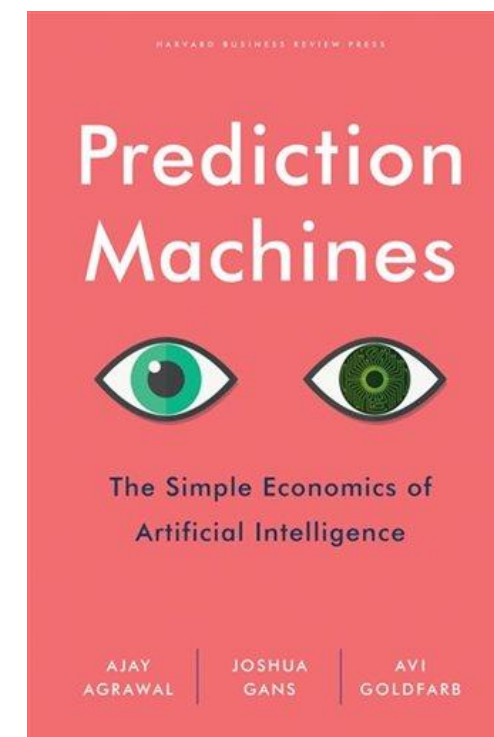
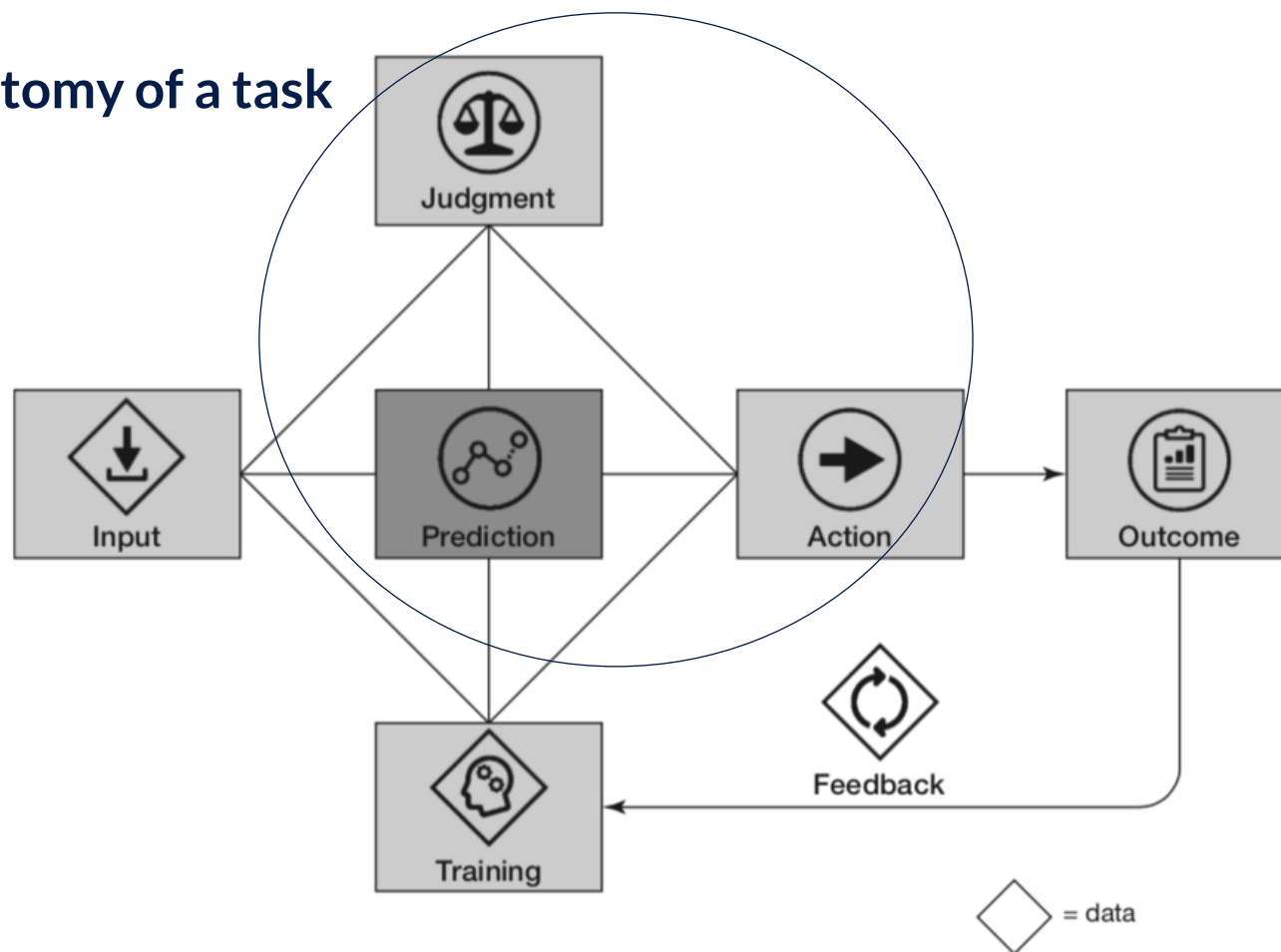


