Artificial Intelligence in Research: Opportunities, Challenges, and Ethical Considerations

Mr. Rajdeep Singh, Research Scholar, Department of Political Science, Chaudhary Devi Lal University, Sirsa

Abstract

Artificial Intelligence (AI) is rapidly transforming the landscape of academic and scientific research by enhancing efficiency, accuracy, and innovation across disciplines. From automated literature reviews and data mining to predictive modelling and advanced analytics, AI-driven tools are reshaping research methodologies and accelerating knowledge production. These technologies enable researchers to handle large datasets, identify complex patterns, and generate insights that were previously difficult to obtain. However, the integration of AI in research also presents significant challenges, including issues of algorithmic bias, data privacy, transparency, intellectual property, and academic integrity. Ethical concerns surrounding authorship, accountability, and over-reliance on automated systems require careful governance and regulatory frameworks. This paper critically examines the opportunities AI offers for improving research productivity and interdisciplinary collaboration while highlighting the limitations and ethical dilemmas that accompany its adoption. It argues for a balanced, responsible, and policy-guided approach to ensure that AI strengthens, rather than compromises, the integrity and credibility of research.

International Advance Journal of Engineering, Science and Management (IAJESM)
Multidisciplinary, Multilingual, Indexed, Double-Blind, Open Access, Peer-Reviewed, Refereed-
International Journal, Impact factor (SJIF) = 8.35

1