AI ethics: What's the buzz?

AI ETHICS

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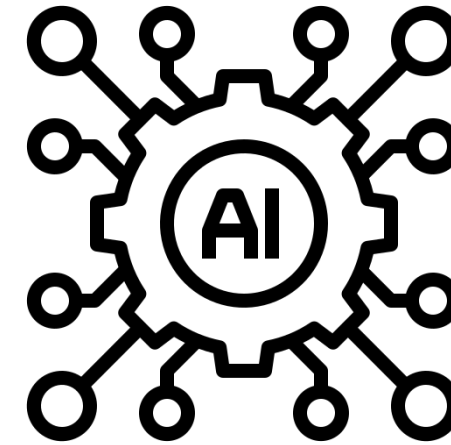
Intro to ethics

- AI **growth** and the **surge** in public attention

- **AI ethics:** A crucial discussion

- **Definition of ethics:** Guiding behavior based on moral principles

- The **intersection** of AI and ethics

AI meets ethics

- AI revolutionizes various sectors:
    - Healthcare

    - Media

    - Insurance

- Examples
    - AI in healthcare - improves surgical accuracy, early disease detection

    - AI in finance - automates processing, fraud detection

[1] Icons made by Freepik, wanicon, Pixel perfect from www.flaticon.com
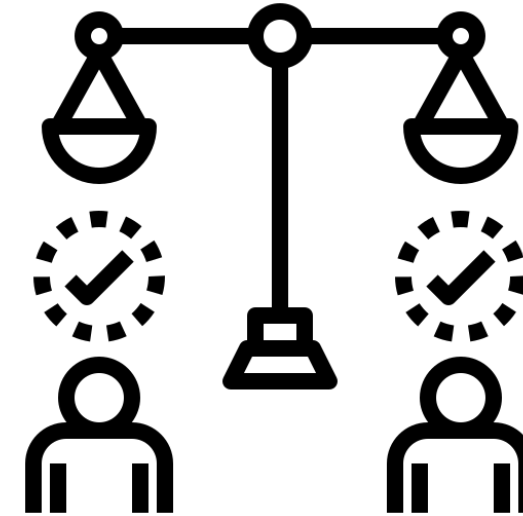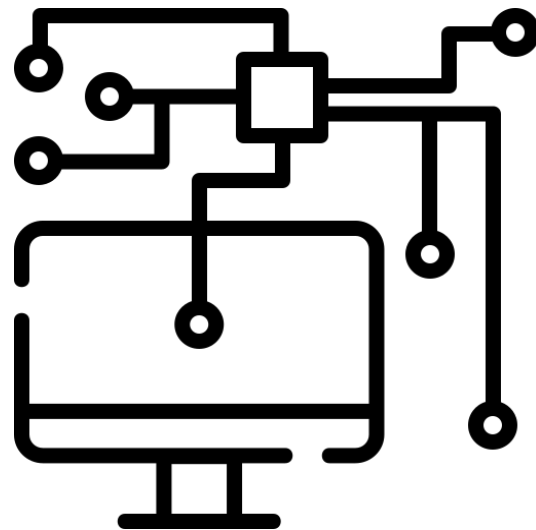
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Why AI ethics?

- Why AI ethics?
  - Risks of unchecked biases, illustrated by insurance claim denial scenario

- Human influence on AI
  - Biases seep into decision-making

- Wider impact
  - Legal professions, judiciary, public decision-making

Ethics in practice

- Aligning AI systems with ethical principles

- Example:
  - Fairness in insurance model
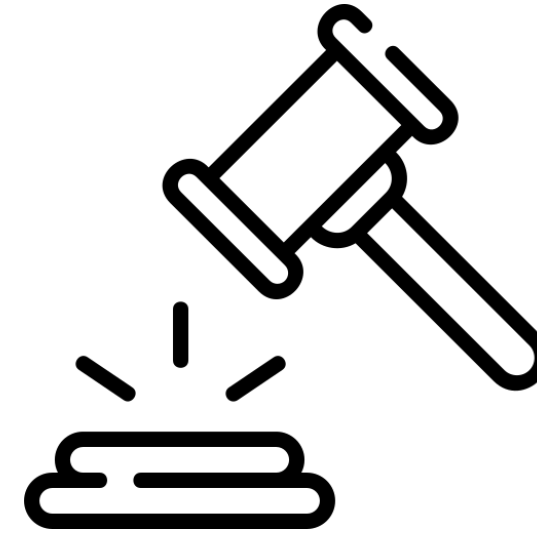 - Equal treatment for all claims

