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Ethical Principles and Challenges of Using Artificial Intelligence in Scientific Research

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Abstract

Research ethics encompasses the moral standards and guidelines that must be upheld during the conduct, documentation, and publication of scientific work. These standards include possessing adequate domain knowledge, using resources appropriately, citing accurately, and recognizing the contributions of collaborators. Nevertheless, researchers often face ethical dilemmas such as plagiarism, data misuse, privacy violations, and the need for transparency and accountability. Addressing these issues requires well-defined ethical strategies to maintain research quality and integrity while curbing potential misconduct. The integration of AI technologies into scientific research has added a layer of complexity to these challenges. Given AI's capacity to process massive datasets, adhering to ethical norms has become more critical than ever. This article explores the ethical dilemmas associated with AI tools in research, noting that despite AI's benefits, it also raises concerns about dishonesty, privacy breaches, and an increase in academic and literary plagiarism. As such, it is vital to enhance researchers' ethical awareness and develop AI tools capable of verifying textual authenticity.

Keywords

Research Ethics, Artificial Intelligence, Information Technology Ethics, AI Ethics, Research.

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