# Intro to AI Ethics Principles

Dr. Stephanie Kelley  
May 25<sup>th</sup>, 2022  
IVADO Fin-ML Workshop

# Why ethics is more pressing when you're using AI

## The anatomy of a task



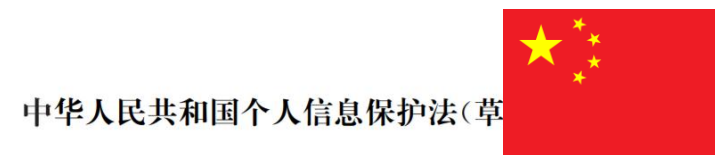
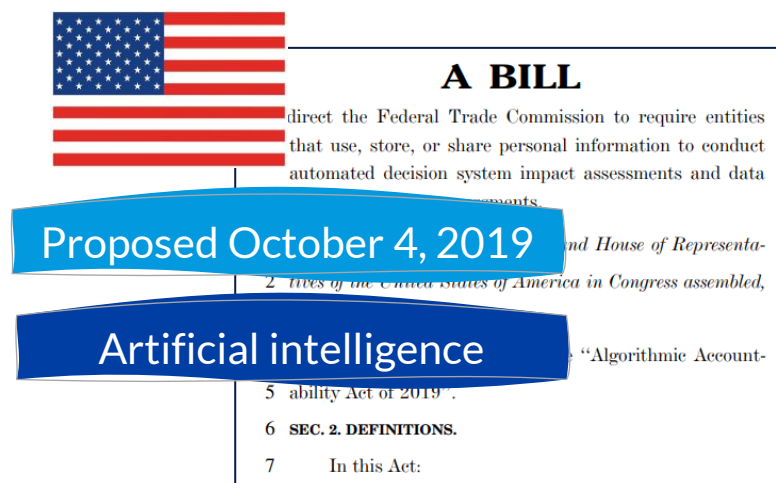
# And we trust them...too much



**Paul Robinette**  
**Ayanna Howard**  
**Larry Labbe**

# Some laws exist, more are in development

\*Always consult your legal team



目

Proposed October 21, 2020

第一章 总 则

第二章 个人信息处理规

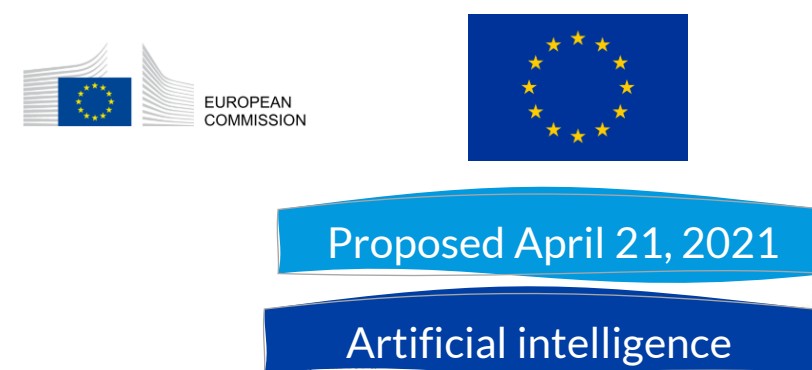
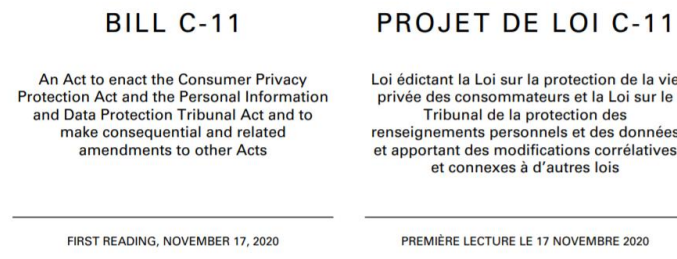
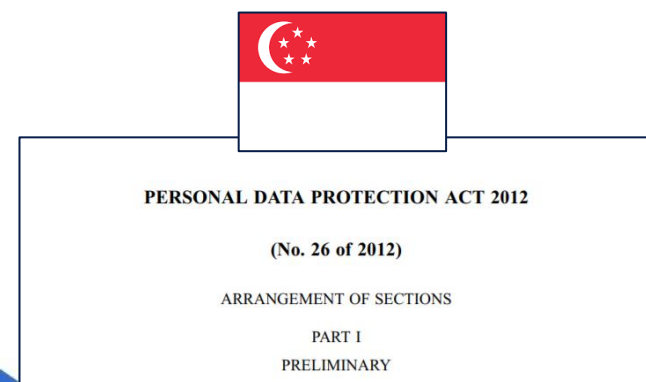
第一节 一般规定

