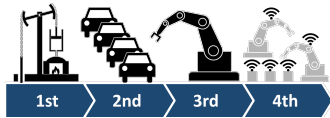


CMSC 304 Computer Ethics AI and (un)employment



Dr. Cynthia Matuszek

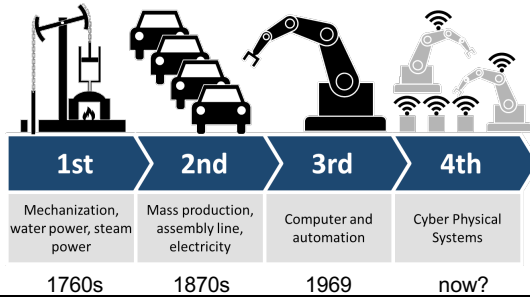
1

Bookkeeping

- Some RJs were blank
- Vote: RJs due Saturdays? Sundays?
- Consider reading EA2 case study
 - Start scheduling with your group
 - EA2 will be done outside class
 - Turnin: 3-4 single-spaced pages

2

The fourth Industrial Revolution



3

What is an industrial revolution?

- "A rapid major change in an economy ... marked by the general introduction of power-driven machinery or by an important change in the prevailing types and methods of use of such machines"
- Transition to new ways of doing things, aided by new technology
- Automating or mechanizing away traditionally human jobs
 - Generally replacing them with new "operator" positions
 - E.g., working on assembly lines replaces hand construction
 - Not a 1:1 replacement
- Improves *efficiency* of the work being done

4

Effects of an industrial revolution

- **Long-term** gains in global income and availability of goods
 - Costs of goods will diminish overall
 - More stuff available to more people
 - More efficient farming → more food availability
 - Overall, humanity can spend more resources on tasks beyond survival
- **Short-term** decrease in available work
 - 2-3 generations
 - Increase in the haves/have-nots split (temporarily?)
- Cannot be legislated away or ignored

5

Luddites



6

What jobs has AI already taken?

- Human “computers”
- Switchboard operators
- Elevator operators
- Cashiers
- Factory workers
- Warehouse workers
- Cab dispatchers
- Data entry clerks
- Stock traders
- Travel agents
- (Some) hotel workers
- Proofreaders
- Telemarketers
- Toll takers

7

What jobs are in transition?

- Different warehouse workers
- Journalists
- Customer service reps
- Architects
- Pharmacists
- Illustrators
- Recycling sorters
- Meat processing workers
- Agriculture
- Taxi drivers
- Doctors (some)
- Accountants
- Translators
- Shelf stocker

8

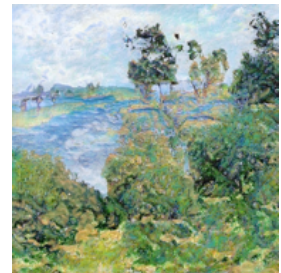
What jobs should be worried?

- Pilots
- Hiring managers
- Surgeons
- Tutors
- Bartenders
- Waiters
- Lawyers
- Bus drivers
- Truckers
- Soldiers
- Receptionists
- Software developers
- Cleaning staff
- Fast food workers

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What jobs will AI take next?

- Actually, really hard to predict
 - Rule based, repeatable, predictable, vs.
 - Unpredictable, creative, empathetic
- Fine, but what do those mean?
- Salespeople and customer service benefit from empathy
- Writing news articles is creative
- “Predictable” is hard to apply



10

The implications of robotics

- 1969 vs. now
 1. Machine learning boom
 2. Physical agents
- What tasks can physical agents do that pure computers can't?



11

AI in Hiring

- Technology is consistently used for hiring
- Resume evaluation
 - Also automated tools for evaluating your resume before you turn it in to be automatically evaluated
- Candidate evaluation
 - Performance on tasks
 - Facial expressions
 - Voice analysis
- How do we feel about this?



12

Roles of AI in Human Resources

- Sifting out resumes from online sources
- Analyzing employee referrals to find the most promising
- Using data to understand retention and turnover
- Chatbots for internal engagement and question answering
- Designing/identifying internal learning and development needs
- Workforce analytics

13

Ethical responsibilities

- What responsibilities do employers have?
 - When hiring?
 - To existing employees?
 - To shareholders?
 - What other stakeholders are there?
- What responsibilities do employees have?
- What responsibilities do legislators have?
 - How can legislation help?

14

Discussion

- **Make a list:** What jobs will AI not take? Why?
- **Think about/discuss:** How can information professionals reduce the impact of the new industrial revolution?
 - How can people with your background help?
- **Consider:** How should AI be used in hiring? Not used?
- **Read/discuss:** <https://onlineethics.org/cases/algorithm-discriminates>

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