



# ARTIFICIAL INTELLIGENCE AND THE FUTURE OF LAW

---

Gillian K. Hadfield  
Schwartz Reisman Chair in Technology and Society  
Professor of Law and Professor of Strategic Management

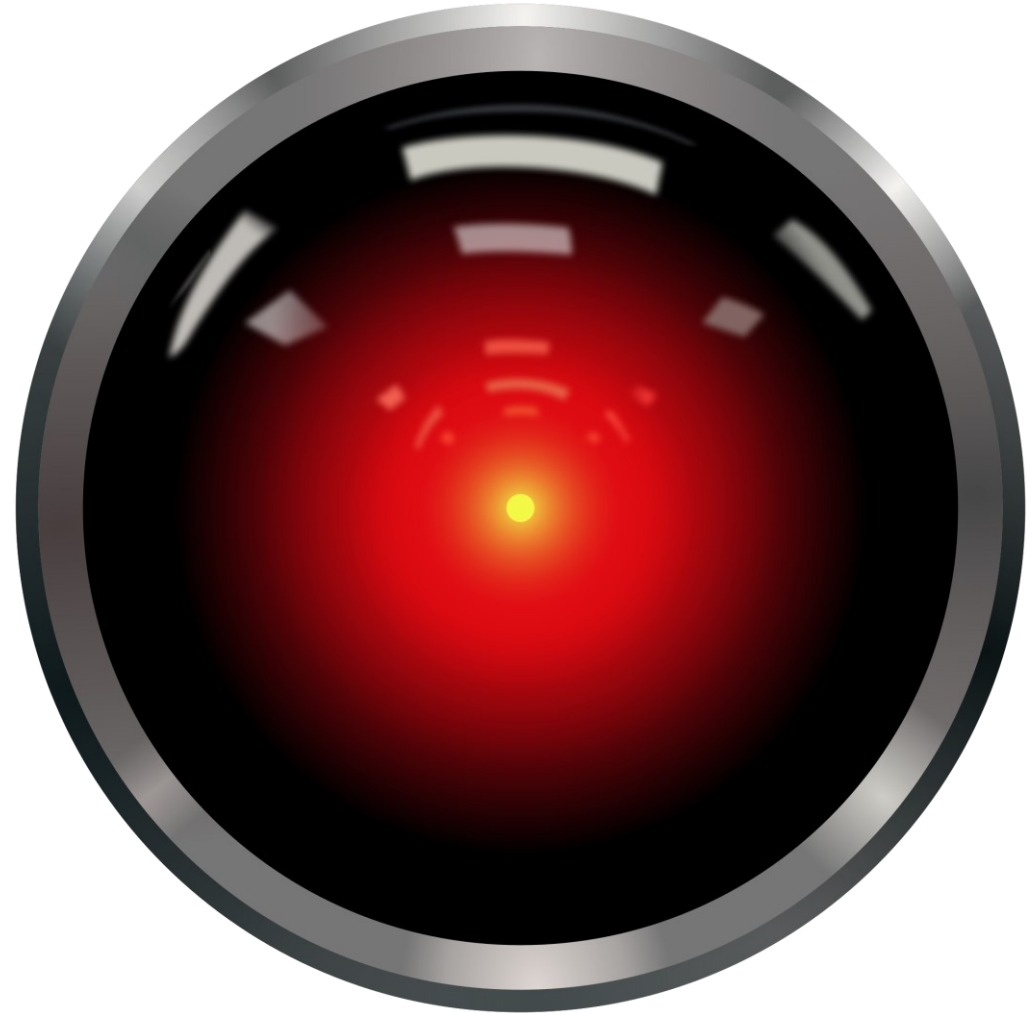
Director, Schwartz Reisman Institute for Technology and Society



# What is AI?

---

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. (Nilsson 2010)



