IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 4, December 2025
Impact Factor: 7.67

Ethical Artificial Intelligence and Bias Mitigation

Dr. Vinod Kumar[1], Dr. Dharamveer[2], Mr. Manoj Kumar[3]
Assistant Professor, Government Degree College, Hansaor, Barabanki[1,3]
Professor, SKBBGPG C Harakh Barabanki[2]
dr.vkvs343@gmail.com, dvsgunja@gmail.com, kumarmanoj2555@gmail.com.

Abstract: *Artificial Intelligence has become an integral part of our lives, revolutionizing various industries and enhancing efficiency. However, as AI continues to advance, it is crucial to address the ethical considerations surrounding its implementation. Bias mitigation, transparency, and accountability are essential for responsible Artificial Intelligence deployment Artificial intelligence has become increasingly popular in recent years and has been used in a range of industries to improve outcomes, streamline processes, and improve decision-making. But there are also moral questions raised by the employment of Artificial Intelligence, particularly in light of potential bias and discrimination. In order to promote justice and reduce bias, this paper offers a thorough discussion of ethical issues and mitigation techniques in Artificial Intelligence. The evolution of Artificial Intelligence and its possible advantages and disadvantages are first covered in the paper. After that, it explores the different ethical issues surrounding Artificial Intelligence, such as trust, accountability, fairness, and openness.*

The study emphasises the effects of bias and discrimination on Artificial Intelligence systems as well as the possible outcomes of these problems. The study also discusses the various mitigation measures, such as algorithmic strategies, data pre-processing, and model validation that have been suggested to mitigate bias and enhance justice Artificial Intelligence. In order to develop the subject of Artificial Intelligence ethics, the study analyses the advantages and disadvantages of different frameworks and emphasises the necessity of continued interdisciplinary research and collaboration. Research papers on Ethical Artificial Intelligence and Bias Mitigation explore identifying, preventing, and correcting unfairness in Artificial Intelligence systems, focusing on sources like biased training data, societal prejudices, and flawed algorithm design, using strategies like data preprocessing (rebalancing), fairness-aware algorithms, post-processing, and ethical frameworks (diverse teams, stakeholder engagement) to ensure transparency, accountability, and equity, often through systematic reviews and case studies in medicine, finance, and beyond. The article is a useful tool for academics, professionals, and decision-makers who want to support ethical and responsible Artificial Intelligence development and application..

Keywords: Introduction, Review of Literature, Concept, Opportunities, Challenges, Mitigation Strategies, Bias Framework and Conclusion

DOI: 10.48175/IJARSCT-30524