PMI-CPMAI™

Exam Content Outline

PMI Certified Professional in Managing AI (PMI-CPMAI)™

Project Management Institute.

PMI Certified Professional in Managing AI (PMI-CPMAI)™ Certification Examination Content Outline

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INTRODUCTION

Project Management Institute (PMI)'s acquisition of Cognilytica in September 2024 has significantly strengthened PMI's advanced AI resources, empowering project managers to implement AI initiatives across organizations worldwide.

Building on the Cognitive Project Management in AI (CPMAI) Methodology, PMI enhanced the certification and developed the PMI Certified Professional in Managing AI (PMI-CPMAI)™. The focus of the certification is the skill set necessary to successfully build AI implementations through the CPMAI Methodology rather than general project management knowledge and skills covered in our broader certifications.

A rigorous job analysis using the Developing a Curriculum (DACUM) methodology was conducted to ensure alignment with real-world professional practice and industry needs in AI development. PMI chose eight AI project and product management subject matter experts to contribute their knowledge during a DACUM workshop held in May 2025 and facilitated by The Ohio State University.

The Ohio State University Center on Education for Employment (CETE) administered a survey for PMI to verify which tasks, knowledge, and skills comprise the work done by AI project and product management professionals. The DACUM job-task analysis identified 68 tasks that may be necessary for these professionals to perform in their job activities. CETE staff followed up on the work of the DACUM committee by requesting ratings from members of the population (i.e., AI project and product managers). Respondents provided ratings of duties and tasks regarding importance, frequency, and difficulty. Composite criticality scores were calculated based on importance and frequency ratings. The Task Verification Report can be found here.

The PMI-CPMAI Exam Prep Course and PMI-CPMAI™ exam are vital components of earning this professional certification. The examination reflects proven, vendor-agnostic best practices for artificial intelligence (AI), machine learning (ML), advanced data analytics, intelligent automation, and AI projects of any size. All examination questions have been developed and reviewed by AI subject matter experts.

This examination tests a professional's ability to apply the CPMAI™ Methodology and manage AI initiatives from inception through operationalization, addressing the unique challenges and requirements that distinguish AI projects from traditional software development initiatives. The PMI-CPMAI™ certification demonstrates competency in managing data-driven, iterative AI projects while ensuring responsible, ethical, and trustworthy AI implementation practices. These questions are mapped against the PMI-CPMAI™ Examination Content Outline to ensure that an appropriate number of questions are in place for a valid examination.

EXAM CONTENT OUTLINE

The following table identifies the proportion of questions from each domain that will appear on the examination.

The PMI-CPMAI exam will reflect the structure of this table while incorporating approaches for successful AI implementation. The concept of customizing approaches to contribute to the value of the CPMAI will be found throughout the five domain areas listed below and are not isolated to any domain. The exact number of questions for each domain may vary by form.

Domain	Percentage of Questions on Test
Support Responsible and Trustworthy AI Efforts	15%
Identify Business Needs and Solutions	26%
Identify Data Needs	26%
Manage AI Model Development and Evaluation	16%
Operationalize AI Solution	17%

DOMAINS, TASKS, AND ENABLERS

The following illustrates tasks and enablers associated with each domain.

- **Domain:** Defined as the high-level knowledge area that is essential in running and managing AI projects.
- **Tasks:** The underlying responsibilities of an AI project professional within each domain area.
- **Enablers:** Illustrative examples of the work associated with the task. Please note that enablers are not meant to be an exhaustive list but rather offer a few examples to help demonstrate what the task encompasses.