# What is law?

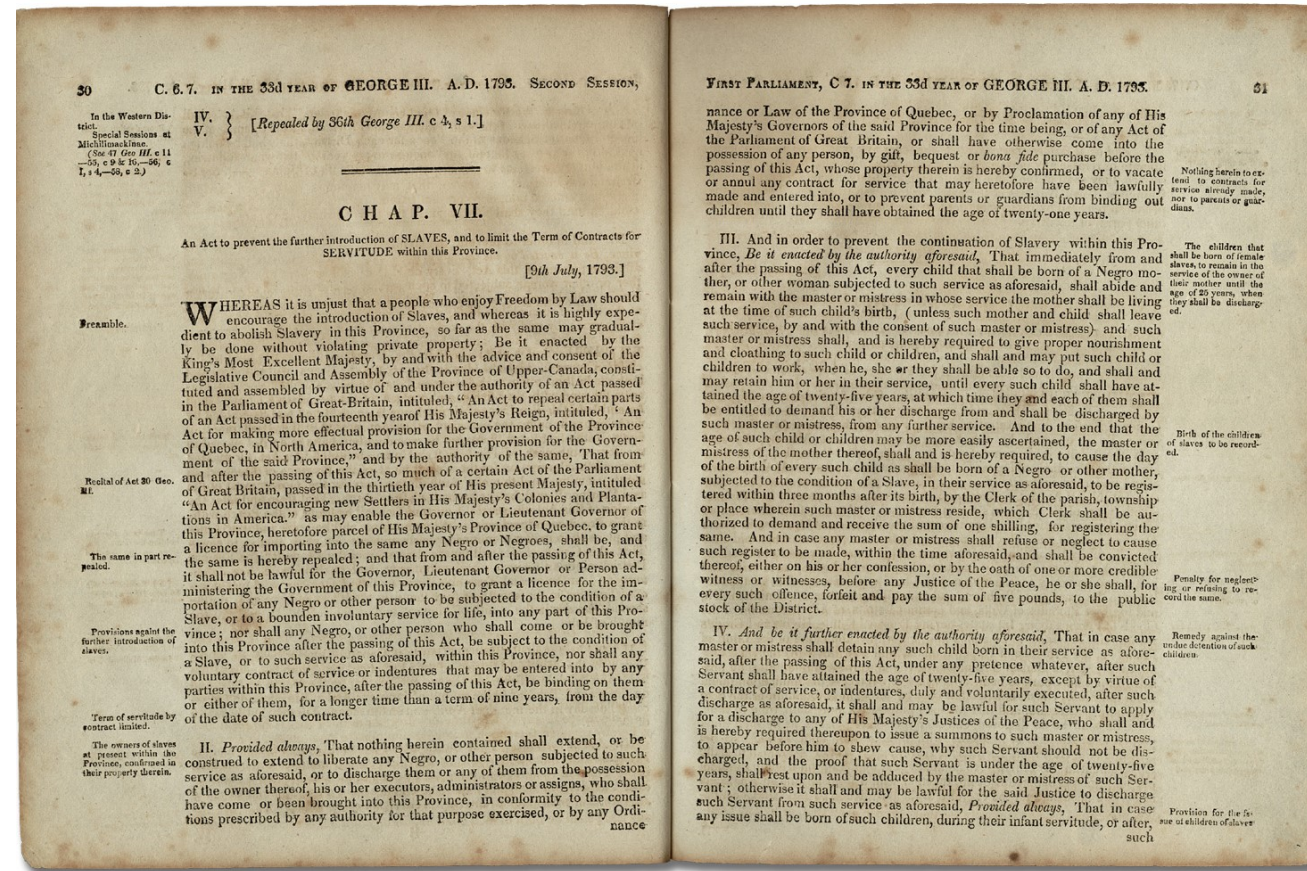
---

Law is a classification institution for achieving social order by coordinating behaviour to follow **appropriate** patterns, enabling human groups to reap the benefits of cooperation and social life



