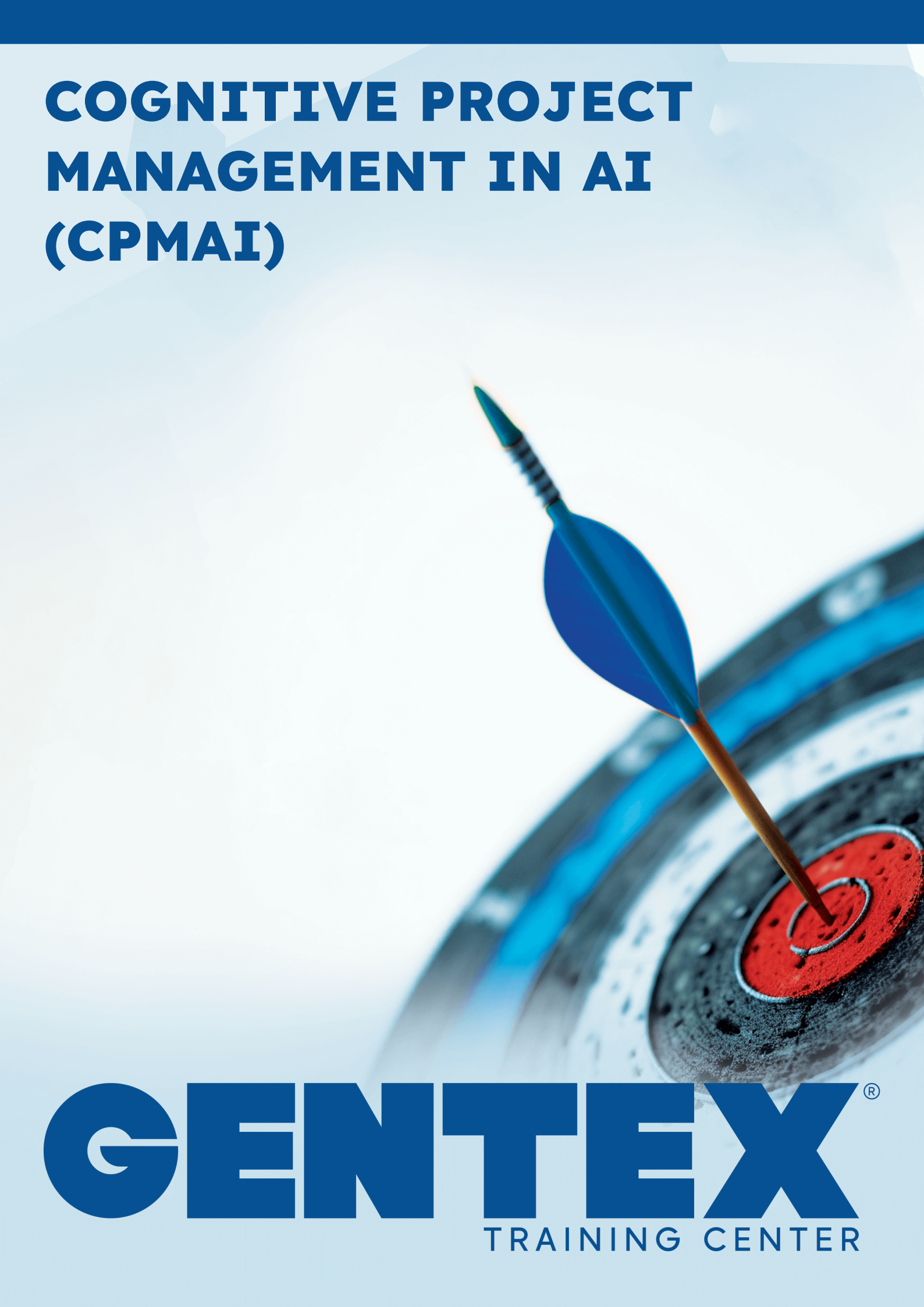
COGNITIVE PROJECT MANAGEMENT IN AI (CPMAI)



