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**ASSESSING THE FEASIBILITY OF INCORPORATING
PROJECT MANAGEMENT FRAMEWORKS WITH AI
POWERED TOOLS**

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DECLARATION

I declare that this is my own work and this thesis/dissertation does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any other University or Institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text. I retain the right to use this content in whole or part in future works (such as articles or books).

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Name of Supervisor: Mr. Shalika Siriwardhana

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ABSTRACT

In today's rapidly evolving technological landscape, the integration of Artificial Intelligence (AI) into project management frameworks (PMFs) presents a significant challenge and opportunity. Despite the potential benefits, there is a lack of comprehensive understanding of how critical factors such as IT infrastructure, IT expertise, organizational dynamics, environmental influences, and technology readiness affect the adoption of AI-powered tools in project management. This study addresses this pressing need by investigating these factors through quantitative research methods, aiming to uncover the prerequisites for successful AI integration in PMFs. By employing statistical analyses, including reliability and validity tests, correlation, regression, and exploratory factor analyses, we analyzed data from 150 IT and project management professionals to provide a nuanced understanding of these dynamics.

The findings reveal a significant positive relationship between IT infrastructure and IT expertise and the effective incorporation of AI tools. Moreover, organizational adaptability and the significance of technological factors are highlighted as crucial for enhancing AI tool adoption in PM frameworks. Ethical, social, and regulatory implications emerged as key considerations, with the study stressing the importance of developing internal policies for AI use in project management.

Recommendations include prioritizing investments in IT infrastructure and expertise, fostering a technology-adaptive culture, and establishing cross-functional teams to oversee AI incorporation. Moreover, it is recommended to invest in AI research and training, assess legal and ethical concerns, and document successful AI integration case studies.

This research contributes to the literature by offering insights into effective strategies for navigating the complexities of modern project management through AI tools, postulating that these technologies can significantly improve project outcomes and provide a competitive advantage. Future research avenues are proposed to explore the long-term impact of AI, its effectiveness in various industries, cross-cultural implications, and the development of structured integration frameworks.

Keywords: Artificial Intelligence, Project Management Frameworks, IT Infrastructure, Organizational Success, Technology Readiness, Quantitative Analysis

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LIST OF ABBREVIATIONS

Abbreviation	Description
ADTECH_MOD1	Organization adaptability to new technology
AGE	Age
AI	Artificial Intelligence
AQUL	Academic Qualifications
CI	Confidence Interval
CONPMF_DEP1	Effective Project Management frameworks to Project Success
DV-1	Mean value of effectiveness dependent variable
EFFCURF_IND3	Effectiveness of the current Project Management framework
ENVFAC_IND4	Significant the environmental factors
ENVINFLU_IND4	Environmental influence for Project Management with AI tools
EXIT	No. of experience in IT industry
GEN	Gender
INFCOM_IND1	Presence of IT infrastructure Components
INFUP_IND1	Infrastructure Update Frequency
IT	Information Technology
IV-1	Mean value of IT Infrastructure Construct
IV-2	Mean value of IT Expertise Construct
IV-3	Mean value of Organizational Factors Construct
IV-4	Mean value of Environmental Factors Construct
JOB	Job Role
LEVAIT_DEP1	Usage of AI tools in Project Management
MOD-1	Mean value Flexibility with Technology Moderator
OEXAIT_IND2	Experience in AI powered tools in Project Management
OEXPPM_IND2	Own expertise in Project Management
ORGFAC_IND3	Significance of the organizational factors
PM	Project Management
PMF	Project Management Framework

PMFRMW_IND2	Familiarity with IT Project Management frameworks
PSM_DEP1	Project success is measured based on
TECFAC_MOD1	Significant the technological factors
TMEXP_IND2	Team's expertise in Project Management
TRNPM_IND2	Any Formal Training in IT Project Management
UTLPMF_IND3	Effectively utilize project management tools in managing projects

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