The Future of Work

Current Issues in AI

Kate Crawford: The Politics of AI

(Royal Society lecture)

What is algorithmic bias?

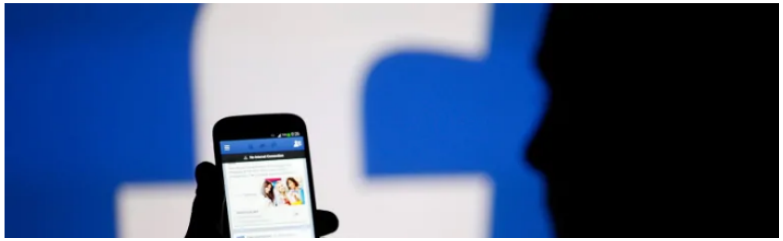
- System generated or reinforced difference between groups
  - Directly encoded
  - Indirectly encoded
  - Biased training data

- Where might this emerge?

Use of Facebook targeting on job ads could violate Canadian human rights law, experts warn

Ads targeting specific age ranges or genders could be offside, say employment lawyers

Elizabeth Thompson · CBC News · Posted: Apr 08, 2019 4:00 AM ET | Last Updated: April 8



Amazon Shut Down Recruiting AI for Sexist Results

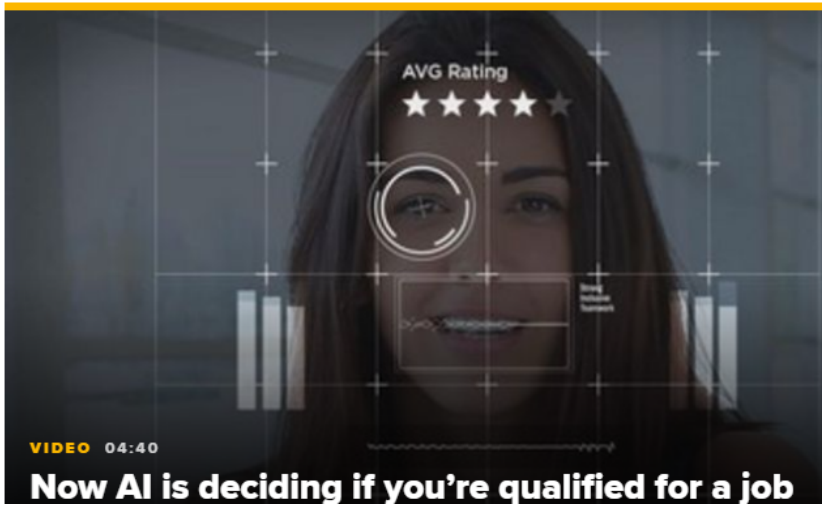
After examining patterns from job applications over 10 years, most of which were from Amazon's system started penalizing women and ranking them lower.

By Adam Smith October 10, 2018 11:21AM EST

262 SHARES

KEY POINTS

- A 2017 Deloitte report found 33 percent of survey respondents already u form of A.I. in the hiring process to save time and reduce human bias.
- This year about 38 percent of Americans will be looking for a new job, a a report by Glassdoor.
- A number of start-ups and companies now offer A.I. recruitment tools.



Screening Algorithms

- Amazon's failed resume screener
  - Ranked resumes on 1-5 scale
  - Trained on 10 years of previously submitted resumes
  - Systematically chose male applicants
    - Downgraded both common skills for the job and many terms that included 'women's' (i.e. 'women's hockey team') and all-women universities
    - Emphasized language common to C.V.s submitted by men

Interviewing Software

- HireVue

- Can you infer emotions, behaviors, identities from facial structure and expressions?
  - Not in any sort of reliable way across contexts and individuals

What is algorithmic management?

- Encoded, automatic decision-making, monitoring and matching systems that operate in real time
  - Often remote

- **Management**
  - Monitoring
  - Performance measurement
  - Scheduling

- **New forms of employment**
  - i.e. selling labour on a platform
  - Remote performance: Amazon MTurk
  - Local performance: driving, food delivery

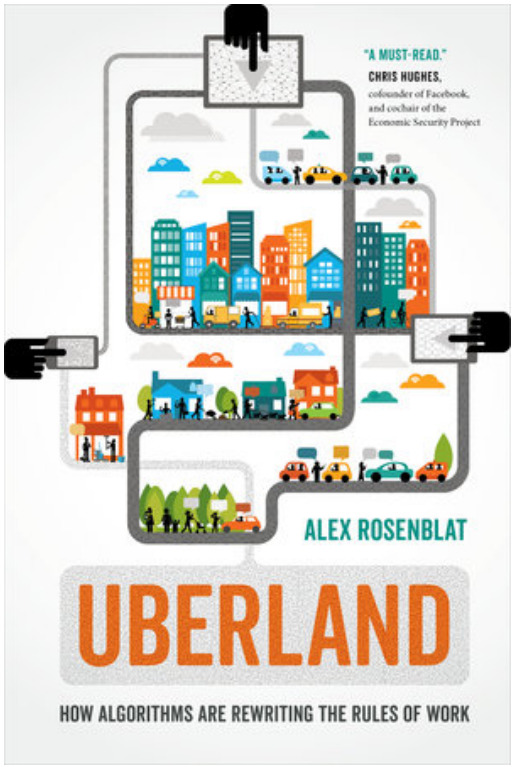
Algorithmic Control

- Kellogg et al. (2019) draw on Edwards (1979) to explain how algorithmic management differs from previous modes of control
  - Rational: appeal to employee self-interest (monetary incentives; Tayloristic approach)
    - **Technical**: physical & technological aspects of production
    - **Bureaucratic**: standardized rules and roles to guide behaviour

- Managers exert control in 3 ways:
  - **Directing**: specify the tasks to be done, order, timing, accuracy
  - **Evaluating**: review performance, assess work, find mistakes
  - **Disciplining:** punishment and reward to enforce compliance

Algorithmic Control

- Comprehensive
- Instantaneous
- Interactive
- Opaque



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Directing

- **Technical**: task sequencing, deskilling, specialization → machine directs work
- **Bureaucratic**: job descriptions, rules, established roles, scripts, checklists
- **Algorithmic**
  - Recommending
  - Restricting

Evaluating

- **Technical**: record length to complete tasks, productivity, accuracy, breaks
- **Bureaucratic**: direct observation, standardized metrics
- **Algorithmic**
  - Recording
  - Rating

Disciplining

- **Technical**: firing and swift replacement (backup workers)
- **Bureaucratic**: incentives/penalties; promoted or fired according to rules, policies, schedules
- **Algorithmic**
  - Replacing
  - Rewarding

Concluding Remarks

- Technological change, as always, will reshape the workplace
  - Immediate impact on individual workers will depend on policy response, employer desires, and worker pushback & organizing
  - Education may provide one avenue to employment and earnings or to avoid particularly bad labour markets

- Good luck!