Domain I	Support Responsible and Trustworthy AI Efforts - 15%
Task 1	**Oversee privacy and security plan:** • Establish data governance protocols for personally identifiable information (PII) • Implement encryption and access controls for AI training data • Conduct privacy impact assessments for AI model deployment • Ensure compliance with GDPR, CCPA, and other data protection regulations • Design secure data handling procedures throughout the AI lifecycle
Task 2	**Manage AI/ML transparency (e.g., data selection, algorithm selection):** • Document model selection criteria and decision rationale • Create transparent reporting on data sources and preprocessing steps • Establish explainability requirements for stakeholder communication • Maintain audit trails for algorithmic decision-making processes • Implement model interpretability tools and techniques
Task 3	**Conduct bias checks (e.g., model, data, algorithm):** • Analyze training data for demographic and representation imbalances • Perform fairness testing across different population groups • Implement bias detection metrics and monitoring systems • Review model outputs for discriminatory patterns • Apply bias mitigation techniques during model development
Task 4	**Monitor regulatory and policy compliance:** • Track evolving AI regulations and industry standards • Ensure adherence to sector-specific compliance requirements • Coordinate with legal and compliance teams on AI governance • Implement compliance monitoring and reporting mechanisms • Maintain documentation for regulatory audits and reviews
Task 5	**Manage accountability documentation and audit trail:** • Create comprehensive records of AI model development decisions • Establish version control for models, data, and training processes • Document stakeholder approvals and go/no-go decision points • Maintain chain of custody records for training and test data • Prepare accountability reports for executive and regulatory review

Domain II	Identify Business Needs and Solutions - 26%
Task 1	**Identify problem to be solved (e.g., needs, persona)**

	• Conduct stakeholder interviews to understand business pain points
	• Analyze existing processes to identify automation opportunities
	• Define target user personas and use cases for AI solutions
	• Map business problems to appropriate AI patterns and approaches
	• Validate problem statements with subject matter experts
Task 2	**Evaluate initial AI feasibility**
	• Assess technical viability of proposed AI solutions
	• Analyze data availability and quality for model training
	• Evaluate computational resource requirements and constraints
	• Review organizational readiness for AI implementation
	• Compare AI approaches against traditional solution alternatives
Task 3	**Conduct risk assessment(s) (e.g., security, safety, ethics)**
	• Identify potential failure modes and safety implications
	• Assess cybersecurity vulnerabilities in AI systems
	• Evaluate ethical implications of AI decision-making
	• Analyze reputational and business continuity risks
	• Develop risk mitigation strategies and contingency plans
Task 4	**Develop AI project scope statement**
	• Define project boundaries and deliverables for AI initiatives
	• Establish success criteria and performance metrics
	• Identify in-scope and out-of-scope functionality
	• Document assumptions and constraints for AI implementation
	• Align scope with business objectives and resource availability
Task 5	**Determine ROI**
	• Calculate expected benefits from AI solution implementation
	• Estimate total cost of ownership including infrastructure and maintenance
	• Develop business case with financial justification
	• Establish metrics for measuring return on investment
	• Create cost-benefit analysis for stakeholder decision-making
Task 6	**Manage adoption/integration risks**
	• Assess organizational change management requirements
	• Identify potential user resistance and adoption barriers
	• Plan integration with existing systems and workflows
	• Develop training and communication strategies for end users
	• Monitor adoption metrics and address implementation challenges
Task 7	**Draft AI solution**
	• Create high-level architecture for AI system design
	• Define data flow and processing requirements
	• Specify AI model types and algorithmic approaches

	• Document integration points with existing systems
	• Outline deployment and operational considerations
Task 8	**Define success criteria (e.g., KPIs, metrics)**
	• Establish measurable performance indicators for AI models
	• Define business impact metrics and success thresholds
	• Create technical performance benchmarks and targets
	• Develop user satisfaction and adoption measurement criteria
	• Align success metrics with organizational objectives
Task 9	**Support business case creation**
	• Gather financial data and projected benefits for business case
	• Collaborate with finance teams on cost estimates and projections
	• Develop compelling narratives for executive presentations
	• Provide technical expertise for business case validation
	• Review and refine business case documentation
Task 10	**Identify project resources (e.g., people, hardware, contractors)**
	• Assess skill requirements for AI project team composition
	• Evaluate hardware and infrastructure needs for development and deployment
	• Identify gaps requiring external contractors or consultants
	• Plan resource allocation and timeline for project phases
	• Coordinate with procurement for specialized AI tools and platforms

Domain III	**Identify Data Needs - 26%**
Task 1	**Define required data**
	• Specify data types and formats needed for AI model training
	• Determine data volume requirements and sampling strategies
	• Identify temporal and granularity requirements for data collection
	• Define data quality standards and acceptance criteria
	• Map data requirements to business objectives and use cases
Task 2	**Identify data SMEs**
	• Locate domain experts with knowledge of relevant data sources
	• Engage business users who understand data context and meaning
	• Connect with data stewards and data governance teams
	• Identify technical experts familiar with data systems and structures
	• Establish communication channels with identified subject matter experts
Task 3	**Identify data sources and locations**

