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A Review on AI-Driven Project Management for Transforming Software Engineering Perspectives

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Abstract: *The software development life-cycle is getting more and more complicated, which makes it hard for software project managers to keep track of the development of big software systems. This research is based on the premise that AI and ML have a profound impact on software project management and software engineering. In instance, it emphasizes the application of AI methods like intelligent automation in Agile and DevOps models, predictive analytics for allocating resources, NLP for requirements analysis, and ML models for estimating effort and risk. The review also examines the use of AI in driving development in test automation, continuous integration, and deployment processes and how the technologies have improved decision-making, operational efficiency, quality assurance and project success rates. It further addresses the issues of implementation, such as data dependency, model accuracy, ethical issues, and testing complexity, and defines the research agenda in the future, which consists of governance frameworks, AI-driven development platforms, and the changing role of software professionals. In general, the paper provides an extensive summary of the ways AI is transforming the contemporary software project management and engineering processes.*

Keywords: Artificial Intelligence (AI), Machine Learning (ML), Software Project Management, Software Engineering, AI Governance, Intelligent Automation