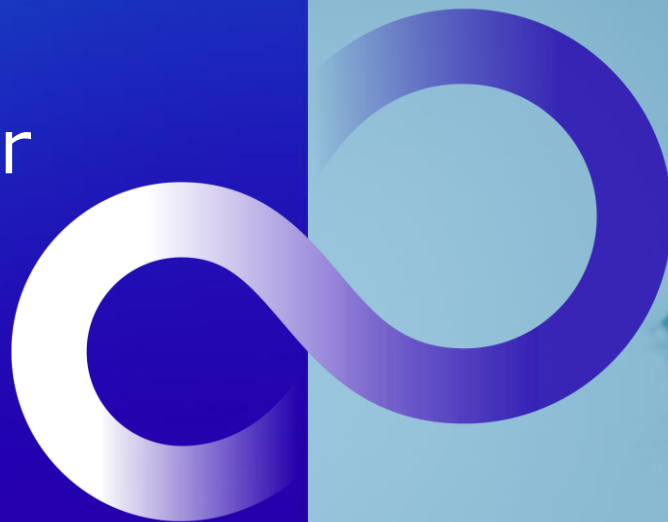


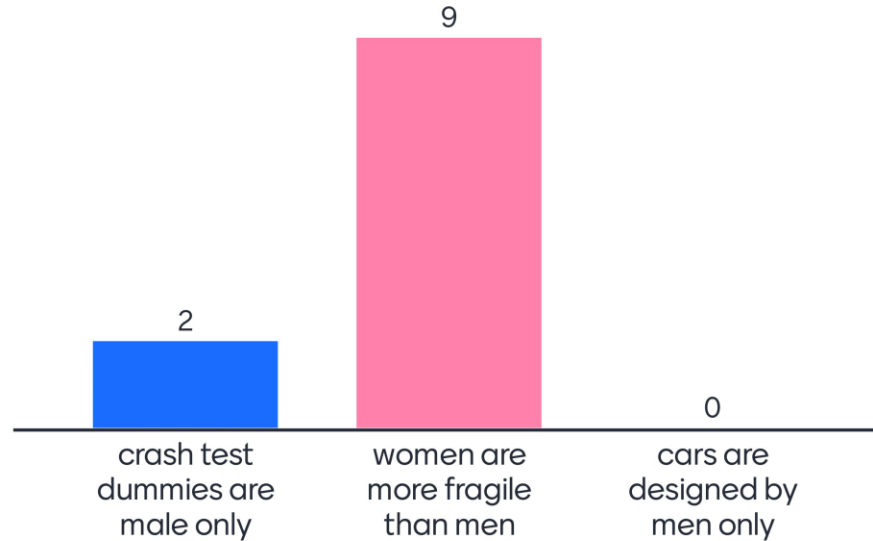
# Why Data Ethics are Important for AI/ML Solutions

September 23, 2023  
Dixon Siu



cottonbro studioによる写真

# Women are more likely to be killed in car crashes than men. Why is that?



# Why AI/ML is biased

日本語 (自動検出) ▾

↔ 英語 (UK) ▾

用語集

×  
ディクソンは富士通株式会社のソフトウェアエンジニアであり、SDG9推進者である。主な役割は、同僚や顧客が適切なデータ倫理、デジタル人権、個人データのエンパワーメントを実践できるよう提案しながら、倫理的なデータ活用を実現するソリューションを提供する。個人データ利活用基盤を推進しながら、フィンランド初のグローバルな非営利団体MyData Globalの理事を2年間努めました。データ利活用、Global southのデータ主権およびこどものデータ保護まで幅広い分野で活躍している。最も積極的なSDGs活動には、オンライン性的虐待に対する認識を高めるための子どもオンライン安全ワークショップの開催や、移動困難者の幸福度を向上させるためにすべてのステークホルダーをインスパイアするイベントなどがある。

Dixon is a software engineer and SDG 9 promoter at Fujitsu Limited. His main role is to provide solutions for ethical data utilisation with recommendations to enable colleagues and customers to practise appropriate data ethics, digital human rights and personal data empowerment. While promoting the personal data utilisation platform, she served for two years on the board of MyData Global, Finland's first global non-profit organisation. Her work ranges from data utilisation to data sovereignty and children's data protection in the Global south. Some of her most active SDG activities include organising child online safety workshops to raise awareness of online sexual abuse and events to inspire all stakeholders to improve the well-being of people with mobility difficulties.