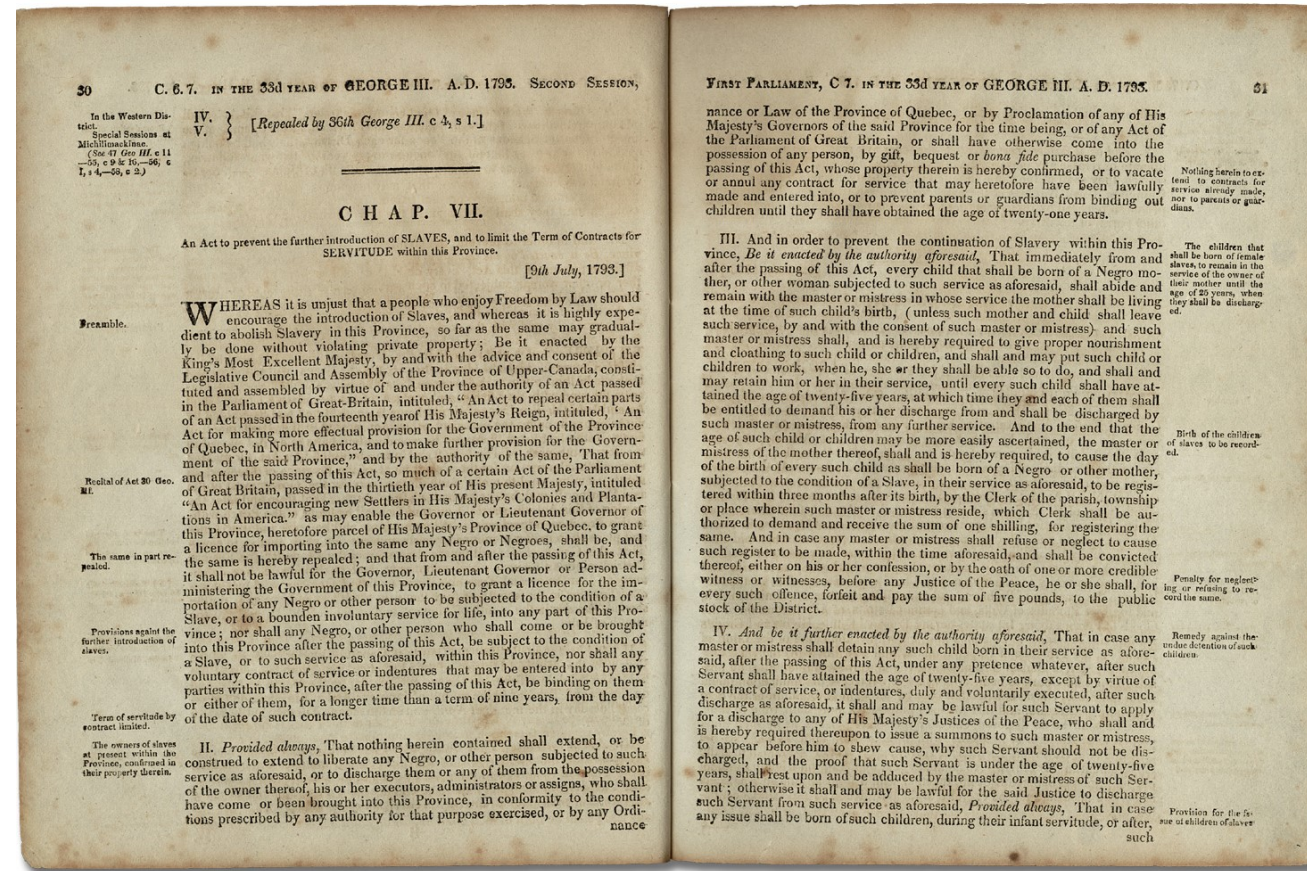
# What is legislation?

