

Project Management for AI Integration

Assignment Guidelines:

This assignment is to investigate modern project management methodologies, lifecycle frameworks, and risk management approaches for complex enterprise Artificial Intelligence (AI) integration projects. Students are asked to think critically about the specific challenges of AI projects such as data pipeline dependencies, non-deterministic model outcomes, continuous MLOps cycles, cross-functional stakeholder alignment, and change management. This is a discussion of implementation frameworks and case studies in modern corporate environments.

Submission Format:

- Type: Detailed project report
- Font: Times New Roman, Size 12, Double Spaced
- Word count: 3000 – 4000 words
- Submission Deadline: To be announced by the respective professors

Assessment Criteria:

- Understanding and application of AI project management methodologies and lifecycle models – 20%
- Critical analysis of technical, operational, and organisational risks in AI integration – 25%
- Application of relevant academic literature, empirical evidence, and industry case studies – 20%
- Strategic insight, resource management, MLOps governance, and quality of recommendations – 25%
- Structure, academic writing, presentation, and APA referencing – 10%

Mandatory Sections:

- Title Page
- Table of Contents
- Abstract
- Introduction
- Literature Review
- Methodology
- Findings
- Discussion
- Conclusion
- References
- Appendices

Assignment Task – Choose ONE of the following written assignments:

Option 1: Agile Frameworks, CRISP-DM, and Managing Non-Deterministic AI Lifecycles

Analyse how enterprise project managers must adapt traditional and agile methodologies to accommodate the exploratory, iterative, and probabilistic nature of AI and machine learning projects. Your paper should:

- Discuss the main limitations of traditional deterministic project management approaches (e.g., Waterfall) when benchmarked against the development of AI, focusing on data uncertainty and probabilistic behaviour of models.
- Make comparisons between adapted lifecycle models (e.g. CRISP-DM, Agile Data Science, and hybrid MLOps models), describing how sprint planning, deliverables, and scope creep are handled.
- Share practical examples of enterprise applications where wrong methodology selection resulted in “proof-of-concept (PoC) graveyard” failures versus successful scalable deployments.
- Examine governance tenets and sample KPIs leaders of projects use to track progress, accuracy drift, and ROI in probabilistic AI projects.

Option 2: Cross-Functional Team Dynamics, MLOps Integration, and Stakeholder Alignment.

Investigate the organisational, cultural, and operational strategies required to manage cross-functional teams and operationalise AI pipelines seamlessly. Your paper should:

- Assess the structural and communication barriers between data scientists, software engineers, domain experts, business leaders, and MLOps teams.
- Consider the trade-offs between centralised AI Centres of Excellence (CoE), decentralised embedded AI teams, and hybrid matrix organisational structures for project delivery.
- Discuss how the continuous integration, continuous delivery, and continuous monitoring (CI/CD/CM) approach advocated in MLOps changes the traditional project closeout and transition stages.
- Provide examples of large enterprises (e.g., JPMorgan Chase, GE, Spotify) that have organised high-performing cross-functional AI delivery teams.
- Advise on a strategic roadmap to drive organisational change, train non-technical participants, and keep cross-department alignment for enterprise-level AI roll-out.

Option 3: AI Governance, Risk Management, and Technical Debt in Enterprise Delivery

Evaluate comprehensive risk management frameworks designed to mitigate data privacy, ethical, operational, and technical risks throughout the AI project lifecycle. Your paper should:

- Cover the various types of risks specific to AI-based solutions that service providers face, including technical debt, data leakage, model bias, concept drift, and third-party vendor dependency.

- Consider how well the risk mitigation toolkit and framework align with your project work in progress.
- Evaluate the trade-offs in cost and timeline for incorporating compliance, data lineage auditing, and explainable AI (XAI) requirements into early phases of project planning.
- Cite recent examples from industry (e.g., healthcare, financial services, or automated hiring) where recklessly managed risk of AI projects led to regulatory penalties, system downtime, or reputational damage.
- Offer a single risk management approach that can guide project managers through end-to-end AI integration.