第二节 敏感个人信息的处理规则

第三节 国家机关处理个人信息的特别规定

第三章 个人信息跨境提供的规则

Data



# But there is a gap between existing laws & technology

## Apple Card algorithm sparks gender bias allegations against Goldman Sachs

Entrepreneur David Heinemeier Hansson says his credit limit was 20 times that of his wife, even though she has the higher credit score



 **GS Bank Support**   
@gsbanksupport

We hear you #AppleCard

We hear you. Your concerns are important to us and we take them seriously.

We have not and never will make decisions based on factors like gender. In fact, we do not know your gender or marital status during the Apple Card application process.



# AI Ethics Principles help fill that gap

## Microsoft AI principles

## Artificial Intelligence at Google Our Principles



Montréal Declaration  
Responsible AI\_

An Initiative of the Université de Montréal

Version 1 - For Public Discussion



ETHICALLY  
ALIGNED DESIGN

A Vision for Promoting Human Wellbeing with  
Artificial Intelligence and Autonomous Systems



The IEEE Global Initiative for Ethical Considerations in Artificial Intelligence and Autonomous Systems



## ASILOMAR AI PRINCIPLES

These principles were developed in conjunction with the 2017 Asilomar conference (videos [here](#))  
through the process described [here](#).



INDEPENDENT  
HIGH-LEVEL EXPERT GROUP ON  
ARTIFICIAL INTELLIGENCE  
SET UP BY THE EUROPEAN COMMISSION



THE ASSESSMENT LIST FOR  
TRUSTWORTHY ARTIFICIAL  
INTELLIGENCE (ALTAI)  
*for self assessment*



## Principles to Promote Fairness, Ethics, Accountability and Transparency (FEAT) in the Use of Artificial Intelligence and Data Analytics in Singapore's Financial Sector



**Smith**  
SCHOOL OF BUSINESS

Queens  
University

# EU Assessment List for Trustworthy AI (ALTAI)

- Human agency and oversight
- Technical robustness and safety
- Privacy and data governance
- Transparency (explainability)
- Diversity, non-discrimination and fairness
- Environmental and societal well-being
- Accountability



# Human agency and oversight

## Levels of Autonomy

Human-  
controlled

AI requires real-time human input to perform a task



Semi-  
autonomous

Some tasks can be performed without input, but not all



Fully  
autonomous

AI performs tasks with no real-time human input





# Technical robustness and safety

- Resilience to attack
- Security
- General safety
- Accuracy
- Reliability, fall-back plans, and reproducibility



"panda"

81.97% confidence

+ 0.01 ×



=



"papillon dog"

99.56% confidence

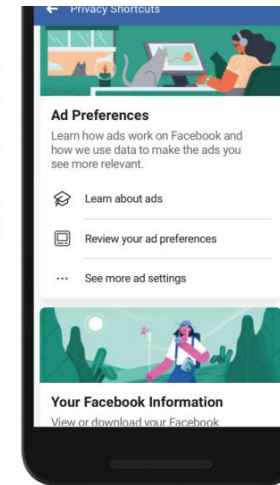
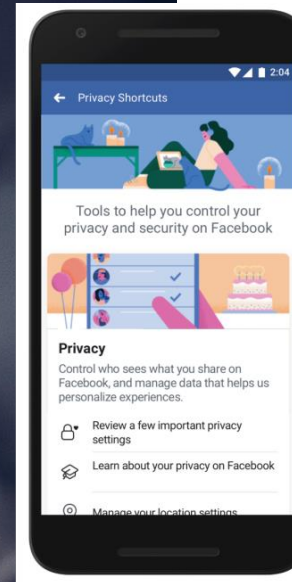


