



# Ethical AI Shaping Scholarly Communication *Challenges and Opportunities*

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# Why Artificial Intelligence (AI) ?

- ▶ AI technologies offer unprecedented opportunities to streamline various aspects of scholarly communication, from literature reviews to data analysis, thereby enhancing research efficiency and productivity. Use of AI is paramount to upholding the integrity and credibility of academic endeavours.
- ▶ In any AI system, a Language Learning Model (LLM) typically refers to a machine learning model specifically designed for language-related tasks. These models are trained on large datasets to learn the intricacies of language, including grammar, semantics, and context. LLMs can perform multiple language related tasks, such as text generation, translation, sentiment analysis, question answering, and more.



# Ethical AI

*Ethics refers to the principles, values, and standards of conduct that govern human behaviour, and guide individuals and organizations, in making morally sound decisions. The key principles of ethical AI are -*

- ▶ Fairness
- ▶ Transparency
- ▶ Accountability
- ▶ Privacy
- ▶ Safety and Reliability
- ▶ Human Control and Autonomy
- ▶ Ethical Use and Impact



# Role of Ethics in AI

- ▶ Ensuring Human Well-being
- ▶ Mitigating Bias and Discrimination
- ▶ Respecting Human Autonomy
- ▶ Promoting Transparency and Accountability
- ▶ Protecting Privacy and Data Security
- ▶ Fostering Trust and Public Confidence
- ▶ Addressing Ethical Dilemmas and Trade-offs



# Challenges in the Usage of AI



- ▶ Bias and Fairness
- ▶ Transparency and Explainability
- ▶ Privacy and Data Protection
- ▶ Accountability and Responsibility
- ▶ Robustness and Security
- ▶ Ethical Decision-Making
- ▶ Social and Economic Impacts
- ▶ Regulatory and Policy Frameworks



# Usage of Ethical AI in Scholarly Communication

- ▶ Literature Review and Discovery
- ▶ Data Analysis and Interpretation
- ▶ Content Generation and Summarization
- ▶ Citation Analysis and Recommendation
- ▶ Peer Review and Manuscript Evaluation
- ▶ Language Translation and Multilingual Communication
- ▶ Personalized Recommendation and Collaboration



# Ethical AI Tools for Researchers



ResearchRabbit



TensorFlow



PyTorch



machine learning in Python



Keras

A deep learning library



Azure Machine Learning



Google Cloud Platform



# Conclusion



- ▶ Ethical AI for research scholars is essential for ensuring that AI technologies are developed, deployed, and utilized responsibly in the research process, by adhering to ethical principles, research scholars can mitigate potential risks, promote fairness, and transparency, and maximize the societal benefits of AI-driven research.
- ▶ AI advances, bringing forth machines and technologies that rival or surpass human capabilities. Now, humanity is confronted with a profound challenge to its longstanding self.-conception as the apex moral agent.