Legislation is **a** mechanism for translating collective choices into authoritative classifications for purposes of social **and** formal penalties



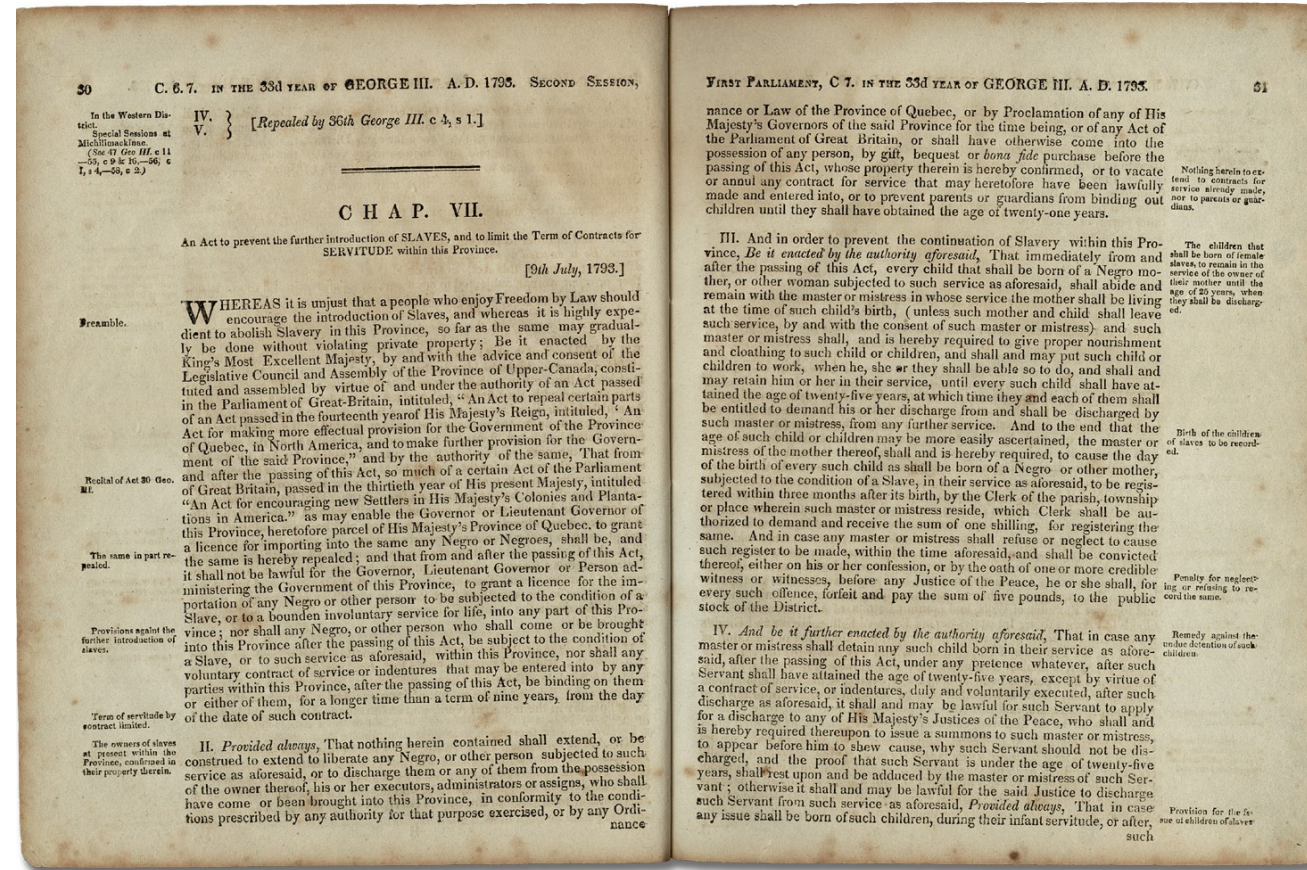
# What is legislation?

Authoritative, unique  
Transparent, public  
Neutral, impersonal  
Stable  
Clear



# What is the rule of law?

Authoritative, unique  
Transparent, public  
Neutral, impersonal  
Stable  
Clear



# HOW WILL WE ACHIEVE THE RULE OF LAW IN THE AGE OF AI?

# George Floyd: Amazon bans police use of facial recognition tech

🕒 11 June 2020

[f](#) [m](#) [t](#) [e](#) [Share](#)

George Floyd death



*Amazon said the suspension of law enforcement use of its Rekognition software was to give US lawmakers the opportunity to enact legislation to regulate how the technology is employed. BBC News*