GENTEX®
TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Introduction

Cognitive Project Management in AI examines how teams run artificial intelligence projects through a disciplined, iterative lifecycle rather than a conventional software schedule. This Training Course covers the CPMAI methodology phases, data readiness, model development, deployment, and AI governance. Participants study the CPMAI six-phase model of business understanding, data understanding, data preparation, model development, model evaluation and model operationalisation, the CRISP-DM process as its foundation, the Agile AI project management overlay, data quality and labelling practice, machine learning model selection, MLOps practices for continuous delivery and monitoring, the ISO/IEC 42001 AI management system standard, the NIST AI Risk Management Framework, EU AI Act risk classification, model explainability tools such as SHAP and LIME, bias and fairness assessment, and returns on AI investment measurement. Furthermore, the programme connects methodology to delivery through CPMAI phase labs, data readiness workshops, and AI governance review simulations. As a result, delegates leave able to run AI projects with stages, evidence, and governance that auditors accept.

Cognitive Project Management in AI (CPMAI) Course Objectives

- Define AI project management and why it differs from software delivery.
- Apply the CPMAI six-phase methodology to an AI initiative.
- Apply the CRISP-DM process as the analytical foundation.
- Overlay Agile practices onto an iterative AI lifecycle.
- Assess data readiness, quality, and labelling requirements.
- Select models appropriate to the business question.
- Plan MLOps for deployment, monitoring, and retraining.
- Apply ISO/IEC 42001 and the NIST AI RMF governance controls.
- Interpret EU AI Act risk classification for AI use cases.

- Measure AI return on investment and business benefit.

Course Methodology

- Interactive workshops using real AI project cases and data sets.
- CPMAI phase design and data readiness labs.
- Model selection and evaluation exercises.
- MLOps, monitoring, and retraining planning 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 leading AI initiatives.
- Data scientists and machine learning engineers.
- AI product owners and business sponsors.
- Data governance and quality managers.
- PMO analysts supporting analytics portfolios.
- Risk, assurance, and compliance professionals.
- Consultants advising on AI adoption.

Cognitive Project Management in AI (CPMAI) Course Outlines

Day 1: Foundations of AI Project Management

- AI, machine learning, and generative AI in project terms.
- Why AI projects differ: uncertainty, data dependence, iteration.

- The CPMAI six-phase methodology overview.
- The CRISP-DM process as its analytical foundation.
- Agile overlay: iteration, prioritisation, and backlog practice.
- Common failures: treating AI as standard software delivery.
- Building the AI project framework pack.

Day 2: Business and Data Understanding

- Business understanding phase: problem framing and success criteria.
- Identifying AI-suitable use cases and value hypotheses.
- Data understanding phase: source discovery and profiling.
- Data quality dimensions and readiness assessment.
- Data governance, permissions, and protection principles.
- Defining the analytical question and target variable.
- Building the business and data understanding pack.

Day 3: Data Preparation and Model Development

- Data preparation phase: cleaning, transformation, and feature engineering.
- Labelling strategies and annotation quality control.
- Handling imbalance, missing values, and outliers.
- Model development phase: algorithm selection and baselines.
- Training, validation, and test split discipline.
- Experiment tracking and reproducibility practice.
- Building the data preparation and modelling pack.

Day 4: Evaluation and Operationalisation

- Model evaluation phase: accuracy, precision, recall, and ROC-AUC.
- Explainability with SHAP and LIME.
- Bias, fairness, and drift assessment.
- Model operationalisation phase: deployment patterns and MLOps.
- Monitoring, alerting, and retraining cadence design.
- Integrated feedback loops into business process.
- Building the evaluation and operationalisation pack.

Day 5: Governance, Ethics, and Value Realisation

- 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.
- Measuring AI return on investment and benefit tracking.
- Reporting AI portfolio performance to the board.
- Personal action plan and continuous improvement.

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Conclusion

By successfully completing Cognitive Project Management in AI (CPMAI), participants will have acquired a practical command of the CPMAI six-phase methodology, data readiness assessment, model development and evaluation, MLOps operationalisation, AI governance, and value measurement. They will know how to run an AI project through stages with evidence at each gate, assess whether data is fit for the intended model, and govern deployment with monitoring and retraining rather than treating go-live as completion. In addition, the course prepares delegates to satisfy auditors and regulators on AI risk and ethics. As a result, they return to work ready to run AI projects with stages, evidence, and governance. Gentex Training Center delivers this Training Course with a practical, standards-based approach.

