ARTIFICIAL INTELLIGENCE IN PROJECT MANAGEMENT



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Introduction

Artificial Intelligence in Project Management examines how delivery teams use AI to forecast, decide, and report without surrendering judgement to a model. This Training Course covers AI capability mapping, data readiness, model selection, and governance. Participants study supervised, unsupervised and reinforcement learning concepts, natural language processing for document and requirement analysis, forecasting with time series and gradient boosting methods, Monte Carlo simulation augmented by machine learning, computer vision for site progress verification, generative AI for report drafting and meeting summarisation, retrieval-augmented generation, the CRISP-DM process, MLOps practices for model monitoring and drift detection, the ISO/IEC 42001 AI management system standard, the NIST AI Risk Management Framework, EU AI Act risk classification, and data protection principles under GDPR. Furthermore, the programme connects capability to delivery through use-case labs, prompt design workshops, and governance review simulations. As a result, delegates leave able to apply AI where it genuinely improves project outcomes.

Artificial Intelligence in Project Management Course Objectives

- Define AI, machine learning, and generative AI in project terms.
- Map AI use cases across planning, control, risk, and reporting.
- Assess data readiness for AI use in project environments.
- Select appropriate models for forecasting, classification, and vision tasks.
- Apply natural language processing to documents and requirements.
- Apply generative AI and retrieval-augmented generation responsibly.
- Apply the CRISP-DM process to a project AI initiative.
- Apply the ISO/IEC 42001 and NIST AI RMF governance controls.
- Interpret EU AI Act risk classification for project use cases.

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- Govern AI use, monitor models, and manage drift and bias.

Course Methodology

- Interactive workshops using real project data and AI use cases.
- Use-case mapping and data readiness labs.
- Model selection and prompt design exercises.
- Forecasting, classification, and NLP demonstration workshops.
- AI governance and risk review simulations.
- Action planning that converts each session into a workplace commitment.

Who Should Take This Course

- Project and programme managers adopting AI tools.
- PMO analysts and project control specialists.
- Data analysts supporting project delivery.
- Digital transformation and innovation leads.
- Risk, assurance, and compliance professionals.
- IT and data governance staff in project organizations.
- Consultants advising on AI-enabled delivery.

Artificial Intelligence in Project Management Course Outlines

Day 1: AI Foundations for Project Work

- AI, machine learning, deep learning, and generative AI defined.
- Supervised, unsupervised, and reinforcement learning concepts.

- Where AI helps and where human judgement must lead.
- AI in the project life cycle: estimate, plan, control, report.
- The CRISP-DM process applied to project initiatives.
- Common failures: no data, no owner, automation without governance.
- Building the AI capability map.

Day 2: Data Readiness and Project Data Assets

- Project data sources: schedules, cost systems, logs, and registers.
- Data quality dimensions and cleaning practice.
- Data lineage, access control, and protection principles.
- Historical project databases and benchmark construction.
- Data labelling and annotation for supervised learning.
- Structured versus unstructured project documents.
- Building the data readiness pack.

Day 3: Models for Forecasting, Risk, and Vision

- Time series forecasting for cost and duration.
- Regression and gradient boosting for estimate accuracy.
- Classification models for risk and delay prediction.
- Monte Carlo simulation augmented by machine learning.
- Computer vision for site progress and safety observation.
- Model evaluation: accuracy, precision, recall, and bias checks.
- Building the model selection pack.

Day 4: Language AI and Generative Applications

- Natural language processing for requirements and contract review.
- Text classification and sentiment analysis in stakeholder feedback.
- Generative AI for report drafting and meeting summarisation.
- Retrieval-augmented generation over project knowledge bases.
- Prompt design, grounding, and hallucination control.
- Human review gates and output verification.
- Building the language AI pack.

Day 5: Governance, Ethics, and Model Operations

- The ISO/IEC 42001 AI management system standard.
- The NIST AI Risk Management Framework functions.
- EU AI Act risk classification and obligations.
- Data protection, confidentiality, and IP considerations.
- MLOps: monitoring, drift detection, and retraining cadence.
- Assurance, audit, and reporting AI use to the board.
- Personal action plan and continuous improvement.

Conclusion

By successfully completing Artificial Intelligence in Project Management, participants will have acquired a practical command of AI capability mapping, data readiness assessment, model selection, language AI applications, and AI governance. They will know how to choose use cases where AI adds measurable value, verify model output before it reaches a decision, and apply governance controls that satisfy auditors and regulators. In addition, the course prepares delegates to monitor models for drift and bias rather than treating deployment as the finish line. As a result, they return to work ready to apply AI where it genuinely improves project outcomes. Gentex Training Center delivers this Training Course with a practical, standards-based approach.

