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COURSE BROCHURE

AI Prescriptive Analytics for Business Decisions Course

23 – 27 August 2027
Dar es Salaam

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Registered in the United Kingdom and Saudi Arabia

AI Prescriptive Analytics for Business Decisions Course

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AI Prescriptive Analytics for Business Decisions is a 1-week training course for analysts, planners and decision-making managers who want models that recommend an action rather than only forecast an outcome, and who leave with a Decision Recommendation Blueprint. Organisations now hold enough operational history to let optimisation and machine learning propose prices, stock levels and schedules. Jupiter Prime Training delivers this course on AI prescriptive analytics for people who must trust, question and act on those recommendations.

Why AI Prescriptive Analytics Matters Now

Three shifts shape AI prescriptive analytics today: planning software that now ships with built-in optimisation solvers, executives who expect a recommended option rather than a chart, and frontline staff who must accept or override automated suggestions. Getting it right turns forecasts into faster, consistent choices on inventory, staffing and pricing; getting it wrong hides poor assumptions inside a confident number. The course draws on ISO/IEC 42001, the international standard for an AI management system, and the NIST AI Risk Management Framework NIST AI RMF to set oversight, explainability and accountability around recommendation models.

Who Gains Most from AI Prescriptive Analytics

- Analysts who translate forecasts into recommended quantities, prices or routes
- Supply and demand planners who balance stock, capacity and service levels
- Commercial managers who set prices, promotions or offer sequences
- Operations schedulers who allocate staff, vehicles or machine time
- Finance partners who test the cost of each recommended option

A planning cell that combines an analyst, a planner and the manager who signs off decisions gains most, because each sees how the recommendation is produced and challenged.

AI Prescriptive Analytics Capabilities

The outcomes move participants from asking what will happen to deciding what should be done, with the trade-offs visible.

- Specify a decision problem as objective, constraints and decision variables — planning leads framing the question
- Build a demand or risk prediction that feeds an optimisation step — analysts preparing inputs
- Test recommended options through what-if and sensitivity scenarios — managers choosing between plans
- Calculate the cost of overriding a recommendation — finance partners and sponsors
- Design a decision dashboard with explanation and override fields — frontline approvers
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Apply ISO/IEC 42001 and NIST AI RMF oversight to recommendation models — risk owners

Key AI Prescriptive Analytics Terms

- Prescriptive analytics — methods that recommend the action most likely to meet an objective under stated constraints.
- Objective function — the quantity a model tries to maximise or minimise, such as margin, cost or waiting time.
- Constraint — a limit the recommendation must respect, such as budget, capacity, shelf space or staff hours.
- Sensitivity analysis — testing how much a recommendation changes when an input assumption moves.
- Next best action — a recommendation engine output proposing the most suitable offer or step for one customer or case.
- Override rate — the share of recommendations people reject, used to judge trust and model fit.

AI Prescriptive Analytics Day by Day

Day 1: From Forecast to Recommended Action

- Descriptive, Predictive and Prescriptive Ladder — Where Each Decision Sits Today
- Decision Inventory — Repeated Choices Worth Automating or Assisting
- Decision Framing Canvas — Objective, Constraints and Decision Variables
- Retail and Logistics Examples — Pricing, Replenishment and Route Choices
- Human Oversight Levels — Advise, Approve or Act Automatically

Day 2: Prediction Inputs That Feed Decisions

- Demand and Risk Prediction Models — Choosing Accuracy Measures That Matter
- Feature Selection From Operational History — Avoiding Leakage and Bias
- Uncertainty Ranges and Prediction Intervals — Carrying Doubt Into Decisions
- Explainability Techniques Such as Feature Importance — Answering Why Questions
- Input Quality Checks — When a Forecast Is Too Weak to Act On

Day 3: Optimisation and Recommendation Engines

- Linear and Integer Optimisation — Allocating Stock, Staff and Budget
- Scheduling and Routing Heuristics — Fast Answers for Hard Problems
- Recommendation Engines and Next Best Action — Personalising Offers and Service Steps
- Simulation and Monte Carlo Scenarios — Stress-Testing Recommended Plans
- Sensitivity and Trade-Off Curves — Showing What Each Constraint Costs

Day 4: Decision Quality and Accountability

- Decision Dashboard Design — Recommendation, Rationale, Confidence and Override
- Override Logging and Analysis — Learning From Rejected Suggestions
- Decision Quality Metrics — Separating Good Choices From Lucky Outcomes
- ISO/IEC 42001 Operational Controls — Ownership of Recommendation Models
- NIST AI RMF Measure and Manage Functions — Monitoring Drift and Harm

Day 5: Practising the Decision Recommendation Blueprint

- Hospital Staffing Case — Applying Day 1 Framing to Shift Allocation
- Warehouse Replenishment Case — Linking Day 2 Predictions to Day 3 Optimisation
- Scenario Debate — Defending a Recommendation Under Changed Assumptions
- Dashboard Mock-Up — Applying Day 4 Override and Rationale Fields
- Decision Recommendation Blueprint — Problem Frame, Model Chain, Oversight and Measures

Applying AI Prescriptive Analytics After the Course

- Frame one recurring decision in the participant's area as objective, constraints and decision variables, and share it with the decision owner.
- Start an override log for an existing forecast or recommendation tool and review its patterns after four weeks.

AI Prescriptive Analytics Questions FAQ

What is AI prescriptive analytics and why does it matter now?

AI prescriptive analytics uses prediction and optimisation to recommend the action that best meets a goal within constraints. It matters now because planning systems increasingly propose decisions, and people need to judge and steer those proposals.

Which roles gain most from AI prescriptive analytics training?

Analysts, planners, schedulers and commercial managers gain most. If you turn forecasts into quantities, prices or rotas, the methods let you test and explain each recommendation.

How does AI prescriptive analytics differ from a forecasting or dashboard course?

AI prescriptive analytics goes beyond predicting or displaying results. A forecasting or reporting course stops at what will happen; this one adds optimisation, scenario testing and override design to decide what to do.

What do you bring back from AI prescriptive analytics training?

You bring back a framed decision problem, a prediction-to-optimisation chain, a scenario set and a dashboard design with oversight and quality measures.

AI Prescriptive Analytics: The Way Forward

The Decision Recommendation Blueprint first informs which recurring decision moves from manual judgement to model-assisted choice. Analysts, planners and approving managers use it to agree inputs, constraints and override rules. After the first cycle of live recommendations, the override log deserves close study: patterns of rejection often reveal a missing constraint rather than a weak model.