

Project We Count

- https://wecount.inclusivedesign.ca

- Access to shaping data science,

- Addressing data gaps and biases,

- Co-designing protections against data abuse and misuse

- Co-creating more equitable decision supports.

WE COUNT

Alternatives to binary terms of service agreements..

- Explore, discover & declare personal data preferences

- Service - transparent, auditable claims of essential data for service

- Negotiate a match

Platform Co-ops

- Cooperatively governed data trusts

Intelligence that understands, recognizes and serves diversity….

- Better able to
  - respond to unexpected
  - detect risk
  - adapt to change
  - transfer to new contexts
- Has greater longevity
- May reduce disparity…
- May help lift us out of our current crisis…

WE COUNT

The Inclusive Design Research Centre

- Toronto, Canada
- inclusive design of emerging sociotechnical systems, policies and practices or... digital inclusion and designing for diversity since 1993, 25th Anniversary in 2018
- **open** source, **open** access, open standards, **open** data
- over 100 research partner organizations globally
- Inclusive Design Institute - 8 universities

Continuing the conversation:

- https://idrc.ocadu.ca

- https://inclusivedesign.ca

- https://wecount.inclusivedesign.ca

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