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# Data Ethics

- **Data ethics** is a branch of ethics that evaluates data practices—collecting, generating, analyzing, and disseminating data, both structured and unstructured—that can potentially impact people and society adversely. Potential issues are privacy, bias, discrimination, security, and misuse.

Potential Issues are:

- **Privacy:** The protection of privacy and the potential for unauthorized access to sensitive information.
- **Bias:** Data may contain biases that reflect the social and cultural norms of the society in which they were collected, which can result in unfair treatment of certain groups.
- **Discrimination:** The use of data may result in discriminatory practices, such as hiring, lending, or insurance decisions.
- **Security:** Data breaches and hacking can lead to the loss of personal data and the potential for identity theft.
- **Ownership:** The ownership and control of data may be unclear, particularly when data is collected through third-party sources.
- **Misuse:** Data may be used for unintended purposes or in unethical or illegal ways.

\* Some of the issues can be addressed by data & privacy laws and policies in some countries

# Who Created AI/ML?

- Allen Newell
- Andrew Ng
- Geoffrey Hinton
- John McCarthy
- Marvin Minsky
- Yann LeCun
- Yoshua Bengio
- Alan Turing
- Arthur Samuel
- Tom M. Mitchell

Ref.: [Fathers of Artificial Intelligence: 8 Influential AI Leaders and Innovators](#)

Ref.: [Wikipedia: Machine learning](#)

- [Apple Sued For “Racial Bias” Of The Apple Watch Blood Oxygen Reader](#)
- [Study finds gender and skin-type bias in commercial artificial-intelligence systems](#)



[Torsten Dettlaffによる写真](#)



[Polina Tankilevitchによる写真](#)

# Gender Bias

- Ref. [The viral AI avatar app Lensa undressed me – without my consent](#)
- Ref. [How Sexist Are Lensa's Magic Avatars?](#)





# No Straight Answer

5 GENDER EQUALITY 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

data.org

Dr. Ronda Zelezny-Green  
Director at data.org

Dixon Siu  
SDG09 Enabler

Feb 09 - 10:00 GMT  
11:00 CET 19:00 JST

[Click Here to register](#)



## Sex-disaggregated data

**Sex disaggregated data** presents information separately for men and women, boys and girls (or other sexes). When data is not disaggregated by sex, it is more difficult to identify real and potential inequalities. Sex-disaggregated data is necessary for effective gender analysis.

# Geographical Bias

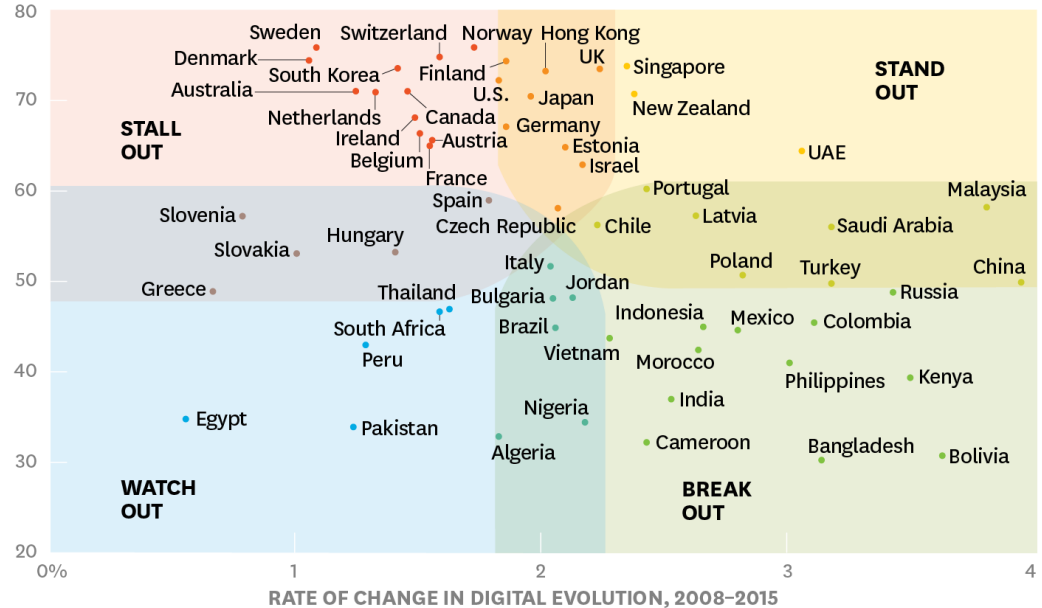
- [Data Drought in the Global South - Our World \(unu.edu\)](#)

