



Data Mining Strategy and Pattern Evaluation Training Course

19 – 23 July 2027
Abu Dhabi

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Overview

Data Mining Strategy and Pattern Evaluation Training Course is a five-day intermediate course for data analysts, business intelligence professionals, operations analysts, and managers who leave with a Data Mining Decision Pack. Participants use a data mining strategy, CRISP-DM lifecycle, managed datasets, method selection, pattern evaluation, and deployment decisions to connect analysis with business action. The course turns unexplained model output into traceable evidence and review choices. Agile Leaders Training Center develops data mining strategy and evaluation capability.

Who Should Attend

- Data analysis functions responsible for profiling datasets and investigating patterns
- Business intelligence functions responsible for translating analytical findings into decision support
- Operations analysis functions responsible for identifying segments, associations, and anomalies
- Management functions responsible for approving analytical use cases and deployment choices
- Data preparation functions responsible for quality, features, samples, and analytical handoffs

The course assumes participants can interpret descriptive statistics and structured datasets, and leaves out programming instruction, production machine-learning engineering, database administration, and broad data governance.

Departments and Industries

The course supports departments and industries that use patterns in managed data to guide operational and commercial decisions.

- Analytics, business intelligence, strategy, finance, risk, and performance departments
- Banking, insurance, retail, telecommunications, and professional services
- Manufacturing, logistics, energy, utilities, and facilities operations
- Healthcare, education, research, and public-service organizations

Learning Objectives

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



- Apply the CRISP-DM lifecycle to a defined business question
- Analyze data suitability, quality, features, samples, and risks
- Compare classification, clustering, association, and anomaly methods
- Build evaluation criteria and validation evidence for discovered patterns
- Evaluate interpretation, deployment, monitoring, and review decisions
- Build a Data Mining Decision Pack for stakeholder handoff

Course Agenda

Day 1: Frame the Mining Decision

- CRISP-DM Business Understanding Canvas
- Business Question and Mining Goal Statement
- Decision Use-Case and Stakeholder Map
- Success Criterion and Constraint Register
- Data Mining Project Risk Log

Day 2: Understand and Prepare Data

- Data Source and Asset Inventory
- Structure, Relationship, and Quality Profile
- Missingness, Outlier, and Bias Review Checklist
- Feature Definition and Selection Register
- Training, Validation, and Holdout Split Record

Day 3: Select Pattern Methods

- Supervised Classification Method Decision Matrix
- Numeric Prediction and Regression Suitability Guide
- Clustering and Segmentation Method Comparison
- Association and Sequence Pattern Selection Sheet
- Anomaly Detection Use-Case Checklist

Day 4: Evaluate and Govern Results

- Model and Pattern Evaluation Scorecard
- Baseline, Error, and Stability Comparison Table
- Pattern Interpretation and Business Relevance Log
- Deployment Decision and Control Checklist
- Monitoring Indicator and Review Handoff Plan



Day 5: Practice Data Mining Decisions

- Exercise: Convert a Business Need into a Mining Goal
- Exercise: Profile Data and Select Managed Features
- Exercise: Compare Classification, Clustering, and Association Methods
- Exercise: Evaluate Patterns and Recommend Deployment Controls
- Capstone: Data Mining Decision Pack

Practical Exercises

The course uses suggested activities based on financial-service, retail, manufacturing, and service-operation datasets.

- Suggested activity: define a mining goal, success criteria, constraints, stakeholders, and project risks for a business question.
- Suggested activity: profile a dataset, record quality limitations, select features, and define training and validation partitions.
- Suggested activity: compare candidate methods for a classification, segmentation, association, or anomaly use case.
- Suggested activity: interpret evaluation evidence, document deployment conditions, and specify monitoring and review triggers.

FAQs

Who suits data mining strategy training, and what does it assume?

Data analysis, business intelligence, operations analysis, data preparation, and decision-management functions suit the training; it assumes participants can interpret structured datasets and basic descriptive statistics.

How does data mining strategy differ from data science programming?

Data mining strategy structures the business question, managed inputs, method choice, evaluation evidence, deployment decision, and monitoring handoff, while data science programming focuses more directly on code, libraries, and technical implementation.

How does the CRISP-DM lifecycle support data mining decisions?

The CRISP-DM lifecycle connects business understanding, data understanding, data preparation, modeling, evaluation, and deployment so that analytical work remains tied to documented goals and decision evidence.



How should a data mining method be selected?

Method selection should connect the business goal, target availability, field types, sample characteristics, interpretability needs, error consequences, validation approach, deployment constraints, and required pattern form.

What evidence supports pattern evaluation?

Pattern evaluation uses baselines, validation results, error measures, stability checks, segment sizes, association strength, anomaly review, business relevance, limitations, and documented criteria for deployment or rejection.

Conclusion

Participants take back a Data Mining Decision Pack containing the mining goal, data profile, feature register, method matrix, validation record, evaluation scorecard, interpretation log, deployment decision, and monitoring plan. It changes isolated pattern discovery into a traceable decision process. The pack connects business purpose, managed inputs, analytical evidence, controls, and review ownership.