- Guidelines in Insurance, Finance, and Banking sectors

- Ethical boundaries for fair, unbiased results

- The potential of ethically built AI

The big picture

- AI ethics: Beyond avoiding harm or bias

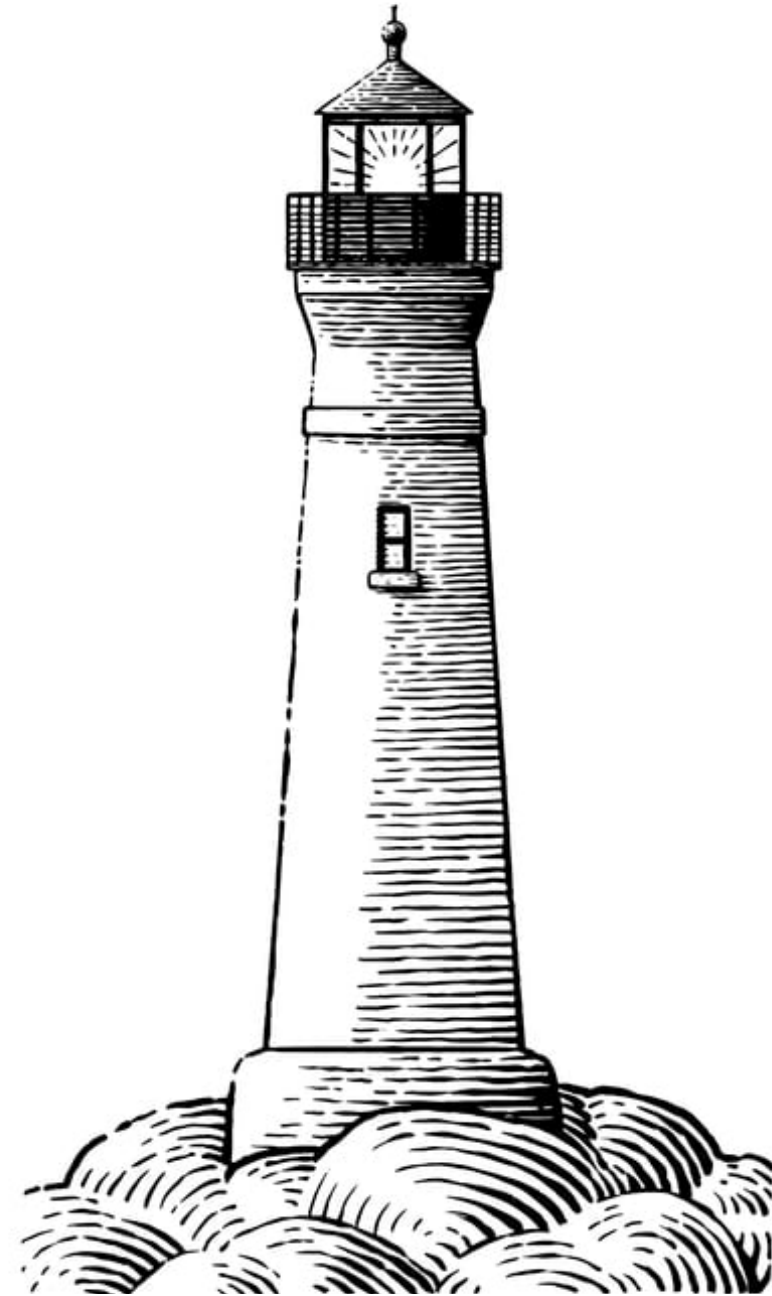- Importance of accountability: Who is responsible for AI's outcomes and construction?

- The role of transparency: Understanding AI's decision-making process

- Need for transparency and literacy in AI development and results

Wrapping up

- AI ethics: The guiding beacon in an AI-driven world

- Ensures benefits of AI without compromising moral values

- Ethical AI: Not just good practice, but good business

Let's practice!

