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COURSE BROCHURE

Machine Learning Concepts Primer Course for Business Newcomers

20 – 24 June 2027
Muscat

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Machine Learning Concepts Primer Course for Business Newcomers

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Machine Learning Concepts Primer for business newcomers is a 1-week training course for professionals who are meeting artificial intelligence for the first time, and it produces an AI Claim Check Sheet for testing proposals and headlines. Colleagues, suppliers and the press now describe almost every product as intelligent, so plain understanding of how models learn has become an everyday workplace need. Jupiter Prime Training offers this Machine Learning Concepts Primer.

Why Machine Learning Concepts Primer Matters Now

Two forces make this subject urgent for newcomers. Software suppliers are adding prediction and text generation features to familiar products, and staff are expected to use them without any grounding in how they work. At the same time, leaders hear confident claims about automation that rarely mention training data, error rates or maintenance. Staff who grasp the basics ask sharper questions and avoid both blind trust and blanket refusal. The course introduces the NIST AI Risk Management Framework AI RMF and the ISO/IEC 42001 AI management system standard as reference points for responsible use.

Who Gains Most from Machine Learning Concepts Primer

- Staff who are starting to use prediction or text features inside office and sales software
- Professionals who will join an AI project as subject experts or testers
- Employees who read supplier proposals that mention models or automation
- Support staff who explain AI-assisted outputs to customers or colleagues
- Graduates moving into analyst roles where models feed reports

A department gains most when a mixed group of its newcomers attends together, giving it a shared starting vocabulary before any AI initiative begins.

Machine Learning Concepts Primer Capabilities

By the final day participants can explain in plain words how a model is built from examples and why it sometimes fails.

- Distinguish rule-based software, machine learning and generative models — supplier conversations
- Describe how training data shapes what a model can and cannot predict — project sponsors
- Interpret accuracy, precision and recall figures in a vendor demonstration — purchasing decisions
- Recognise overfitting, bias and drift in simple examples — colleagues relying on outputs
- Apply a short checklist to separate realistic AI uses from hype — line managers
- Communicate AI concepts to colleagues without jargon — wider department

Key Machine Learning Concepts Primer Terms

- Machine learning — a way of building software that finds patterns in example data rather than following hand-written rules.
- Training data — the labelled or unlabelled examples a model studies to learn the patterns it later applies.
- Neural network — a model made of connected layers of simple units that adjust their weights during training.
- Overfitting — when a model memorises its training examples so closely that it performs poorly on new cases.
- Precision and recall — two measures of how many flagged cases are correct and how many true cases are found.
- Hallucination — a confident but false output produced by a text-generating model.

Machine Learning Concepts Primer Day by Day

Day 1: From Rules to Learning Machines

- Rule-Based Versus Learning Systems — Spotting Which One a Product Uses
- Short History of Artificial Intelligence — Why Interest Rises and Falls
- Supervised, Unsupervised and Reinforcement Learning — Matching Tasks to Approaches
- Everyday AI Examples in Retail and Banking — Recognising Models Already in Use
- Personal AI Glossary — Building a Shared Starting Vocabulary

Day 2: Data That Teaches a Model

- Labelled Examples and Features — What a Model Actually Sees
- Training, Validation and Test Splits — Honest Measurement of Performance
- Data Quality Checks — Gaps, Duplicates and Outdated Records
- Sampling Bias Illustrations — When Examples Misrepresent Real Customers
- Spreadsheet Classification Exercise — Training a Simple Model by Hand

Day 3: Inside Neural Networks and Language Models

- Neurons, Layers and Weights — Intuition Without Mathematics
- Image Recognition Walkthrough — How Networks Learn Visual Patterns
- Large Language Models and Tokens — How Text Generation Works
- Prompting Basics and Hallucination — Checking Generated Answers
- Compute and Energy Costs — Practical Limits on Model Size

Day 4: Judging Whether a Model Works

- Confusion Matrix Reading — Counting Right and Wrong Predictions
- Precision, Recall and Accuracy — Choosing the Measure That Matters
- Overfitting and Drift Examples — Why Performance Fades Over Time
- NIST AI RMF Measure Function — Questions About Trustworthy Results
- Human Review Points — Where People Stay in the Decision

Day 5: Practising the AI Claim Check Sheet

- Vendor Demonstration Critique — Applying Evaluation Measures to a Pitch
- Headline Fact Check — Applying Training Data and Bias Questions
- Use Case Realism Test — Applying Learning Types to Proposals
- ISO/IEC 42001 Responsible Use Pointers — Questions for Internal Policies
- AI Claim Check Sheet — Finalising a Reusable Question Set

Applying Machine Learning Concepts Primer After the Course

- Use the confusion matrix method to review the accuracy figures in one AI feature your department already uses.
- Lead a short briefing for colleagues explaining training data, overfitting and hallucination with examples from your own work.

Machine Learning Concepts Primer Questions FAQ

What is a Machine Learning Concepts Primer and why does it matter now?

A Machine Learning Concepts Primer is a plain introduction to how models learn from data, how they are judged and where they fail. It matters now because AI features are appearing in everyday business software faster than staff are prepared for them.

Which roles gain most from a Machine Learning Concepts Primer?

Newcomers in finance, sales, operations, support and junior analyst roles gain most, especially those about to use AI features or join AI projects as subject experts.

How does a Machine Learning Concepts Primer differ from a data science course?

A Machine Learning Concepts Primer builds understanding without coding or mathematics. A data science course trains people to build and tune models; this course prepares people to use, question and discuss them confidently.

What do you bring back from a Machine Learning Concepts Primer?

You bring back an AI Claim Check Sheet for testing AI proposals.

Machine Learning Concepts Primer: The Way Forward

The AI Claim Check Sheet turns new knowledge into a habit of asking the right questions. Its first use is often a supplier demonstration or an internal proposal, where newcomers and their managers test claims about accuracy and data. Revisit it after a few months of real use, when experience with live AI features shows which questions mattered most.