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Identification of Modern Techniques in Project Management of Software Development Companies

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Abstract

In today's rapidly changing software development environment, project management technologies are crucial to ensuring projects are managed effectively. The primary objective of this study is to identify modern-day tools, methods, frameworks, and techniques that enhance project outcomes. A systematic review was conducted on 100 research papers, from which 50 were selected based on inclusion and exclusion criteria. After further evaluation, 25 key studies were chosen for analysis to assess their relevance, quality, and applicability. The findings of the study highlight the importance of Agile and Lean approaches and identify Scrum and Kanban as the most effective frameworks. It also discusses the innovative potential of combining Cloud Computing and Artificial Intelligence (AI) with Lean and Agile methodologies. These integrations are identified to increase project efficiency, speed up decision-making, optimize resources, and provide better scalability. The study specifically reveals how cloud-based platforms and AI-powered data analysis allow real-time project monitoring, contributing to data-driven decision-making and enhancing resource allocation. It also examines how modern technologies transform traditional project management practices, addressing the challenges of resource management and project complexity. Furthermore, the study proposes future research directions, such as the exploration of limitations of Lean and Agile methodologies, the growth of AI-based solutions, and the application of Cloud Computing across different organizational types.

Keywords: *Project management, Agile methodology, Lean methodology, Artificial Intelligence, Cloud Computing*