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Digging deeper: AI ethics principles

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Meet MedTech Innovations

- MedTech Innovations
  - Healthcare company

  - Using AI to improve patient care and uphold ethics

- Personal reflections
  - Consider the application of AI ethics in…
    - Personal life

    - Career

    - Known businesses
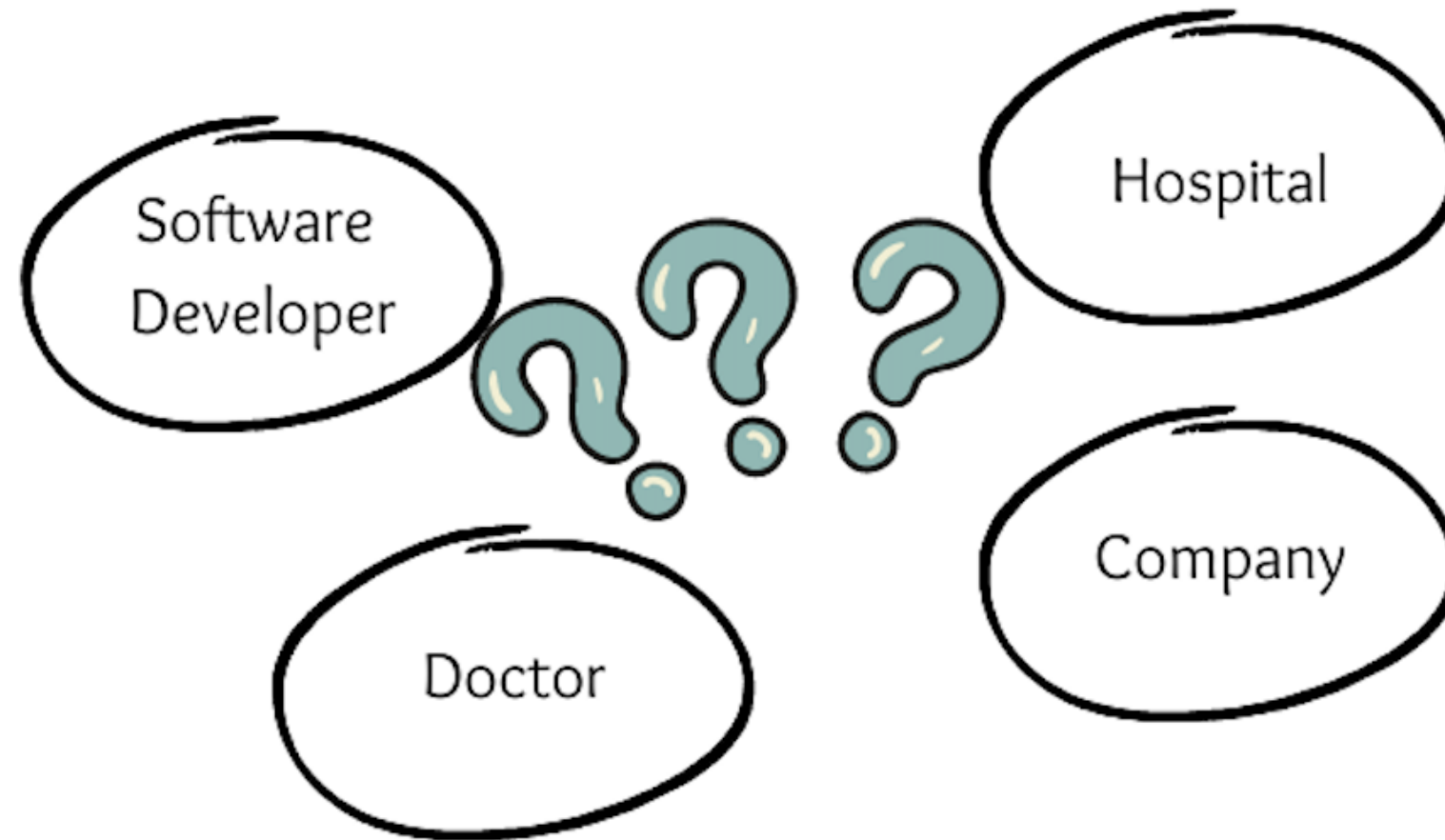
The principle of fairness

- MedTech's AI in patient care
  - Personalized treatment plans

- Challenge:
  - Unintentional **bias** in AI systems

  - Potential **discrimination**

- **Principle of fairness**
  - **Equal** treatment

  - Avoidance of discrimination

How to address these issues?