	• Map internal databases and data warehouses containing relevant information • Explore external data sources and third-party data providers • Assess cloud storage and distributed data repositories • Inventory legacy systems and historical data archives • Document data ownership and access permissions
Task 4	**Coordinate AI workspace and infrastructure** • Provision computing resources for data processing and model training • Establish secure development environments for AI teams • Configure data storage and backup systems for project needs • Set up collaboration tools and version control systems • Ensure compliance with security and governance requirements
Task 5	**Gather required data** • Execute data extraction from identified sources and systems • Coordinate data transfers and migrations to AI development environments • Implement data collection processes for ongoing data feeds • Validate data completeness and accuracy during collection • Establish data refresh and update procedures
Task 6	**Check data privacy, compliance, and access** • Verify data usage rights and licensing agreements • Ensure compliance with data protection regulations and policies • Implement access controls and user permissions for data resources • Conduct privacy impact assessments for data usage • Document data lineage and usage for audit purposes
Task 7	**Oversee data evaluation** • Assess data quality dimensions including accuracy, completeness, and consistency • Analyze data distributions and identify potential biases or gaps • Evaluate data freshness and relevance for AI model training • Review data schema and structure for modeling compatibility • Conduct exploratory data analysis to understand data characteristics
Task 8	**Determine if data meets solution needs** • Compare available data against defined requirements and specifications • Assess data sufficiency for training robust AI models • Identify data gaps and develop strategies for addressing deficiencies • Validate data representativeness for target use cases • Make go/no-go decisions based on data readiness assessment
Task 9	**Convey data understanding to leadership**

	• Prepare executive summaries of data assessment findings • Create visualizations and reports to communicate data insights • Present data readiness status and recommendations to stakeholders • Translate technical data concepts into business-relevant language • Provide regular updates on data preparation progress and challenges

Domain IV	Manage AI Model Development and Evaluation - 16%
Task 1	**Oversee AI/ML model technique(s) (e.g., algorithm, selection)** • Research and evaluate appropriate algorithms for specific use cases • Guide selection between supervised, unsupervised, and reinforcement learning approaches • Assess trade-offs between model complexity, performance, and interpretability • Coordinate with data scientists on model architecture decisions • Review algorithm selection criteria and decision documentation
Task 2	**Oversee AI/ML model QA/QC (e.g., configuration management, model performance)** • Establish model testing protocols and quality assurance procedures • Implement configuration management for model versions and parameters • Monitor model performance metrics during development and testing • Coordinate peer reviews and technical validation of model designs • Ensure adherence to coding standards and best practices
Task 3	**Manage AI/ML model training** • Plan training schedules and resource allocation for model development • Monitor training progress and computational resource utilization • Coordinate hyperparameter tuning and optimization activities • Oversee cross-validation and model selection processes • Manage training data versioning and experiment tracking
Task 4	**Manage data transformation to conduct data preparation** • Oversee data cleaning and preprocessing workflows • Coordinate feature engineering and selection activities • Manage data normalization and standardization processes • Supervise data augmentation and synthetic data generation • Ensure data transformation reproducibility and documentation
Task 5	**Verify data quality for go/no-go decision to conduct data preparation** • Conduct final data quality assessments before model training

	• Validate data preprocessing and transformation results • Assess data representativeness and potential bias issues • Make decisions on data readiness for model development • Document data quality findings and recommendations
Task 6	**Verify model ready for operationalization go/no-go decision** • Evaluate model performance against established success criteria • Assess model robustness and generalization capabilities • Review deployment readiness including infrastructure requirements • Validate model documentation and operational procedures • Make final approval decisions for model deployment

