

# Unit 1 Review

15-110

# Ethics Overview

Ethics: “**What should we value (broadly)? And what should we do in order to realize those values?**” -

David Danks

- Simple decisions in computing, such as in the way we design algorithms and abstractions, can have legitimate [ethical consequences](#).
- Ethics should be a component of dialogue within the sphere of computer science. **Disconsideration can result in financial, social, regulatory failure;** like a [self-driving car that fails to recognize that people jaywalk](#), or a [high-speed trading algorithm gone awry](#).
- Realize that simple technical choices, neglect and errors can lead to significant screwups with ethical impacts.

# Ethics Reflection on AI Explainability

As algorithms and coding become more complex, simple decisions and tactics as well as understandings of our work can have significant impacts.

- Explainable AI means that the solutions and decisions made by an AI are able to be **understood by humans**.
- On the other hand, “*the black box*” concept refers to situations when humans cannot explain how the AI came to its decision.
- This will have consequences in transparency and implementation as AI becomes more prevalent. It will **introduce new legal and social challenges** as AI is used in new settings such as [hiring](#), university admissions, insurance decisions, etc.

## Discussion

- As a society, should we preference safety and caution over rapid innovation? How would this look in terms of AI development and implementation?
- Can you imagine any scenarios where a “black box AI” would cause significant social or legal problems?

## Links

- <https://www.nytimes.com/2021/02/23/technology/ai-innovation-privacy-seniors-education.html>
- <https://www.nytimes.com/2021/03/15/technology/artificial-intelligence-google-bias.html>
- <https://www.bbc.com/news/magazine-19214294>
- <https://www.forbes.com/sites/insights-intelai/2019/03/27/managing-the-ethics-of-algorithms/?sh=6494c0e73481>
- <https://www.startupdaily.net/2020/06/when-algorithms-go-wrong-how-relying-on-automated-tech-is-a-world-of-pain-for-governments/>

# Unit 2 Review

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# Ethics Reflection

- Design decisions on **data structures** and who has **access** can have serious consequences
- Facebook-Cambridge Analytica data scandal
  - 2013 Cambridge Analytica develops survey app
  - On each survey, the app also collects **all data** from **every Facebook friend**
  - [“The Great Hack”](#) (2019 Netflix Documentary on the scandal)
- Facebook platform policy only allows collection of friends’ data to improve app user experience
- Cambridge Analytica breached platform policy terms, but there was nothing implemented by Facebook to prevent this excessive data access (over 50 million users) by apps on their platform

# Discussion

- Should technology services be responsible for disclosing to their users **what data is being collected** and/or **how data is used**?



# Readings

<https://www.theguardian.com/news/2018/mar/17/cambridge-analytica-facebook-influence-us-election>

<https://www.theguardian.com/uk-news/2018/mar/23/leaked-cambridge-analytica-blueprint-for-trump-victory>