- ✓ Active engagement with AI systems
- ✓ Partner with AI
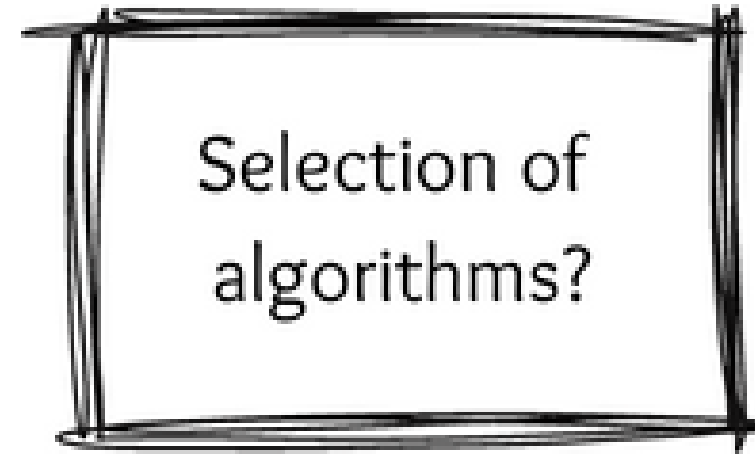- ✓ Take responsibility
- ☐ ...
- ☐ ...

The principle of accountability

- Scenario: MedTech's AI system mistake affecting patient treatment

- **Principle of accountability:**
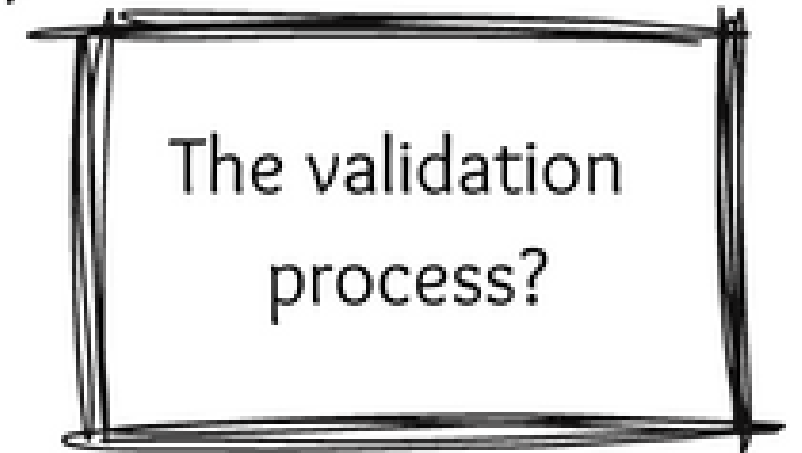 - Someone should always be accountable for AI outcomes

The principle of transparency

- Scenario: MedTech's AI system recommends a specific treatment

- Challenge: Understanding why AI made the decision

- **Principle of transparency:**
  - Decisions by AI should be explainable and comprehensible

  - Sharing knowledge and information across different stakeholders
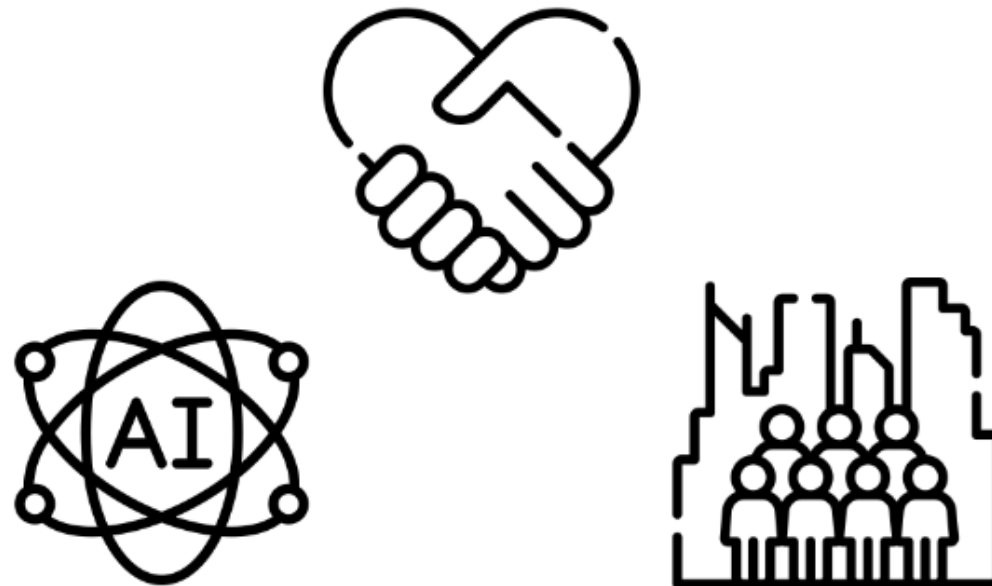
Selection of algorithms?

