



How to ethically and adequately use artificial intelligence



A definition

Artificial Intelligence (AI) is the development of computer systems capable of performing tasks that typically require human intelligence. These tasks include reasoning, recognising patterns, learning from data, and making decisions. Ethical AI usage focuses on creating AI technologies that are not only effective but also align with moral and societal values. This involves addressing ethical concerns such as fairness, transparency, accountability, and privacy.

Ethical AI ensures that AI systems perform without bias, respect user privacy, and operate transparently so stakeholders understand AI decisions. Moreover, adequate use of AI demands efficiency, adherence to ethical standards, and consistent monitoring to mitigate risks such as unintended consequences or misuse of technology.

By integrating these principles, AI can be leveraged responsibly to enhance productivity and improve lives while maintaining trust and safety in AI-dependent activities. Certain topics in this worksheet overlap with those explored in the 'Ethical Issues in Digital Entrepreneurship'. For a more in-depth analysis of these aspects, readers are encouraged to refer to that document.



Why is this important?

Integrating ethical practices in artificial intelligence (AI) is crucial for ensuring that technological advancements contribute positively to society and respect individual rights.

- **Fosters trust:** ethical AI builds trust among users, which is essential for the adoption and effective use of technology in education and beyond.
- **Promotes fairness:** by minimising biases, ethical AI ensures that all individuals have equal opportunities to benefit from technological advancements.
- **Protects privacy:** ethical AI practices safeguard personal data, maintaining the privacy and security of users' information.
- **Enhances reliability:** AI systems designed with ethical guidelines reduce errors and inconsistencies, increasing their reliability and effectiveness.





- **Supports inclusivity:** ethically developed AI considers diverse needs and backgrounds, making digital tools accessible and beneficial for everyone.



Tips and tricks

- **Understand and address biases:** Identify and mitigate biases in data and algorithms to ensure fair AI outcomes, using diverse training data that accurately represents different demographics.
- **Prioritise transparency and accountability:** Maintain clear documentation of AI processes and decisions and ensure open communication with stakeholders about how AI systems operate.
- **Implement robust privacy protections:** Employ strong encryption and secure data storage solutions to protect user data, integrating privacy considerations at the development stage of AI applications.
- **Ensure human oversight:** Maintain human involvement in critical decision-making processes, allowing for the oversight and correction of AI decisions as necessary.
- **Foster continuous improvement:** Encourage ongoing feedback on AI's ethical performance and adapt guidelines and practices based on emerging challenges and technological advancements.
- **Include different perspectives:** Make sure your AI team is diverse. Having people from different backgrounds can help spot issues and biases in AI systems that might not be obvious at first.
- **Get everyone involved:** Use a team approach where you include not just tech people, but also experts in ethics and representatives from groups who might be affected by AI. Make sure that many different viewpoints are considered in how the AI is developed and used.



Useful resources and tools

- **Understand and address biases:**
 - [AI Fairness 360 \(AIF360\)](#): A toolkit by IBM for examining and mitigating biases within AI models.





- [Google's What-If Tool](#): Offers an easy-to-use interface for exploring machine learning models for fairness and other features without needing to code.



Prioritise transparency and accountability:

- [IEEE Global Initiative on Ethics of Autonomous and Intelligent Systems](#): Provides ethical standards and best practices for the design of AI systems.
- [Partnership on AI](#): Formulates best practices on AI technologies and advances public understanding



Implement robust privacy protections:

- [Ethics in AI and Data Science on edX](#): Covers ethical issues of AI and provides frameworks for managing privacy and security concerns.



Foster continuous improvement:

- [AI For Everyone on Coursera](#): Taught by Andrew Ng, this course discusses societal implications of AI and encourages ongoing ethical practices.



Books for deeper insights:

- "[Weapons of Math Destruction](#)" by Cathy O'Neil – This book explores the dark side of big data and biased algorithms that can reinforce inequality.
- "[Ethics of Artificial Intelligence](#)" edited by S. Matthew Liao – A collection of essays from leading philosophers offering a philosophical treatment of AI's ethical implications.