# CORE CHALLENGES OF REGULATING AI: MACHINE *LEARNING*



# CORE CHALLENGES OF REGULATING AI: RELATIONSHIP TO HUMAN ACTION

# **TO WHOM DO WE GIVE INSTRUCTIONS THROUGH LEGISLATION?**

**PEOPLE?**

**MACHINES?**

# NYPD used facial recognition to track down Black Lives Matter activist

*Mayor Bill de Blasio says standards need to be "reassessed"*

By [James Vincent](#) | Aug 18, 2020, 5:26am EDT

[f](#) [🐦](#) [🔗](#) SHARE



*Black Lives Matter activist Derrick Ingram (above) was targeted by the police for alleged assault. | Photo by Ira L. Black -*

# George Floyd: Amazon bans police use of facial recognition tech

🕒 11 June 2020

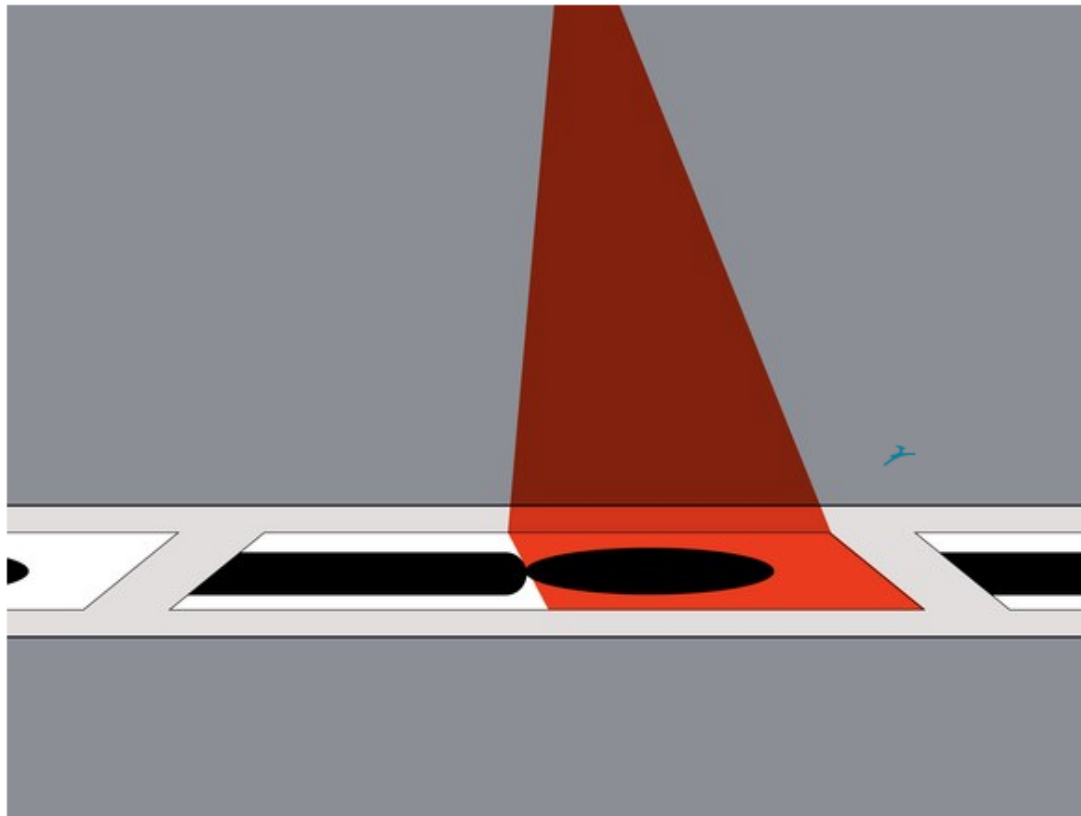
[f](#) [m](#) [t](#) [e](#) [Share](#)

