LAW4039 Notes

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Contents

1 Lecture 1: Society, Institutions, Risk, and AI

1.1 R1: Why the US Went to War in Vietnam

https://www.fpri.org/article/2017/04/united-states-went-war-vietnam/

1.2 R2: Five years after Deepwater Horizon, what has the disaster taught us?

https://www.minnpost.com/earth-journal/2015/04/five-years-after-deepwater-horizon-what-has-disaster-taught-us/

1.3 R3: A Declaration of the Independence of Cyberspace (1996)

1.4 R4: The Great AI Awakening, N.Y. Times Magazine (Dec. 14, 2016)

1.5 R5: Regulating AI Systems: Risks, Challenges, Competencies, and Strategies

1.6 R6: Russell and Norvig, AI (2015)

1.7 R7: Suleyman and Musk: Humans Must Become Cyborgs to Avoid AI Domination

1.8 R8: Chui: Applying AI for Social Good, Discussion Paper, McKinsey and Co

1.9 Lecture Notes

The challenge for technologists: learning a little bit of law during these 10 weeks.

1.9.1 A tragic instrusion

The hardest cases to discuss and analyze: the death penalty cases (these ones go to California Supreme Court). Example: intrudred enters the home of a woman who's home with her four year old son. Mother was stabbed, and bleeds to death.

Important questions:

- How to structure a six-picture "show-up" for the child at the push of a button?
- Do we use pervasive surveillance capacity into an ML-enabled infrastructure for security?

Death penalty cases are not-unlike analyzing the ethics of AI systems, where one must weigh the balance between different foundational ethical principles.

Two AI based approaches:

- GANs to generate images based on textual descriptions.
- Convolutional neural networks for facial recognition / person tracking.

But there are concerns:

- How accurate is the technology?
- What is the line between police and non-police?

1.10 Why are we here? Because AI is not just theory...

AlphaZero works across games. 5-7 years ago, most of these feats were highly domain specific.

Kasparov: "I can't disguise my satisfaction that it plays with a very dynamic style...much like my own."

1.11   What is AI?

- Capacity to undertake functions that, if performed by a human, would generally be understood to require intelligence" (Russell and Norvig)

- Definition of "intelligence" "Ability to learn or understand or to deal with new or trying situations"

It's worth differentiating between a few types of AI: *domain-specific AI*, which is supervised ML attached to some application; *simulated AGI*, (e.g. Echo / Google Home, etc.).

1.12   What is regulation?

For instance: how fast can you go on 280? While the Autobahn has no speed limits, 70-90 is a reasonable speed when

- We define the term broadly: How society defines legitimate authority to structure relations among people, organizations, information, and the physical world.

- Not just specific rules, imposed by agencies, governing the design, operation, or use of technology.

Governance intersects with politics, socioeconomic behavior, specifically including:

- Constitutions

- Statutes

- Judge-made law (e.g. the common law)

- Agency decisions

- Norms

1.13   A (straightforward) problem AI can help address

- 210 languages spoken in California courts.

- Interpreters provide services in courtrooms, but not enough multi-lingual staff over the counter.

- 2018: We began a pilot project to provide translation over-the-counter to limited-English court users, using tablets

- AI could help enhance: access to justice (but als omedical care, education).

1.14   Deepwater Horizon: disaster

- Offshore drilling: Hole, metal casing, cement "slugs," drilling fluid pumped down to balance pressure; drilling operators cement well, then replaced by rig to extract oil.

- But problems lurked: Well had a fracture, troubling readings ignored, too much mud displaced, blowout preventer failed.

- 9:49pm, April 20, 2010: First explosisons occurred.

- Cuellar at the WH, helping to reconcile work of NOAA and FDA to assess and mitigate impact of the disaster on seafood.