



3-Day CPMAI™ Certification Prep Workshop

Sponsored by NextEmTech

Cognilytica / PMI-CPMAI™ (Cognitive Project Management for AI) — a structured, hands-on masterclass moving participants through all 6 CPMAI phases via core concepts, real-world case studies, and group exercises.

Target Audience	Project Managers, Program Managers, Product Owners, Data/AI Team Leads, and Consultants working in AI project management. Course level adapts to participants' AI maturity, business context, industry, and strategy. Built for those preparing for the PMI-CPMAI exam.
Duration	3 days — 24 total instruction and workshop hours.
Core Framework	6-Phase CPMAI Methodology (iterative, CRISP-DM based for AI/ML).

DAY 1 — Foundations, Business Alignment & Data Understanding

Morning Session (9:00 AM – 12:30 PM)

0 AI/ML Fundamentals & The CPMAI Framework

- Why traditional Agile/Waterfall methodologies fail for AI projects.
- The 7 Patterns of AI (Hyperpersonalization, Autonomous Systems, Predictive Analytics, Conversational, Patterns/Anomalies, Recognition, Goal-Driven Systems).
- The CPMAI 6-phase lifecycle overview and iterative loops.

1 CPMAI Phase 1 — Business Understanding & Problem Framing

- Aligning AI initiatives with enterprise business goals and KPI measurement.
- AI Feasibility Assessment: is AI necessary, or will traditional software work?
- Defining key metrics: business ROI vs. technical ML metrics.
- Risk, governance, and responsible-AI scoping from day one.

HANDS-ON: AI Project Charter & Problem Framing Canvas

Teams are assigned a troubled real-world case (e.g. automated loan approval system). Participants complete an AI Feasibility Matrix, identify the relevant AI pattern, and write business-aligned acceptance criteria.

Afternoon Session (1:30 PM – 5:00 PM)

2 CPMIAI Phase 2 — Data Understanding & Assessment

- Identifying internal, external, structured, and unstructured data requirements.
- Data quality dimensions: completeness, accuracy, bias, velocity, and volume.
- Data governance, privacy compliance (GDPR/CCPA), and data rights/licensing.
- Detecting historical data bias before modeling begins.

HANDS-ON: Data Audit & Bias Discovery Workshop

Participants analyze sample datasets to identify hidden sampling bias, data gaps, privacy concerns, and whether existing corporate data is sufficient for model training.

DAY 2 — Data Prep, Pipeline Engineering & Model Development

Morning Session (9:00 AM – 12:30 PM)

3 CPMIAI Phase 3 — Data Preparation & Engineering Strategy

- Data cleansing, normalization, labeling, and feature engineering workflows.
- Handling missing values, outliers, and imbalanced datasets.
- Data pipeline architecture and DataOps integration.
- Avoiding “data leakage” between training and testing splits.

HANDS-ON: Data Cleaning & Transformation Blueprint

Given a noisy customer dataset, teams outline a step-by-step data prep workflow, define labeling strategy/costs, and design a pipeline to handle missing or skewed data.

Afternoon Session (1:30 PM – 5:00 PM)

4 CPMIAI Phase 4 — Model Development & Training Strategy

- Supervised, unsupervised, and reinforcement learning selection.
- Generative AI & LLM tuning vs. fine-tuning vs. RAG (Retrieval-Augmented Generation).
- Build vs. buy vs. fine-tune decisions (open source, cloud APIs, custom models).
- Training workflows, hyperparameter tuning, and cross-validation techniques.

HANDS-ON: Model Architecture & Build Decision Matrix

Evaluate technical trade-offs between custom ML models and pre-trained foundation models for a specific enterprise scenario, balancing cost, accuracy, speed, and privacy.

DAY 3 — Evaluation, Operationalization & Certification Prep

Morning Session (9:00 AM – 12:30 PM)

5 CPMAI Phase 5 — Model Evaluation & Business Validation

- Evaluating model performance: confusion matrix, precision, recall, F1-score, ROC-AUC.
- Testing for fairness, explainability (XAI), and adversarial vulnerabilities.
- Go/No-Go decision criteria: does the model meet the Phase 1 business case thresholds?

HANDS-ON: The Go/No-Go Steering Committee Simulation

A roleplay session where teams present model evaluation reports to a “Steering Committee” and defend why a model with 88% accuracy should or should not be deployed, based on bias and business risk.

Afternoon Session (1:30 PM – 5:00 PM)

6 CPMAI Phase 6 — Model Operationalization & Lifecycle Maintenance

- Deployment patterns: batch, edge, real-time API, and shadow deployment.
- MLOps integration: continuous integration / continuous deployment (CI/CD) for AI.
- Managing model drift, data drift, and conceptual drift post-launch.
- AI governance, continuous monitoring, and incident management planning.

HANDS-ON: Operational Risk & Drift Management Plan

Teams design a post-deployment monitoring dashboard plan and incident response SLA for a deployed model experiencing 15% performance degradation due to market shift.

7 CPMAI Exam Preparation & Strategy Session

- Review of high-yield exam concepts across all 6 phases.
- 30-question scenario-based mock exam walkthrough.
- Test-taking strategies for scenario-based CPMAI questions.
- Final Q&A and post-course study roadmap.