The validation process?

Applying AI ethics

- **Fairness:**
  - Continual testing of AI systems to detect and rectify bias

- **Accountability:**
  - Clear responsibilities defined for each AI system's outcomes

- **Transparency:**
  - Make AI systems explainable and understandable

- **Commitment:**
  - Ethical adherence builds trust, mitigates risks

Why do they matter?

- **Understanding & applying principles:** Ensures ethical AI use

- **Building trust:** Transparency and accountability foster patient trust

- **Mitigating risks:** Ethical AI use reduces potential risks

- **Promoting AI:** Transparency and knowledge-building enhances societal trust and utilization of AI

Let's practice!

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AI ethics: where's the line?

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The privacy-personalization paradox

- AI personalizes user experiences, enhancing appeal

- The **privacy-personalization paradox**
  - Personalization can compromise user privacy

- Solution:
  - AI literacy

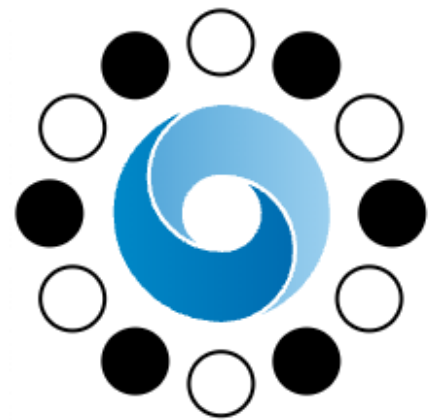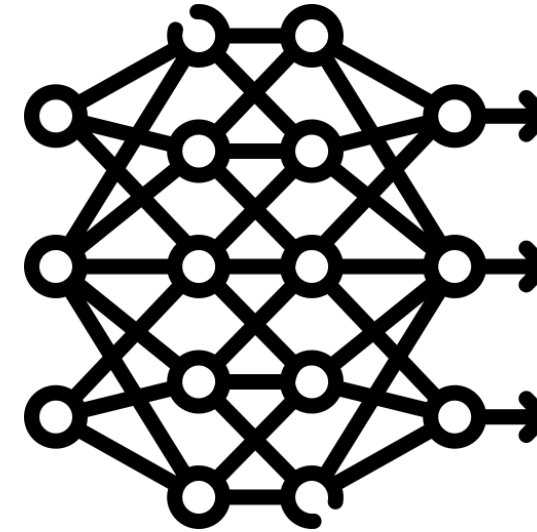 - Clear privacy policies

- Example: Spotify

The bias-fairness conundrum

- **Bias-fairness conundrum:**
  - AI learns from data that can carry societal biases

- Result:
  - AI may unintentionally amplify these biases

- Example:
  - Early versions of ChatGPT

- Solution:
  - Train AI models with fairer, bias-free data

The transparency-complexity trade-off

- **Transparency-complexity trade-off:**
  - Complex AI models lack transparency but are highly accurate

- **Simpler** models are **more transparent** but less accurate

- AI literacy is vital for comprehension and ethical implications

[1] Icon made by Freepik from www.flaticon.com

The autonomy-control dilemma

- **Autonomy-control dilemma:**
  - AI can act autonomously but might operate outside human control

- Question:
  - Should we prioritize autonomy or control?
    - No one-size-fits-all answer

- Example:
  - Tesla's Autopilot system emphasizes driver vigilance and readiness to take control

Navigating the challenges

- Navigating ethical dilemmas in AI requires thoughtful **trade-offs**

- Importance of **human element** in decision-making

- Striving for better decisions in complex situations

- Need for **diverse stakeholders' involvement** and **continuous AI monitoring**

Let's practice!

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