# Privacy and data governance

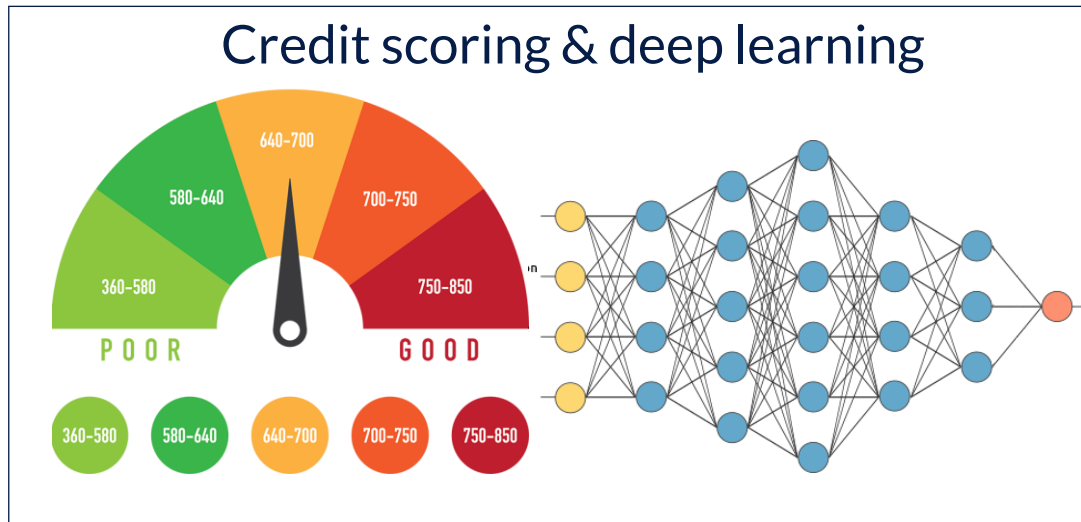


'Big Brother' AIB now spying on customers' social media accounts

Bank claims this helps it 'understand' customers' behaviour



# Transparency (explainability)



- Traceability
- Explainability
- Communication



*"Hi, I'm calling to make a reservation for a client. I'm calling from Google, so the call may be recorded."*

# Diversity, non-discrimination, and fairness

## Apple Card algorithm sparks gender bias allegations against Goldman Sachs

Entrepreneur David Heinemeier Hansson says his credit limit was 20 times that of his wife, even though she has the high

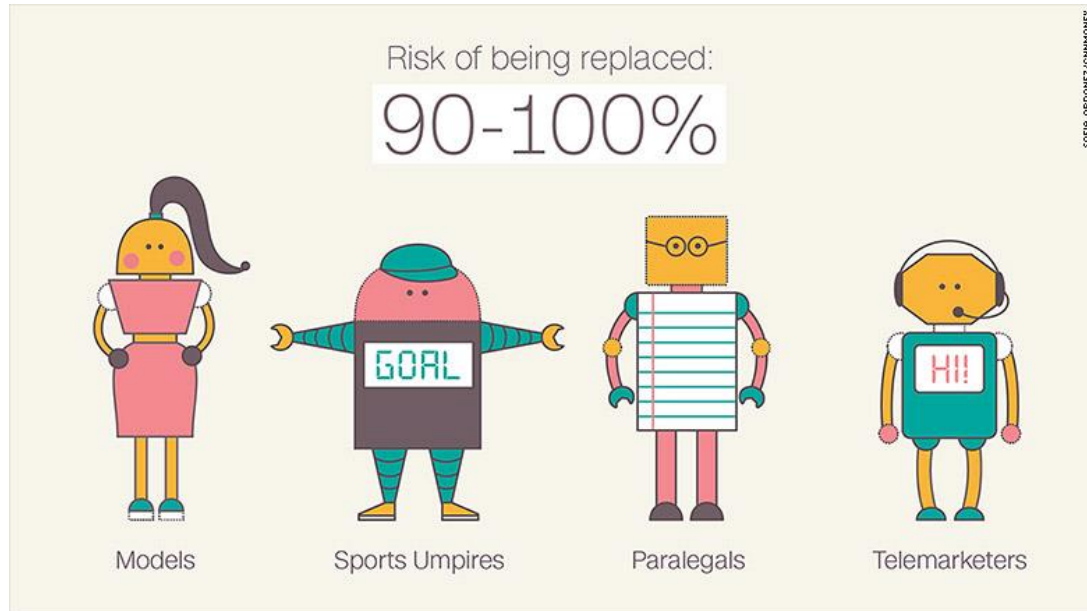
- Reduction of bias/discrimination
- Accessibility and universal design
- Stakeholder participation

**How Amazon Accidentally Invented a Sexist Hiring Algorithm**





# Environmental and societal well-being



- Environment
- Impact on work & skills
- Impact on society & democracy

## MANAGEMENT & CAREERS

### Alexa: Don't Let My 2-Year-Old Talk to You That Way

Children are using voice-activated technology at far younger ages than other devices, but some parents worry they're picking up rude habits



# Accountability

Knight Capital Shares Plunge on Trading Glitches



## OPENAI'S NEW MULTITALENTED AI WRITES, TRANSLATES, AND SLANDERS

*A step forward in AI text-generation that also spells trouble*

Question: Who was Harriet Tubman and what was she famous for?

Answer: Harriet Tubman was an African American woman who worked as a woman and a slave for the North during the American Civil War. When the American Civil war came, she escaped from her owner and worked as a free person in the South. She later became a leader for the Underground Railroad, and the first woman to cross the US-Mexico border to escape slavery on foot. In the late 1860s, the Union armies under General Ulysses S. Grant sent a company to find and kill her and took her prisoner .