

ETHICAL DEPLOYMENT OF LARGE LANGUAGE MODELS IN HIGHER EDUCATION

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ABSTRACT

Ethical deployment of Large Language Models (LLMs) in higher education refers to the responsible design, implementation, and governance of AI systems used for teaching, learning, assessment, and academic support. As universities increasingly integrate LLMs into educational workflows, concerns around bias, academic integrity, data privacy, transparency, and accountability have become central. Ethical deployment requires aligning AI outputs with curriculum standards while ensuring fairness, explainability, and human oversight. By integrating Explainable Artificial Intelligence (XAI), Retrieval-Augmented Generation (RAG), curriculum-aware AI, Human-in-the-Loop (HITL) validation, and governance frameworks, institutions can mitigate risks while maximizing educational benefits. This study explores ethical deployment of LLMs in higher education through a qualitative literature review. Findings indicate that ethical frameworks improve trust, academic integrity, learning outcomes, and institutional accountability. Despite challenges such as regulatory uncertainty, model bias, and infrastructure limitations, ethical deployment remains essential for sustainable AI integration in universities.

KEYWORDS: *Large Language Models, Higher Education, AI Ethics, Curriculum-Aware AI, academic Integrity, Explainable AI, Governance Frameworks*

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