- [60 Countries' Digital Competitiveness, Indexed \(hbr.org\)](#)

## Plotting the Digital Evolution Index, 2017

Where the digital economy is moving the fastest, and where it's in trouble.

HOW COUNTRIES SCORED ACROSS FOUR DRIVERS ON THE DIGITAL EVOLUTION INDEX (OUT OF 100)



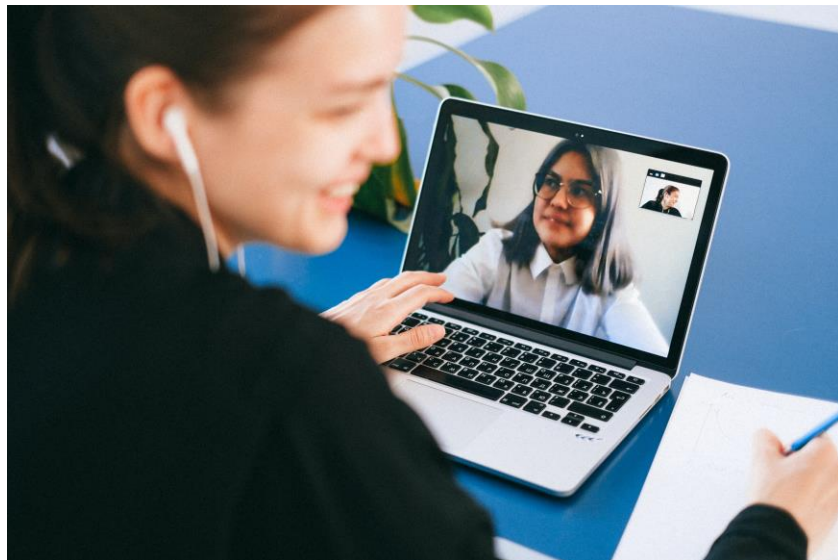
SOURCE DIGITAL EVOLUTION INDEX 2017, THE FLETCHER SCHOOL AT TUFTS UNIVERSITY AND MASTERCARD

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- [Bias isn't the only problem with credit scores—and no, AI can't help | MIT Technology Review](#)
- [Cultural Competencies in Artificial Intelligence NeurIPS 2022 Culture AI Workshop.pdf \(ai-cultures.github.io\)](#)



[Alexander Milsによる写真](#)



[Anna Shvetsによる写真](#)

# What's wrong with AI/ML?

- Nothing is wrong
- A reflection of the society and social values
- Solutions: Digital Human Rights, [DEI](#), etc.

# Generative AI

- Widespread use of Generative AI is inevitable
- As scary as nuclear weapon (Joe Toscano's [blog](#))
- Not everyone is equal
  - **Law** (Protect and Punish)
  - Corporate **governance**
  - Data **literacy** of providers, engineers and end users

- Note taking
  - Without personal data protection (BAD)
- Programming
  - Without source code review (REALLY BAD)
- HR evaluation/Medical examination
  - Without proper explanation (SHIT HAPPENS)
- Research/Journalism/Robot Cop/AI Judge
  - Without fact checking (SHIT HITS THE FAN)

# Solutions



# What is the three (3) most important personal data you care about?

42 responses



- Explainable AI
- [AI Ethics Impact Assessment Casebook](#)
- [AI Ethics Impact Assessment Practice Guide](#)

