

AI and Machine Learning Foundations for Professionals Course

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Overview

AI and Machine Learning Foundations for Professionals Course is a one-week foundation course for professionals responsible for business improvement, data decisions, technology adoption, operations, risk, or project delivery, who leave with an AI and Machine Learning Adoption Roadmap. Participants distinguish AI methods, frame use cases, assess data readiness, interpret model evaluation, map lifecycle decisions, define human oversight, and plan responsible adoption. Agile Leaders Training Center provides training in AI and machine learning foundations.

Who Should Attend

- Business teams responsible for identifying improvement opportunities and outcomes
- Data teams responsible for information quality and analytical decisions
- Technology teams responsible for solution assessment and integration
- Operations teams responsible for process performance and controls
- Risk teams responsible for oversight, impacts, and accountability
- Project teams responsible for coordinating adoption and stakeholder decisions

The course assumes participants contribute to business, data, technology, operations, risk, or project decisions and leaves out programming, mathematical derivations, specialist model engineering, data-science certification, and product configuration.

Departments and Industries

The course supports responsible AI and machine learning adoption across functions and sectors.

- Strategy, transformation, and innovation functions
- Data, analytics, and information-management teams
- Technology, digital-service, and operations functions
- Financial, healthcare, and professional-service organizations
- Manufacturing, energy, and logistics organizations
- Government, education, and nonprofit organizations

Learning Objectives

By the end of this course, participants will be able to:

- Compare AI, machine learning, and deep learning methods
- Apply a use-case framing method to business needs
- Analyze data readiness, features, labels, and limitations
- Evaluate model results with task-appropriate metrics
- Use lifecycle, oversight, and risk-control tools
- Build an AI and Machine Learning Adoption Roadmap

Course Agenda

Day 1: AI and Machine Learning Context

- AI, Machine Learning, and Deep Learning Comparison Map
- Supervised, Unsupervised, and Reinforcement Learning Decision Tree
- Prediction, Classification, Clustering, and Recommendation Use-Case Cards
- Human Task and Machine Task Boundary Canvas
- AI Value, Feasibility, and Risk Screening Matrix

Day 2: Use Cases and Data Readiness

- Business Problem and Outcome Framing Template
- Stakeholder, User, and Decision Journey Map
- Data Source, Ownership, and Provenance Inventory
- Feature, Label, and Target Definition Sheet
- Data Quality, Bias, and Representativeness Checklist

Day 3: Model Lifecycle and Evaluation

- Training, Validation, and Test Data Partition Diagram
- Baseline and Candidate Model Comparison Table
- Accuracy, Precision, Recall, and Error-Cost Scorecard
- Overfitting, Generalization, and Drift Diagnostic Guide
- Model Deployment and Monitoring Lifecycle Map

Day 4: Responsible Adoption and Oversight

- NIST AI RMF Govern, Map, Measure, and Manage Worksheet
- Human Oversight and Escalation Decision Matrix
- AI Impact, Risk, and Control Register
- Model Documentation and Evidence Checklist
- Adoption Readiness, Ownership, and Dependency Dashboard

Day 5: AI Adoption Planning Practice

- Suggested Exercise: Compare AI and Machine Learning Approaches
- Suggested Exercise: Frame and Screen a Workplace Use Case
- Suggested Exercise: Review Data and Model Evaluation Evidence
- Suggested Exercise: Define Oversight, Controls, and Monitoring
- Capstone Exercise: AI and Machine Learning Adoption Roadmap

Practical Exercises

The course uses suggested activities that turn foundation concepts into traceable adoption decisions.

- Suggested activity: classify workplace problems by AI method, decision type, expected outcome, feasibility, and risk
- Suggested activity: frame a use case and inspect sources, ownership, features, labels, quality, bias, and representativeness
- Suggested activity: compare validation evidence, task metrics, error costs, generalization concerns, deployment, and monitoring needs
- Suggested activity: assign human oversight, risks, controls, evidence, ownership, dependencies, and adoption actions

FAQs

Who suits AI and machine learning foundations training?

AI and machine learning foundations training suits professionals who shape business, data, technology, operations, risk, or project decisions. It assumes workplace decision experience and requires no programming or model-building background.

How do AI and machine learning foundations differ from technical data-science training?

AI and machine learning foundations focus on concepts, use cases, data readiness, evaluation evidence, oversight, and adoption decisions. Technical data-science training focuses on mathematics, coding, algorithms, experimentation, and model implementation.

How should professionals select an AI or machine learning use case?

Professionals should connect a defined decision or process problem to an appropriate method, available data, measurable outcome, affected stakeholders, feasibility constraints, risks, and human accountability.

What model evaluation evidence should non-specialists review?

Non-specialists should review data partitions, baselines, task-appropriate metrics, error costs, performance across relevant groups, generalization limits, monitoring thresholds, and documented assumptions.

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What belongs in an AI and Machine Learning Adoption Roadmap?

The roadmap includes prioritized use cases, outcomes, data needs, lifecycle stages, evaluation criteria, human oversight, risks, controls, owners, dependencies, monitoring, and sequenced adoption actions.

Conclusion

Participants take back an AI and Machine Learning Adoption Roadmap connecting use cases, data, models, evaluation, oversight, and controls. The roadmap makes assumptions, evidence, ownership, dependencies, and decisions visible across participating functions. It supports staged adoption based on business value, feasibility, risk, and monitoring needs.

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