George Floyd death



ML engineering: find the model that best predicts the *training data*

# PHOTO ALGORITHMS ID WHITE MEN FINE—BLACK WOMEN, NOT SO MUCH



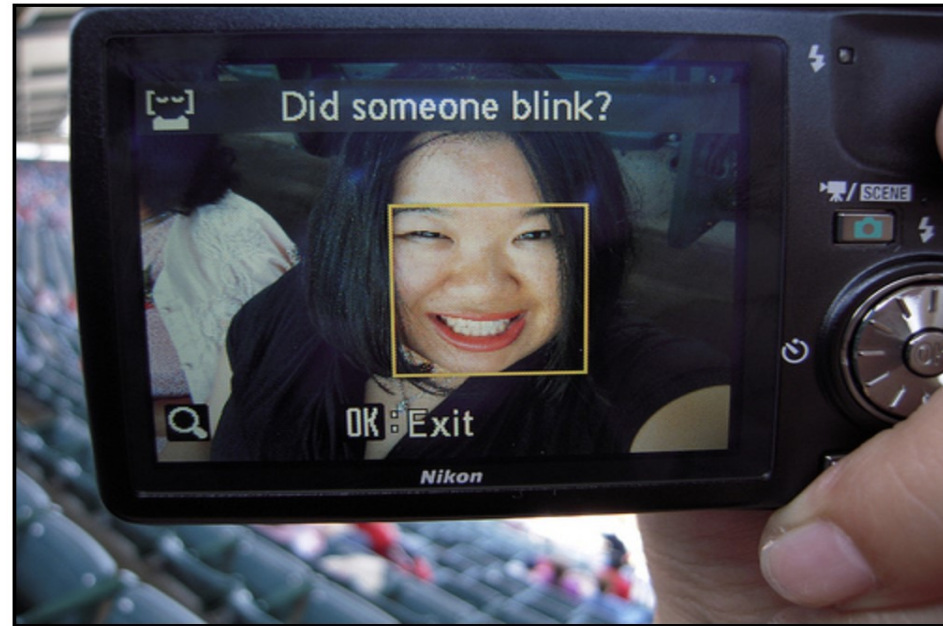
When asked to analyze the lightest male faces in the image set, Microsoft's service correctly identified them as men every time. IBM's algorithms had an error rate of 0.3 percent.

When asked to analyze darker female faces, Microsoft's service had an error rate of 21 percent. IBM and Mevii's Face++ both had 35 percent error rates.



# Racist Camera! No, I did not blink... I'm just Asian!

Published on [May 13, 2009](#) in General. 52 Comments



[Racist Camera! No, I did not blink... I'm just Asian!](#), originally uploaded by !!! :: jozjozjoz :: !!!.

We got our Mom a new Nikon S630 digital camera for Mother's Day and I was playing with it during [the Angels game we were at on Sunday](#).

As I was taking pictures of my family, it kept asking "Did someone blink?" even though our eyes were always open.

Sheesh! RACIST! :P

-Joz



# **TO WHOM DO WE GIVE INSTRUCTIONS THROUGH LEGISLATION?**

**PEOPLE?**

**MACHINES?**

## **Stop at through highway**

**136** (1) Every **driver** or street car operator approaching a stop sign at an intersection,

(a) shall stop his or her vehicle or street car at a marked stop line or, if none, then immediately before entering the nearest crosswalk or, if none, then immediately before entering the intersection; and

(b) shall yield the right of way to traffic in the intersection or approaching the intersection on another highway so closely that to proceed would constitute an immediate hazard and, having so yielded the right of way, may proceed. R.S.O. 1990, c. H.8, s. 136 (1).

/Autonomous  
/Sensing  
/Communication  
/Battery  
/Navigation  
/Mirrorless  
/Ecology

