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COURSE BROCHURE

Data Science and Data Ethics for Business Professionals Training Course

14 – 18 February 2027
Muscat

Data Science and Data Ethics for Business Professionals Training Course

Ref: 3154_119829 **Date:** 14 – 18 February 2027 **Location:** Muscat **Fees:** 6500 GBP

Data Science and Data Ethics for Business Professionals is a 1-week training course for managers and professionals who commission, fund or act on analytical work and leave with a data use ethics review for one business use case. As predictive scoring and automated recommendations spread into pricing, hiring and lending, leaders must judge both whether a model works and whether its use is fair. Jupiter Prime Training treats these two judgements as one discipline.

Why Data Science and Data Ethics Matters Now

Three pressures meet on this subject. Analytical teams now build scoring models quickly, so owners receive more outputs than they can question. Customers and employees increasingly ask how decisions about them were reached and whether their personal records were used as they agreed. Boards and auditors expect a named person to answer for each automated decision. An organisation that frames questions carefully, tests models honestly and records its ethical reasoning earns trust and avoids costly reversals; one that does not risks biased outcomes and withdrawn products.

Who Gains Most from Data Science and Data Ethics

- Business owners who commission predictive or segmentation work and sign off its use
- Product and service managers who place model outputs in front of customers
- Risk and compliance professionals who judge whether a proposed record use is acceptable
- People leaders who weigh scoring tools in recruitment, appraisal or workforce planning
- Analytics coordinators who translate business needs into briefs for technical specialists

The strongest benefit comes when a business owner, a risk professional and an analytics coordinator from one function attend together so their use case reflects commercial, ethical and technical views.

Data Science and Data Ethics Capabilities

Participants question a model on two fronts: does it predict well, and should it be used.

- Frame a business problem as a testable analytical question — sponsors and analytics leads
- Assess model accuracy, error types and stability — product owners approving release
- Test outputs for unequal treatment across customer or employee groups — risk and people leaders
- Weigh consent, purpose and proportionality before reusing personal records — privacy and legal advisers
- Specify explanation and human oversight duties for automated decisions — affected customers and staff

- Build an ethics review with named accountable owners — boards and internal auditors

Key Data Science and Data Ethics Terms

- Training set — the historical records a model learns from, carrying any past bias forward.
- Prediction error — the difference between what a model forecast and what actually happened, measured across many cases.
- Proxy variable — an input that indirectly stands for a protected characteristic, such as postcode standing for ethnicity.
- Fairness test — a comparison of model outcomes across groups to reveal whether any group is treated less favourably.
- Informed consent — a person's clear agreement to a specific, understood use of their records.
- Human oversight — the arrangement by which a named person can review, question and override an automated decision.

Data Science and Data Ethics Day by Day

Day 1: Analytical Questions and Business Stakes

- Problem Framing Canvas — Turning a Business Concern into a Testable Question
- Prediction, Classification and Segmentation Choices — Matching Method to Decision
- Stakeholder Impact Mapping — Who Gains or Loses from Each Use
- Record Sources and Provenance Checks — Judging Whether Inputs Fit the Purpose
- Success Measures Agreed Up Front — Defining What a Useful Model Delivers

Day 2: How Models Are Built and Judged

- Training and Hold-Out Samples — Testing Performance on Unseen Cases
- Accuracy, Precision and Recall — Reading the Cost of Each Error Type
- Overfitting and Drift Warning Signs — Deciding When a Model Needs Retraining
- Feature Importance Summaries — Questioning What Drives a Score
- Model Release Checklist — Approving or Returning Work to Analysts

Day 3: Fairness and Unequal Treatment

- Sources of Bias in Historical Records — Spotting Inherited Patterns Early
- Proxy Variable Screening — Removing Inputs That Mask Protected Traits
- Group Outcome Comparisons — Measuring Approval and Rejection Gaps
- Threshold Adjustment Trade-Offs — Balancing Accuracy Against Equal Treatment
- Fairness Findings Log — Recording Evidence for Later Challenge

Day 4: Consent, Transparency and Accountability

- Purpose Limitation and Consent Records — Deciding Whether Reuse Is Acceptable
- Minimisation and Anonymisation Options — Reducing Exposure of Personal Records
- Plain-Language Decision Explanations — Telling Customers Why an Outcome Occurred
- Human Review and Appeal Routes — Keeping a Person Answerable for Outcomes
- Accountability Register for Automated Decisions — Naming Owners and Escalation Paths

Day 5: Practising the Data Use Ethics Review

- Use Case Selection and Framing — Applying Day One Question Design
- Model Evidence Summary — Applying Day Two Performance Measures
- Fairness and Proxy Assessment — Applying Day Three Group Comparisons
- Consent and Oversight Conditions — Applying Day Four Accountability Measures
- Ethics Review Recommendation and Sign-Off Brief — Completing the Review

Applying Data Science and Data Ethics After the Course

- Compare group outcomes for one live scoring model and present gaps to its owner.
- Introduce the model release checklist for the next analytical project the function commissions.

Data Science and Data Ethics Questions FAQ

What is data science and data ethics for business professionals, and why does it matter now?

It is the combined skill of judging whether an analytical model works and whether its business use is fair and accountable. It matters now because automated scores increasingly shape decisions about customers and staff.

Which roles gain most from data science and data ethics training?

Business owners, product managers, risk professionals and people leaders gain most. You benefit if you commission analytical work, approve its release or answer for decisions it influences.

How does a data science and data ethics course differ from a technical machine learning course?

It prepares you to question and approve models rather than code them. No programming background is needed.

What do you bring back from data science and data ethics training?

You bring back a completed ethics review for one real use case. It holds model evidence, fairness findings and oversight conditions.

Data Science and Data Ethics: The Way Forward

The data use ethics review first informs whether one proposed model use goes ahead, changes or stops. Business owners, risk professionals and approving committees use it to record their reasoning and name accountable owners. After its first use, revisit the fairness thresholds and consent conditions, since live outcomes often reveal group differences that testing samples did not show.