JUPITER PRIME

Consulting • Training • Advisory

جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

AI Process Mining and Conformance Analytics Training Course

8 – 12 August 2027
Muscat

jupiterprime.uk

info@jupiterprime.uk

Registered in the United Kingdom and Saudi Arabia

AI Process Mining and Conformance Analytics Training Course

Ref: 893_33729 **Date:** 8 – 12 August 2027 **Location:** Muscat **Fees:** 6500 GBP

AI Process Mining and Conformance Analytics is a 1-week training course for continuous improvement leads, operations managers and process owners, who leave with a Process Conformance Baseline drawn from their own event log. Most cases now leave traces in transactional systems, so the real route of an order or claim can be reconstructed. Jupiter Prime Training runs this course.

Why AI Process Mining and Conformance Analytics Matters Now

Three forces shape this field. Enterprise systems now emit timestamped activity records at a volume no manual walkthrough can match. Machine learning predicts delayed cases while they are open. Auditors and control functions ask for proof that the designed path is followed. An organisation that reads its logs well spots rework loops and handover delays early; one that does not keeps funding automation of a path few cases take. The course draws on ISO/IEC 42001 AI management system and the NIST AI Risk Management Framework AI RMF for the responsible use of predictive models on case data.

Who Gains Most from AI Process Mining and Conformance Analytics

- Those accountable for end-to-end flows such as order-to-cash or procure-to-pay and their cycle times
- Those who run improvement portfolios and must rank candidate changes by measured effect
- Those who extract and prepare activity records from ERP, CRM or ticketing platforms
- Those responsible for internal control who test whether approvals follow the designed sequence
- Those who scope robotic or rule-based automation and need evidence of case frequency

A cross-functional group, where a process owner, a data specialist and an improvement lead attend together, gains most.

AI Process Mining and Conformance Analytics Capabilities

Participants move from raw case tables to explained deviations.

- Specify an event log with case ID, activity and timestamp attributes — the extraction request sent to system owners
- Build discovered process maps and variant views — the conversation with owners about how work really flows
- Calculate conformance fitness against a reference model — the decision on which deviations warrant action
- Apply machine learning to rank root causes of delay — the choice of which bottleneck to address first
- Weigh automation candidates by frequency, variability and handover count — the investment case for automation
- Design KPI monitors that flag drift in near real time — the sustainment routine owned by line managers

Key AI Process Mining and Conformance Analytics Terms

- Event log — a table of recorded activities with case identifier, activity and timestamp.
- Case ID — the attribute linking separate events to one instance of a process, such as one invoice.
- Process discovery — algorithms that build a process model automatically from an event log without a prior design.
- Conformance checking — comparison of recorded behaviour with a reference model to locate skipped, repeated or out-of-order steps.
- Variant — a distinct sequence of activities followed by one or more cases from start to end.
- Fitness — a measure of how much recorded behaviour a reference model can replay without deviation.

AI Process Mining and Conformance Analytics Day by Day

Day 1: Event Data Foundations

- Case, Activity and Timestamp Attributes — Choosing The Process Perspective
- Extracting Logs From ERP and Ticketing Systems — Source System Access Requests
- Event Data Quality Profiling — Deciding Which Records To Trust
- Object-Centric Versus Single-Case Logs — Handling Orders With Many Items
- Privacy Pseudonymisation of Resource Fields — Protecting Employee Identity In Analysis

Day 2: Discovering the Real Process

- Directly-Follows Graphs and Frequency Filters — Simplifying Spaghetti Maps For Owners
- Inductive Miner and Petri Net Output — Producing A Sound Reference Model
- Variant Clustering With Machine Learning — Grouping Similar Case Paths
- Throughput and Waiting Time Overlays — Locating Where Cases Stall
- Handover-of-Work Social Networks — Spotting Costly Transfers Between Roles

Day 3: Conformance and Deviation

- Token Replay and Alignment Techniques — Measuring Fitness Against Design
- Deviation Catalogues: Skips, Loops and Reordering — Classifying Breaches For Owners
- Segregation of Duties Rule Checks — Evidence For Internal Control Testing
- Precision and Generalisation Metrics — Judging Whether A Model Is Too Loose
- Responsible Model Use Under NIST AI RMF — Documenting Limits Of Predictions

Day 4: Root Causes and Automation Choices

- Decision Mining at Gateways — Explaining Which Attributes Drive Routing
- Predictive Delay Models on Open Cases — Prioritising Intervention Before Deadlines Slip
- Feature Importance for Bottleneck Causes — Separating Symptoms From Drivers
- Automation Candidate Scoring Matrix — Ranking Tasks By Frequency And Variability
- Simulation of To-Be Variants — Testing Redesign Effect Before Rollout

Day 5: Practising Conformance Monitoring

- Applying Discovery To A Participant Log — Confirming The As-Is Baseline
- Applying Alignment Results To Prioritise Deviations — Agreeing Owner Actions
- Applying Delay Predictions To A Live Queue — Setting Intervention Triggers
- Drift Detection and KPI Alert Design — Sustaining Gains After Change
- Assembling The Process Conformance Baseline — Sharing Findings With Process Owners

Applying AI Process Mining and Conformance Analytics After the Course

- Request and profile an event log for one end-to-end flow, then present its top variants to the owner.
- Run an alignment-based conformance check on that log and assign owners to the main deviations.

AI Process Mining and Conformance Analytics Questions FAQ

What is AI process mining and conformance analytics, and why does it matter now?

It is the reconstruction of real process behaviour from event logs, checked against the designed model. It matters now because most work leaves digital traces, so assumptions about flow can be tested directly.

Which roles gain most from AI process mining and conformance analytics?

Process owners, improvement leads, operations managers and internal control specialists gain most.

How does AI process mining and conformance analytics differ from a general operational excellence course?

It works from recorded event data rather than plant metrics or observation. It focuses on logs, variants, fitness and case predictions.

What do you bring back from AI process mining and conformance analytics training?

You bring back a conformance baseline for one of your own processes. It holds variants, fitness scores, ranked causes and KPI alerts.

AI Process Mining and Conformance Analytics: The Way Forward

The Process Conformance Baseline first informs which deviation a process owner tackles first. Owners and control functions use it to judge automation proposals. After its first use, the perspective worth revisiting is the reference model itself: recurring compliant variants may show that the designed path, not the people, needs to change.