Who We Are

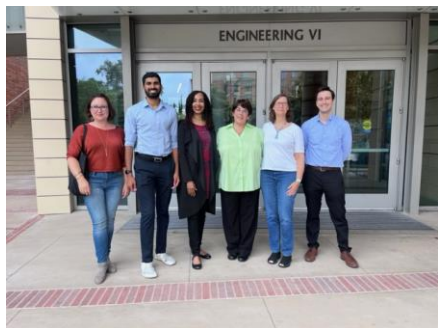- The **UCLA Institute for Technology, Law & Policy** is a collaboration between the UCLA School of Law and the Samueli School of Engineering whose mission is to foster research and analysis to ensure that new technologies are developed, implemented and regulated in ways that are socially beneficial, equitable, and accountable.

What is A.I.?

UK the House of Lords Report of Session 2017–19

- Technologies with the ability to perform tasks that would **otherwise require human intelligence**, such as visual perception, speech recognition, and language translation.

What is A.I.?

Information Technology Industry Council "AI Policies and Principles" 2017

- A suite of technologies capable of learning, reasoning, adapting, and performing tasks in ways **inspired by the human mind**. With access to data and the computational power and human ingenuity required to extract increasing value from it, researchers are building intelligent software and machines to enhance human productivity and empower people everywhere.

What is A.I.?

Canada Directive on Automated Decision-Making (2019)

- Information technology that performs tasks that would **ordinarily require biological brainpower to accomplish**, such as making sense of spoken language, learning behaviours or solving problems.

What is A.I.?

Texas HB 2060

- "Systems capable of "**perceiving an environment through data acquisition** and processing and interpreting the derived information to take an action or actions or to **imitate intelligent behavior** given a specific goal and learning and adapting behavior by analyzing how the environment is affected by prior actions."

What is A.I.?

Rhode Island H 6423

- It includes "computerized methods and tools, including, but not limited to, machine learning and natural language processing, that act in a way that resembles human cognitive abilities when it comes to solving problems or performing certain tasks."

What is A.I.?

Louisiana SCR 49 2023

- "Artificial intelligence "combines computer science and robust datasets to enable problem-solving measures directly to consumers."

What is A.I.?

The International Telecommunication Union: "Artificial intelligence for good"

- "… a rich set of methods and disciplines, including vision, perception, speech and dialogue, decisions and planning, problem solving, robotics and other applications that enable **self-learning**. AI is best viewed as a set of technologies and techniques used to **complement traditional human attributes**, such as intelligence, analytical ability and other capabilities."

What is A.I.?

EU Artificial Intelligence Act

- "An AI system is a machine-based system that [...] infers from the input it receives how to **generate outputs such as predictions, content, recommendations, or decisions** that can affect physical or virtual environments."

What is A.I.?

National Artificial Intelligence Act of 2020

- "A machine-based system that can, for a given set of human-defined objectives, **make predictions, recommendations or decisions** influencing real or virtual environments."

What is A.I.?

The National Defense Authorization Act 2019; the future of AI Act

- "…system that **performs tasks under varying and unpredictable circumstances without significant human oversight,** or that can learn from experience and improve performance when exposed to data sets."

What is A.I.?

10 U.S. Code § 2358

- An artificial system designed to **act rationally**, including an intelligent software agent or embodied robot that achieves goals using perception, planning, reasoning, learning, communicating, decision making, and acting.

What is A.I.?

IEEE Definition (2016)

- "Artificial Intelligence is that activity devoted to making machines **intelligent**, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment."

What is A.I.?

California Department of Technology

- "intelligence demonstrated by machines, unlike the natural intelligence displayed by humans. Leading AI textbooks define the field as the study of "**intelligent agents**": any device that perceives its environment and takes action that maximizes its chance of successfully achieving its goals. Colloquially, the term "Artificial Intelligence" is used to describe machines (or computers) that **mimic cognitive functions that humans associate with human minds**, such as learning and problem solving."

Artificial Intelligence and Bias – An Evaluation

Michael Karanicolas and Mallory Knodel:

- A.I. is automation that aims to approximate human capability, including through machine learning, deep learning and active learning.

- Machine learning is a form of artificial intelligence algorithm that improves itself based on training data. They are statistical interference engines with the capacity to generate outputs from the analysis of large inputs of data. The systems then "learn from experience". Deep learning and active learning are more advanced techniques in which a system "learns how to learn" with (deep learning) or without (active learning) predetermined data sets.

Existing Federal Use Cases

- **Securities and Exchange Commission**: using A.I.-powered tools to identify suspicious activity.

- **Customs and Border Protection**: facial recognition and risk scoring.

- **Social Security Administration**: flagging potential errors in draft decisions.

- **Patent and Trademark Office**: research and classification support.

- **Food and Drug Administration**: facilitating post-market surveillance.

- **Federal Communications Commission/Consumer Financial Protection Bureau**: customer service interactions handled by A.I., as well as processing of comments and complaints.

Existing Regulatory Frameworks - California

- **High-risk Automated Decision Systems: Inventory 2023**

- **California Electronic Communications Privacy Act 2016**

- **Information Practices Act of 1977 (IPA)**

Regulatory Proposals - California

- **The California AI Accountability Act (SB 896)**

- **Automated decision tools (AB-331*)**

- **The California AI-ware Act (SB 313)**

- **Artificial Intelligence for California Research Act (SB 398)**

- **The California Interagency AI Working Group (SB 721)**

- **2023 CA AJR 6**

- **Safe and Secure Innovation for Frontier Artificial Intelligence Systems Act (SB 1047)**

- **Public contracts: artificial intelligence services: safety, privacy, and nondiscrimination standards (SB 892)**

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Federal Regulatory Frameworks

- **21st Century Integrated Digital Experience Act (2018)**

- **Maintaining American Leadership in Artificial Intelligence (2019)**

- **Promoting the Use of Trustworthy Artificial Intelligence in the Federal Government (2020)**

- **The National Artificial Intelligence Initiative Act (2020)**

- **AI Accountability Framework (2021)**

- **Blueprint for an AI Bill of Rights (2022)**

- **AI Training Act (2022)**

- **The Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence (2023)**

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NIST: AI Risk Management Framework

- **Taxonomy of Risks: reliability, accuracy, robustness, resilience, security, accountability, explainability, interpretability, privacy, fairness, and bias.**

- **Effective Governance Framework: Map -> Measure -> Manage**

- **Assessing tradeoffs: interpretability vs. privacy; or predictive accuravy vs. interpretability; or privacy vs. accuracy**

- **Early assessment informing Go/No-Go decisions, along with continuous evaluation of impacts and tradeoffs.**

NIST: AI RMF

Other National Models

- **European Union: Artificial Intelligence Act (2024)**

- **Canada: Directive on Automated Decision-Making (2019)**

- **Singapore: Model AI Governance Framework (2022)**

- **OECD: Artificial Intelligence Principles -> Global Partnership for Artificial Intelligence**

- **China: Ethical Norms for New Generation Artificial Intelligence; Guiding Opinions on Strengthening Ethical Governance of Science and Technology; Trustworthy AI white paper.**

Key takeaways:

- **Private Sector vs. Public Sector Dichotomy:**
    - **Whatever expectations we place on the private sector, our expectations in the public sector should be higher.**

- **Transparency and disclosure are important, but not sufficient.**

- **A.I. is set to radically transform the public service, which mandates a reconceptualization of the core due process principles that underlie our understandings of procedural fairness.**

Thank You