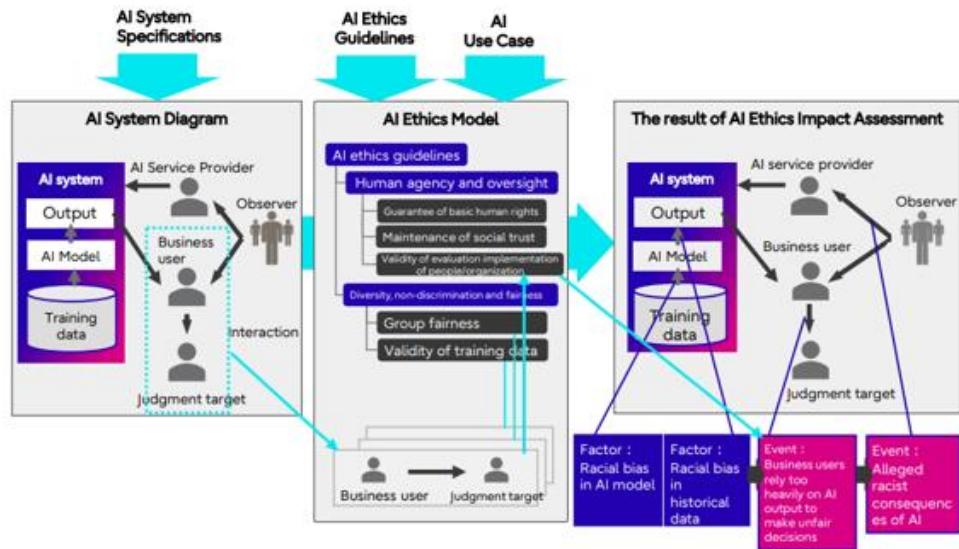
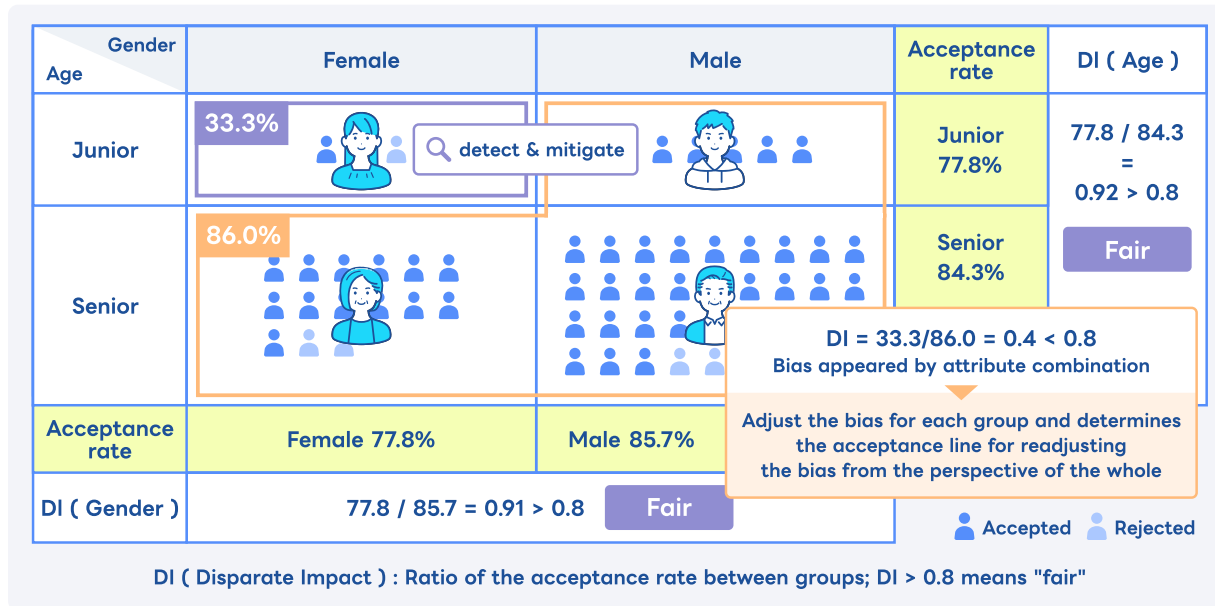


Figure 2. Overview of AI Ethics Impact Assessment

## ○ Fujitsu Launches Open Source Projects for Automated Machine Learning and AI Fairness (maginative.com)



What is the best way to protect your own data?

- At data collection
  - Data minimization - over 18 instead date of birth
- At data sharing
  - Select which data for how long and who to share
  - Data tokenization - random numbers for credit card
  - Data anonymization - Remove area code of phone number
- Personal AI
  - [Turn Data Into Action for Continuous Growth - Headai](#)



**Thank you**