Domain V	**Operationalize AI Solution - 17%**
Task 1	**Manage creation of AI solution deployment plan** • Develop comprehensive deployment strategy and timeline • Plan infrastructure requirements and resource allocation • Coordinate with IT teams on system integration and deployment • Establish rollback procedures and contingency plans • Create deployment checklists and validation criteria
Task 2	**Manage AI solution deployment** • Coordinate deployment activities across technical teams • Monitor deployment progress and resolve implementation issues • Validate system functionality and performance in production environment • Manage user access provisioning and security configurations • Conduct post-deployment verification and testing
Task 3	**Oversee model governance** • Establish model lifecycle management procedures • Implement model versioning and change control processes • Monitor model performance and drift detection • Coordinate model updates and retraining schedules • Ensure compliance with governance policies and standards
Task 4	**Oversee AI solution metrics (e.g., KPI, model performance)** • Implement monitoring dashboards for business and technical metrics • Track key performance indicators and success measures • Analyze model performance trends and degradation patterns • Generate regular performance reports for stakeholders • Establish alerting systems for performance threshold breaches
Task 5	**Prepare final report/lessons learned**

	• Document project outcomes and achievement of objectives
	• Capture lessons learned and best practices for future projects
	• Analyze what worked well and areas for improvement
	• Create knowledge transfer documentation for operational teams
	• Present final project results to stakeholders and leadership
Task 6	**Manage AI solution transition plan**
	• Plan transition from project team to operational support
	• Coordinate knowledge transfer to production support teams
	• Establish ongoing maintenance and support procedures
	• Define roles and responsibilities for operational phase
	• Create handover documentation and training materials
Task 7	**Oversee AI solution contingency plan**
	• Develop incident response procedures for AI system failures
	• Plan backup and disaster recovery strategies
	• Establish escalation procedures for critical issues
	• Create business continuity plans for AI service disruptions
	• Test and validate contingency procedures regularly

PMI-CPMAI EXAM INFORMATION

Completion of the PMI-CPMAI Exam Prep Course is required to take the PMI-CPMAI exam. The PMI-CPMAI certification exam is comprised of 120 total questions. Of the 120 questions, 20 are considered pre-test questions. Pre-test questions do not affect the score and are used in examinations as an effective and legitimate way to test the validity of future examination questions. All questions are placed throughout the examination randomly.

No. of Scored Questions	No. of Pretest (Unscored) Questions	Total Examination Questions
100	20	**120**

The allotted time to complete the computer-based and online-proctored exam is **two hours and forty minutes.**

Total Time Allotted
160 minutes

It may take some candidates less than the allotted time to complete the exam.

For the PMI-CPMAI exam, there are no scheduled breaks.
The exam is preceded by a tutorial and followed by a survey, both of which can take up to 15 minutes to complete. The time used to complete the tutorial and survey is not counted against total testing time.

The PMI-CPMAI exam is offered in English and will be offered in the following languages in January 2026: Arabic, Brazilian Portuguese, French, German, Japanese, Korean, Simplified & Traditional Chinese, and Spanish.

PMI-CPMAI Exam Eligibility

Completion of the PMI-CPMAI Exam Prep Course is required to schedule and take the PMI-CPMAI exam. PMI-CPMAI requires no prior project management, technical, or AI experience or certifications to enroll in the course and take the exam. However, project or product management and AI fundamental knowledge are valuable. The course and exam cover the CPMAI (Cognitive Project Management in AI) Methodology and build knowledge tailored to managing AI initiatives from a project management perspective. Upon completion of the PMI-CPMAI Exam Prep course, individuals will be able to schedule and take their exam via Pearson Vue.

Registering for the Exam

To purchase and register for the PMI Certified Professional in Managing AI (PMI-CPMAI) Exam Prep Course & Certification, please use the online certification system (myPMI) to login into your myPMI account or if you do not yet have a PMI account, you can create a free account on PMI.org.

After completing the PMI Certified Professional in Managing AI (PMI-CPMAI) Exam Prep Course, you will be asked to provide your exam details and schedule your exam by accessing your myPMI dashboard. Pearson VUE provides options to either take a proctored online exam or in-person exam at one of Pearson VUE's testing centers. Official exam results will be available on your myPMI dashboard.

Although PMI will email you reminders during the process, you have the responsibility to complete the course to schedule and take the exam.

Before registering for your exam, you will be required to read and agree to the PMI Code of Ethics and Professional Conduct, which can be found in the PMI Certification Handbook and on PMI.org.