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FAQs for the Artificial Intelligence in Project Management course

Q1 What is the "Artificial Intelligence in Project Management" course about?

It is a five-day programme on using AI to forecast, decide, and report in project delivery without surrendering judgement to a model. It covers AI capability mapping, data readiness, forecasting and classification models, natural language processing, generative AI and retrieval-augmented generation, the CRISP-DM process, and AI governance under ISO/IEC 42001 and the NIST AI RMF.

Q2 What are the key benefits of the "Artificial Intelligence in Project Management" course?

Participants gain the ability to choose use cases where AI adds measurable value, verify model output before it reaches a decision, and apply governance controls that satisfy auditors and regulators. They also learn to monitor models for drift and bias rather than treating deployment as the finish line.

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Q3 What skills will I gain from the "Artificial Intelligence in Project Management" course?

AI foundations with machine learning and generative AI concept application, supervised, unsupervised and reinforcement learning distinction, capability mapping across planning, control, risk and reporting, and CRISP-DM process application, data work with project data source mapping, data quality assessment and cleaning, lineage and access control design, historical database and benchmark construction, and labelling and annotation practice, modelling with time series forecasting, regression and gradient boosting application, classification model design for risk and delay prediction, machine-learning augmented Monte Carlo simulation, computer vision application for progress and safety, and model evaluation across accuracy, precision, recall and bias, and language AI and governance with NLP application to requirements and contract review, text classification and sentiment analysis, generative AI drafting and summarisation, retrieval-augmented generation design, prompt design and hallucination control, human review gate design, ISO/IEC 42001 control application, NIST AI RMF function use, EU AI Act risk classification, data protection practice, MLOps monitoring and drift detection, and board reporting on AI use.

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Q4 What tools, methods, or standards are covered in the "Artificial Intelligence in Project Management" course?

The course covers AI, machine learning, deep learning and generative AI defined, supervised, unsupervised and reinforcement learning concepts, where AI helps and where human judgement must lead, AI in the project life cycle across estimate, plan, control and report, the CRISP-DM process applied to project initiatives, common failures across no data, no owner and automation without governance, project data sources across schedules, cost systems, logs and registers, data quality dimensions and cleaning practice, data lineage, access control and protection principles, historical project databases and benchmark construction, data labelling and annotation for supervised learning, structured versus unstructured project documents, time series forecasting for cost and duration, regression and gradient boosting for estimate accuracy, classification models for risk and delay prediction, Monte Carlo simulation augmented by machine learning, computer vision for site progress and safety observation, model evaluation across accuracy, precision, recall and bias checks, natural language processing for requirements and contract review, text classification and sentiment analysis in stakeholder feedback, generative AI for report drafting and meeting summarisation, retrieval-augmented generation over project knowledge bases, prompt design, grounding and hallucination control, human review gates and output verification, the ISO/IEC 42001 AI management system standard, the NIST AI Risk Management Framework functions, EU AI Act risk classification and obligations, data protection, confidentiality and IP considerations, MLOps monitoring, drift detection and retraining cadence, and assurance, audit and reporting AI use to the board.

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Q5 How is the "Artificial Intelligence in Project Management" course applied in real-world practice?

Delegates apply it through AI capability maps, use-case inventories, value-versus-risk assessments, CRISP-DM project charters, data readiness assessments, project data source inventories, data quality scorecards, cleaning logs, lineage maps, access control matrices, historical project databases, benchmark datasets, labelling guidelines, annotation records, structured and unstructured data registers, model selection matrices, time series forecasts, regression models, gradient boosting models, classification models, risk prediction models, delay prediction models, machine-learning augmented Monte Carlo simulations, computer vision outputs, safety observation analyses, model evaluation reports, accuracy, precision and recall records, bias check reports, NLP requirement analyses, contract review outputs, text classification results, sentiment analyses, generative AI drafts, meeting summaries, retrieval-augmented generation knowledge bases, prompt libraries, grounding records, hallucination review logs, human review gate definitions, AI management system documents, NIST AI RMF assessments, EU AI Act classification notes, data protection impact assessments, MLOps monitoring dashboards, drift reports, retraining schedules, AI use registers, audit evidence files, board AI reports, and AI adoption roadmaps. They also use them to chair AI governance reviews and to present AI use and risk to executive leadership.