



ETHICS AND GOVERNANCE OF ARTIFICIAL INTELLIGENCE

MASTER I SCIENCE DE DONNÉES ET INTELLIGENCE ARTIFICIELLE (SDIA)

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LESSON 2 : ETHICAL CONSIDERATIONS IN AI RESEARCH AND DEVELOPMENT

- By examples

WHAT IS AI ETHICS?

- **The ethical challenges of AI**

1. Bias in AI
2. Privacy in AI
3. Safety in AI
4. Explainability in AI
5. Control in AI
6. Accountability in AI

BIAS IN AI

- A credit scoring system could be biased against people of color.
- A facial recognition system could be biased against women.

PRIVACY IN AI

- Data collected by AI systems could be used to profile individuals.



SELF DRIVING VEHICLE

Accident RISKS



Evolving legal landscape

Few safety regulations established; liability questions persist



False Sense of security

Operators less engaged and aware



Hacking

Hackers gain control of vehicle remotely



Malfunctions

Technology malfunctions may have lethal consequences

SAFETY IN AI

- An autonomous AI system could cause harm.

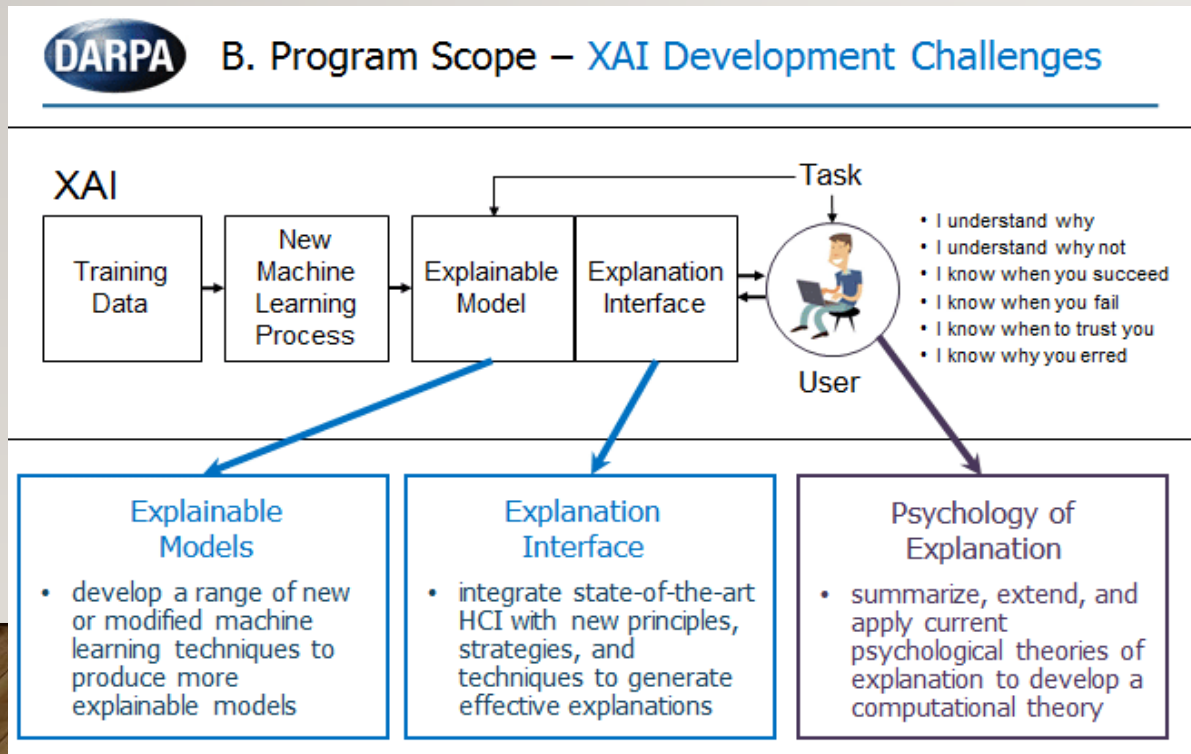


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EXPLAINABILITY IN AI

- It can be difficult to understand how an AI system makes decision.



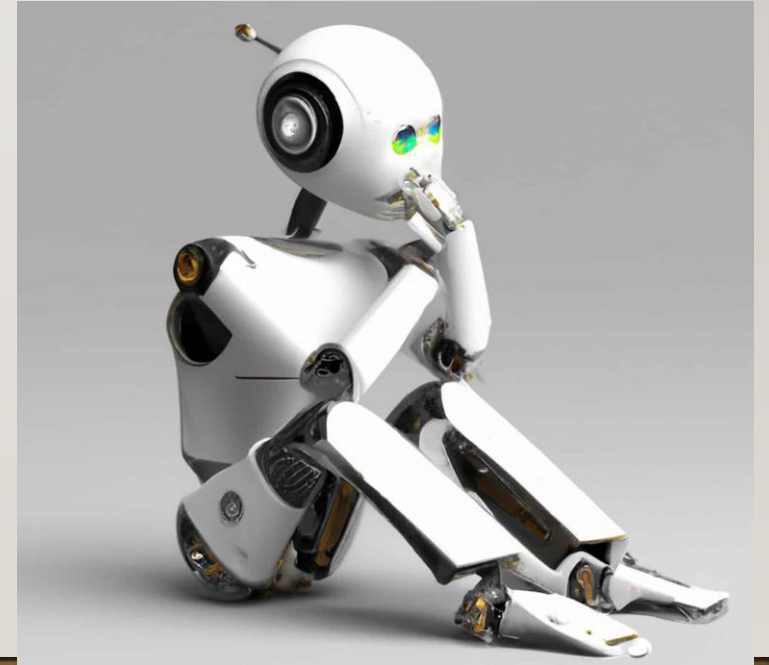
Vallverdu, Jordi, 2020, Approximate and Situated Causality in Deep Learning, volume = {5},
Journal doi = {10.3390/philosophies5010002}

CONTROL IN AI

- A credit scoring system could be biased against people of color.
- A facial recognition system could be biased against women.

ACCOUNTABILITY IN AI

- It can be difficult to hold an AI system accountable for its actions.



CONTROL IN AI

- It can be difficult to control the actions of an AI system.

Q&A AND DISCUSSION



CONCLUSION

In conclusion, ethical considerations play a significant role in AI research and development.

By addressing fairness, transparency, privacy, accountability, safety, and reliability, we can ensure that AI technologies are developed and used responsibly to benefit society and minimize potential harm.

Ethical guidelines and frameworks provide a roadmap for researchers, developers, and policymakers to navigate the complex landscape of AI ethics and governance.



REFERENCES

- Life 3.0: Being Human in the Age of Artificial Intelligence, by Max Tegmark 2017.