

Rethinking Agile: The Mentorship-Driven Agile Process Human-Centric Approach to Software Development

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Abstract : This paper introduces the Mentorship-Driven Agile Process (MDAP), an approach to software development that addresses the limitations of traditional agile methodologies. MDAP reimagines software development with a focus on human capital, efficient knowledge transfer, and developer empowerment while strategically integrating artificial intelligence to enhance productivity and quality. The framework is built around small, cross-functional "Skill Cells" that combine traditionally separate roles such as development, code review, QA, and DevOps. This structure facilitates rapid skill transfer, enhances code quality, and improves system understanding. MDAP leverages modern tools and practices, including managed software environments, advanced monitoring systems, and AI-assisted processes, to streamline development cycles and reduce overhead. The paper outlines the structure, operational dynamics, and key practices of MDAP, including its unique approach to ceremonies, code review, and DevOps. It also discusses the benefits, prerequisites for success, and potential challenges of implementing MDAP, as well as the ethical considerations of AI integration. By fostering a more collaborative and fulfilling work environment augmented by AI, MDAP aims to create better software, happier teams, and more successful companies, potentially reshaping the landscape of software development.

Keywords : agile software development, mentorship, skill cells, DevOps, AI in software development, organizational psychology

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