FAQs for the Cognitive Project Management in AI (CPMAI) course

Q1 What is the "Cognitive Project Management in AI (CPMAI)" course about?

It is a five-day programme on running artificial intelligence projects through a disciplined, iterative lifecycle rather than a conventional software schedule. It covers the CPMAI six-phase methodology, CRISP-DM, data readiness, model development and evaluation, MLOps operationalisation, AI governance under ISO/IEC 42001 and the NIST AI RMF, and AI return on investment.

GENTEX® TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Q2 What are the key benefits of the "Cognitive Project Management in AI (CPMAI)" course?

Participants gain the ability to run an AI project through stages with evidence at each gate, assess whether data is fit for the intended model, and govern deployment with monitoring and retraining rather than treating go-live as completion. They also learn to satisfy auditors and regulators on AI risk and ethics.

Q3 What skills will I gain from the "Cognitive Project Management in AI (CPMAI)" course?

AI project foundations with CPMAI phase application, CRISP-DM process use, and Agile overlay design, business and data understanding with problem framing, value hypothesis formulation, use case assessment, data source discovery, data profiling, data quality assessment, and governance and permission design, data preparation and modelling with cleaning, transformation and feature engineering, labelling strategy design, imbalance and outlier handling, algorithm selection, baseline construction, and experiment tracking, and evaluation, operationalisation and governance with model evaluation across accuracy, precision, recall and ROC-AUC, explainability practice with SHAP and LIME, bias and fairness assessment, drift detection, deployment pattern design, MLOps planning, monitoring and retraining cadence design, ISO/IEC 42001 control application, NIST AI RMF function use, EU AI Act risk classification, data protection practice, and AI return on investment measurement.

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Q4 What tools, methods, or standards are covered in the "Cognitive Project Management in AI (CPMAI)" course?

The course covers AI, machine learning and generative AI in project terms, why AI projects differ across uncertainty, data dependence and iteration, the CPMAI six-phase methodology overview, the CRISP-DM process as its analytical foundation, the Agile overlay across iteration, prioritisation and backlog practice, common failures across treating AI as standard software delivery, business understanding across problem framing and success criteria, identifying AI-suitable use cases and value hypotheses, data understanding across source discovery and profiling, data quality dimensions and readiness assessment, data governance, permissions and protection principles, defining the analytical question and target variable, data preparation across cleaning, transformation and feature engineering, labelling strategies and annotation quality control, handling imbalance, missing values and outliers, model development across algorithm selection and baselines, training, validation and test split discipline, experiment tracking and reproducibility practice, model evaluation across accuracy, precision, recall and ROC-AUC, explainability with SHAP and LIME, bias, fairness and drift assessment, model operationalisation across deployment patterns and MLOps, monitoring, alerting and retraining cadence design, integrated feedback loops into business process, 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, measuring AI return on investment and benefit tracking, and reporting AI portfolio performance to the board.

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Q5 How is the "Cognitive Project Management in AI (CPMAI)" course applied in real-world practice?

Delegates apply it through AI project frameworks, CPMAI phase plans, phase gate criteria, CRISP-DM project charters, Agile backlogs and iteration plans, business understanding documents, problem statements, success criteria sheets, value hypotheses, use case inventories, data understanding reports, data source inventories, data profiling outputs, data dictionaries, data quality scorecards, data governance records, permission and consent records, analytical question definitions, target variable specifications, data preparation plans, cleaning logs, transformation pipelines, feature engineering registers, labelling guidelines, annotation records, annotation quality reports, imbalance treatment records, missing value strategies, outlier handling logs, model development plans, algorithm selection matrices, baseline results, train, validation and test split records, experiment tracking logs, reproducibility records, model evaluation reports, accuracy, precision, recall and ROC-AUC records, explainability outputs using SHAP and LIME, bias and fairness assessments, drift reports, deployment plans, MLOps configurations, monitoring dashboards, alerting rules, retraining schedules, feedback loop designs, AI management system documents, NIST AI RMF assessments, EU AI Act classification notes, data protection impact assessments, AI return on investment models, benefit tracking reports, board AI reports, and AI improvement plans. They also use them to chair AI governance reviews and to present AI portfolio performance to executive leadership.