AI and Data Science in Fiction and Society

Seminar Kick Off

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Goals

• Why should we read fictional literature at university at all?
  – given that we are not humanities students

• Fiction is a mirror of society
• Technology is developed in research labs
  – ...but its impact on society is seldom discussed therein

• In this seminar, we will discuss those impacts
Organization

• Requirements
  – Read a novel and present it in the seminar
  – Write a seminar paper
  – Review others’ seminar papers
    • it is a good idea to also read the books for the seminar papers you review

• First step
  – Pick a novel
  – If not done yet, send a ranked list to Ms. Bianca Lermer
    • Until the end of Sunday, Sept. 18th
  – You are invited to propose books **not** on the list on the Web page
Organization

• Getting your book
  – we have copies in the library (of books listed on the Web page)
  – you may need them for some time

• After assignment is finished, you can borrow “your” copy
  – address the counter in the library in the castle west wing
### Organization

- **We will use a process called “peer review”**
  - widely used (and discussed) in science
  - you will review your fellow students’ seminar papers

- **Timeline**
  - Prepare a draft until October 30\textsuperscript{th}
  - You will get two seminar papers to review
  - Submit your reviews until November 6\textsuperscript{th}

- **Seminar (i.e., presentations, discussions)**
  - November 17\textsuperscript{th}, 24\textsuperscript{th}, December 1\textsuperscript{st}, 8\textsuperscript{th}
  - Participate actively

- **Final seminar paper submission: January 15\textsuperscript{th}, 2022**
Preparing Your Seminar Paper

• Synopsis
  – Brief summary of the novel’s contents
  – Main themes, characters, plot points

• Characters
  – Main characters? What do they represent?

• Technology
  – Which technology is described?
  – What does already exist, what is still to be invented?

• Interaction of technology and society
  – Which of the characters appreciate the technology?
  – Who are rather sceptics?

• Anything else you want to discuss

• Use further literature!
Hints for Further Literature

• Book reviews
  – e.g., in newspapers
  – which aspects do they appraise? which do they criticize?

• Information on the author
  – e.g., interviews
  – did s/he comment on the book?

• Information on technology
  – e.g., research articles

• Information on ethical aspects
  – e.g., research articles
  – e.g., high level documents (EU HLEG, to come later)
Preparing a Review

• 1st rule: be constructive!
• What you should point at
  – can you follow easily? is there information missing at any point?
  – are all claims well supported?
  – do you have any questions not answered?
  – aspects underrepresented
• What you should not do
  – provide general criticism (“don’t like the paper”)
  – correct every spelling mistake
  – rewrite the seminar paper
Preparing the Presentation

• Remember
  – we are here to discuss

• Therefore
  – don’t just report facts
  – raise questions
  – be provocative
Questions?
Straw Poll (will be repeated at the end)

• Do you consider AI rather beneficial or harmful?

Stephen Hawking says A.I. could be 'worst event in the history of our civilization'

- Physicist Stephen Hawking said the emergence of artificial intelligence could be the "worst event in the history of our civilization."
- He urged creators of AI to "employ best practice and effective management."
- Hawking is among a number of voices including Elon Musk who have warned about the dangers of AI.
Isaac Asimov’s 3(+1) Laws of Robotics (1942)

• 0\textsuperscript{th} law:
  – A robot may not harm humanity, 
or, by inaction, allow humanity to come to harm.

• 1\textsuperscript{st} law:
  – A robot may not injure a human being 
or, through inaction, allow a human being to come to harm.

• 2\textsuperscript{nd} law:
  – A robot must obey the orders given it by human beings, except where such orders would conflict with the 1\textsuperscript{st} law.

• 3\textsuperscript{rd} law:
  – A robot must protect its own existence as long as such protection does not conflict with the 1\textsuperscript{st} or 2\textsuperscript{nd} law.
EC Ethics Guidelines

- AIs should be...
  - “lawful, complying with all applicable laws and regulations”
  - “ethical, ensuring adherence to ethical principles and values”
  - “robust, both from a technical and social perspective, since, even with good intentions, AI systems can cause unintentional harm”
Today’s Challenges (among others)

• Transparency
  – Does AI need to be open source?

• Algorithmic bias
  – How to measure & prove? Is there useful bias?

• Liability
  – If an AI does harm, who is legally in charge?

• Human dignity
  – Are there areas which should not be controlled by AI?
Joseph Weizenbaum’s AI-free Areas (1976)

• AIs should not be used for…
  – A customer service representative
  – A therapist
  – A nursemaid for the elderly
  – A soldier
  – A judge
  – A police officer

• Where are we almost 50 years later?
Thought Experiment: Universal Paperclips