Self-Driving

48  
mph

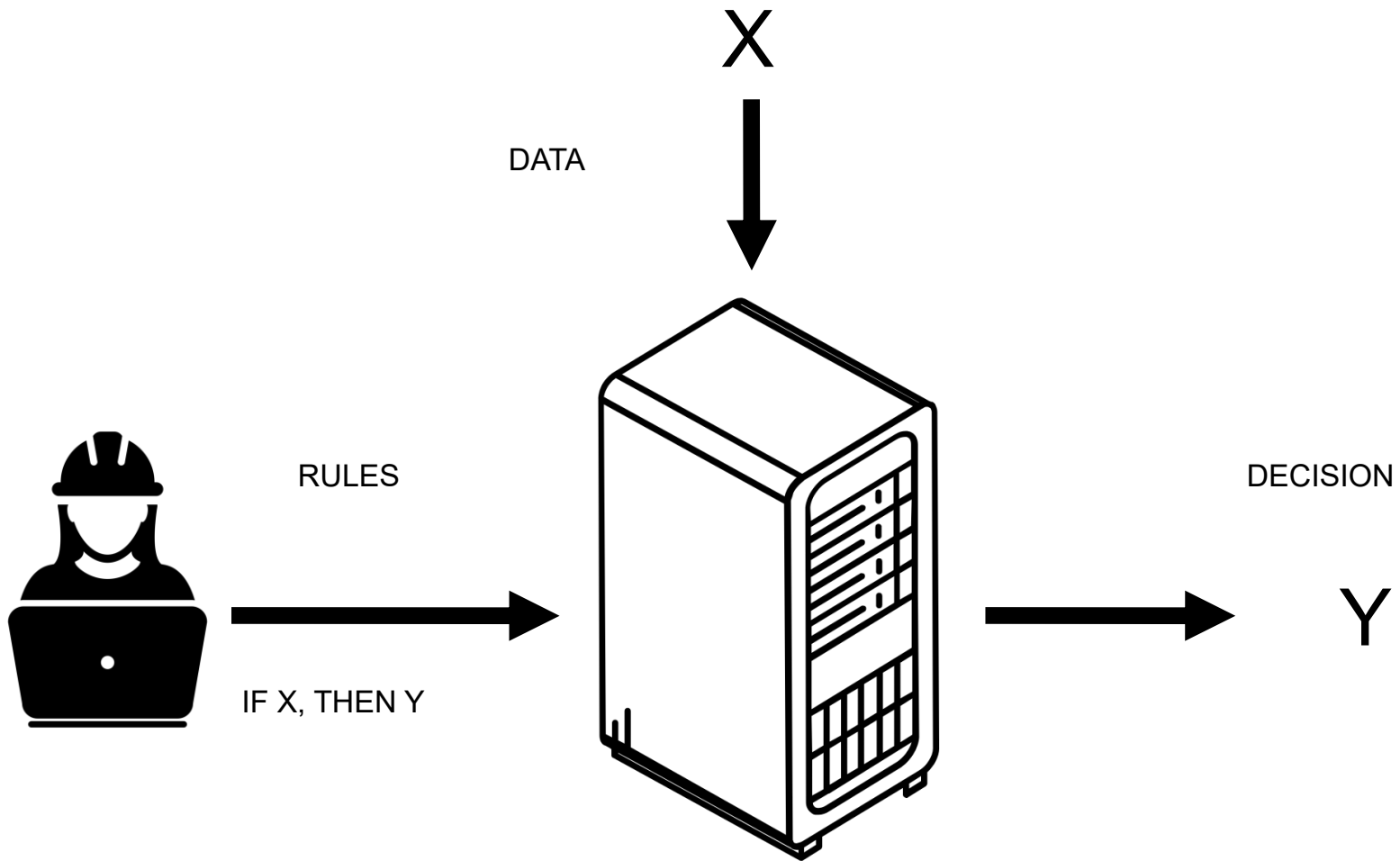




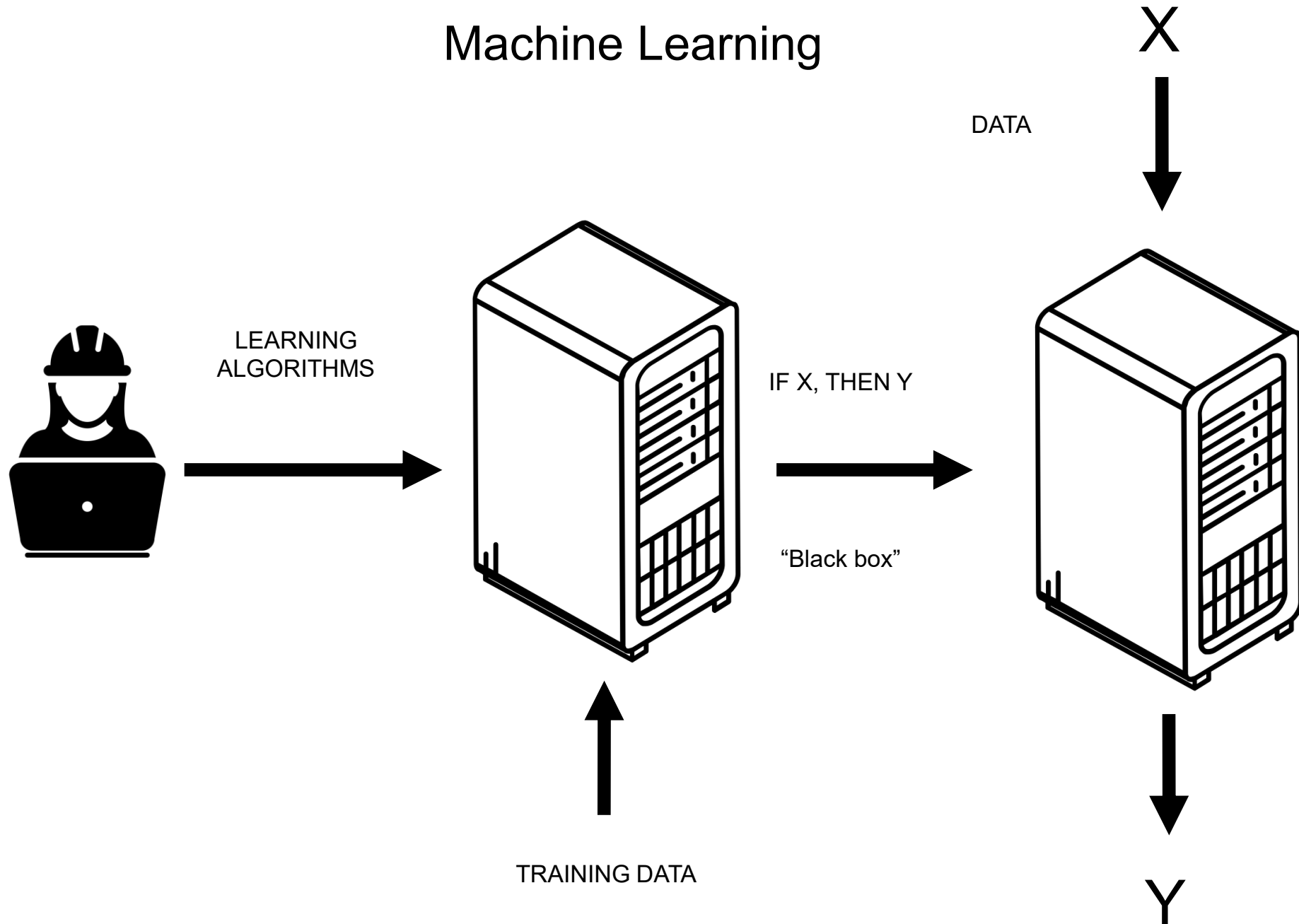
**TO WHOM DO WE GIVE INSTRUCTIONS THROUGH  
LEGISLATION?**

**PEOPLE WHO BUILD MACHINES?**

# Conventional Programming



# Machine Learning



# **CORE CHALLENGES OF REGULATING AI:**

**COMPLEXITY OF TECHNOLOGY**

**SPEED OF CHANGE**



**THE COMING SHIFT IN LEGISLATION?**

**FROM INSTRUCTIONS TO *OUTCOMES***

**SELF-REGULATION?  
LICENSED THIRD-PARTY *PRIVATE* REGULATORS?  
AI TO REGULATE AI?**

# Core challenge of Regulating A?

---

## Reinventing Law

Law  $\neq$  Legislation

Legislation = Mechanism to  
coordinate  
appropriate  
behaviour