You can also use the online certification system to:

- Download your exam reports with pass/fail status
- Register and submit payment to take or retake any PMI examination and/or evaluation
- Download receipts
- Access your certification record and update your contact information
- View your listing on the PMI Certification Registry

TAKING THE EXAM

The PMI-CPMAI exam is available to take in person (recommended) via computer-based test (CBT) at a test center or proctored online through our test delivery provider, Pearson Vue. Online proctored exams will require system tests and an extensive check-in process. Please allow for time prior to your exam to ensure you complete these processes. You have one year (12 months) from the time of purchase to obtain the certification.

- For in person test center and availability (recommended) please make sure to review test centers near you by visiting: https://www.pearsonvue.com/us/en/pmi.html
- For testing online via OnVue online proctored please make sure you review, and complete necessary system checks by visiting: https://www.pearsonvue.com/us/en/pmi/onvue.html

For those requiring accommodations, the PMI-CPMAI offers accessibility options during the exam on Pearson VUE.

Full details can be found in the PMI Certification Handbook and within the examination scheduling instructions.

RETAKING THE EXAM

If you do not pass the exam on your first attempt, we encourage you to continue studying and review the PMI-CPMAI Exam Prep material and resources and then retake the exam. The suggested period for exam preparation prior to retaking the exam is 30 days. You may take the examination up to a total of three times within a 1-year (365 days) eligibility period. This policy is designed to uphold exam security and reduce the overexposure of examination questions to individual candidates. However, during this year you are welcome to apply for any other PMI certification. Each subsequent exam attempt will require submitting an exam fee prior to scheduling the exam.

PMI-CPMAI Certification Fees

The fees for obtaining the PMI-CPMAI certification are subject to regional and membership pricing rules. However, membership is NOT required to obtain the PMI-CPMAI. Initial course and examination fees must be paid before you can take the course and scheduling your exam will be available upon the completion of the PMI-CPMAI Exam Prep Course.

Once an examination date is confirmed and scheduled, you may be subject to cancellation or no-show fees.

Maintaining your PMI-CPMAI certification will require a payment based on regional and membership pricing rules. We currently support USD, Euros, BRL, and INR currencies.

PMI accepts credit cards and wire transfers as valid forms of payment methods. Klarna and Afterpay, third-party "buy now, pay later" services, are also available for orders of $50 and over.

If PMI membership is obtained after you submit payment for the certification, PMI will not refund the difference. Review all the benefits of PMI membership.

For more information about certification fees, please see the PMI Certification Handbook.

Continuing Certification Requirements (CCR) Program

Once you have successfully earned your PMI-CPMAI certification, maintain your certification by completing 30 professional development units (PDUs) every 3 years. For details on the CCR Program and instructions on how to earn and track PDUs in CCR, please review the Continuing Certification Requirements (CCR) Handbook by visiting https://www.pmi.org/certifications/certification-resources/maintain

Reference Materials

Exam candidates should be aware that the PMI-CPMAI™ examination is not written according to any single text or singularly supported by any particular reference. PMI does not endorse specific review courses resources, references, or other materials for certification preparation. The references listed below are not inclusive of all resources that may be utilized and should not be interpreted as a guaranteed means of passing the exam.

Project Management Institute (PMI). (2025). AI in Project Management. Retrieved from *https://www.pmi.org/learning/ai-in-project-management*

Project Management Institute (PMI). (2025). Free Introduction: PMI Certified Professional in Managing AI (PMI-CPMAI)™ Retrieved from www.pmi.org/dcpdp/sku/EL185

Project Management Institute (PMI). (2025). AI Today Podcast. Retrieved from *https://www.pmi.org/ai-today-podcast*

Project Management Institute (PMI). (2024). The Seven Patterns of AI. Retrieved from *https://www.pmi.org/blog/seven-patterns-of-ai*

Project Management Institute (PMI). (2025). Top 10 Ethical Considerations for AI Projects. Retrieved from *https://www.pmi.org/blog/top-10-ethical-considerations-for-ai-projects*

Project Management Institute (PMI). (2025). AI Data Governance Best Practices. Retrieved from *https://www.pmi.org/blog/ai-data-governance-best-practices*

Project Management Institute (PMI). (2024). Preparing Project Managers for an AI-Driven Future. Retrieved from *https://www.pmi.org/blog/preparing-project-managers-for-an-ai-driven-future*

Project Management Institute (PMI). (2025). Leading and Managing AI Projects Digital Guide. Retrieved from *https://www.pmi.org/standards*

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