Enterprise AI and Data Products Portfolio Management

Duration: 1 Week

Day 1: AI & Data Product Fundamentals & Portfolio Strategy

Module 1: AI & Data Products – Concepts & Classification

- AI product types: predictive models, generative AI, recommendation engines, intelligent agents
- Data product types: datasets, data APIs, analytical dashboards, data feeds, feature stores
- AI vs data product distinction: ownership, consumers, SLAs, and lifecycle differences
- Enterprise AI & data product landscape: internal vs external products
- Product thinking applied to AI & data: outcome over output, user-centricity, and value metrics

Lab Exercises:

1. Classify 10 existing enterprise AI and data assets as products or projects; justify each classification using product criteria
2. Map your organisation's AI and data product landscape: product type, owner, consumer, and current maturity level

Module 2: Portfolio Strategy & Prioritisation

- Portfolio management concepts: balance, alignment, risk, and return across a product portfolio
- Strategic alignment: mapping AI and data products to business objectives and OKRs
- Prioritisation frameworks: RICE, MoSCoW, weighted scoring for AI/data product backlogs
- Portfolio health metrics: coverage, duplication, ROI, and adoption rate
- Portfolio governance: review cadence, decision rights, and portfolio board structure

Lab Exercises:

3. Score a portfolio of 8 AI and data product initiatives using a weighted prioritisation framework; produce a ranked backlog
4. Build a portfolio alignment matrix mapping each product to a strategic business objective with contribution scoring

Day 2: Product Discovery, Definition & Roadmapping

Module 3: AI & Data Product Discovery & Requirements

- Discovery techniques: stakeholder interviews, data audits, and opportunity scoring
- Problem statement definition: from business pain to product hypothesis
- User personas for AI products: data consumers, model users, and operational end-users
- Data availability assessment: evaluating data readiness for a proposed AI product
- Feasibility trifecta: desirability, viability, and technical feasibility for AI products

Lab Exercises:

5. Conduct a structured discovery for a proposed AI product: interviews, data audit, and feasibility assessment
6. Write a product hypothesis statement and a data readiness scorecard for two AI product candidates

Module 4: Product Roadmapping & Milestone Planning

- AI product roadmap structure: now, next, later with model, data, and infrastructure tracks
- Milestone definitions: data ready → model baseline → MVP → production → scale
- Dependency mapping: data engineering, ML, platform, and business stakeholder dependencies
- Roadmap communication: executive summary vs engineering detail views
- Roadmap tools: Productboard JIRA roadmaps, and simple spreadsheet templates

Lab Exercises:

7. Build a 6-month roadmap for an AI product with data, model, and infrastructure tracks using a provided template
8. Create an executive roadmap view and an engineering detail view for the same product; present key differences

Day 3: Metrics, OKRs & Business Value Measurement

Module 5: AI & Data Product Metrics Framework

- Product metrics hierarchy: business outcome → product KPI → model performance → data quality
- AI model metrics in a product context: accuracy, precision, recall, latency, and drift rate
- Data product metrics: freshness, completeness, SLA adherence, and consumer adoption
- Leading vs lagging indicators for AI product performance
- Instrumentation: logging predictions, user interactions, and data consumption events

Lab Exercises:

9. Define a 3-level metrics framework for an AI product: business outcome, product KPI, and model/data metrics
10. Design an instrumentation plan: identify what to log, where to store it, and how to surface it in a dashboard

Module 6: OKRs, ROI & Stakeholder Reporting

- OKR design for AI and data products: outcome-driven key results with measurable targets
- ROI calculation for AI products: cost of build, cost of run, value delivered, and payback period
- Business case documentation: executive summary, financial model, and risk register
- Stakeholder reporting: product health dashboard for leadership and operational teams
- Communicating AI product value to non-technical stakeholders

Lab Exercises:

11. Write OKRs for two AI products with 3 measurable key results each; validate alignment with business strategy
12. Build a product health dashboard in Power BI or Excel tracking OKR progress, adoption, and model performance

Day 4: Lifecycle Management, Governance & Risk

Module 7: AI & Data Product Lifecycle Management

- Product lifecycle stages: ideation, build, launch, growth, maturity, and retirement
- Model versioning and deprecation: managing multiple model versions in production
- Feature store lifecycle: feature creation, versioning, sharing, and retirement
- Data product versioning: schema versioning, backward compatibility, and consumer communication
- Sunset planning: decommissioning AI products safely with consumer migration support

Lab Exercises:

13. Map 5 products across lifecycle stages; identify one product ready for retirement and write a sunset plan
14. Design a versioning and deprecation policy for a data API product: version numbering, sunset notice, and migration guide

Module 8: Portfolio Governance, Risk & Compliance

- AI product risk categories: model risk, data risk, security risk, and regulatory risk
- Model risk management: validation, monitoring, and escalation procedures
- Regulatory compliance for AI products: EU AI Act, GDPR, and sector-specific requirements
- Data product governance: access control, data contracts, and SLA enforcement
- Portfolio risk register: identifying, scoring, and mitigating portfolio-level risks

Lab Exercises:

15. Complete a risk assessment for 3 AI products using a structured risk register; score likelihood and impact
16. Write a data contract for a data product: schema, SLA, access policy, change notification, and consumer obligations

Day 5: Operating Model, Team Design & Capstone

Module 9: AI & Data Product Operating Model

- Product team structures: centralised, federated, and embedded AI/data product teams
- Roles in an AI product team: product manager, data scientist, ML engineer, data engineer, analyst
- Agile for AI products: sprint planning with model experiments, data tasks, and product features
- Cross-functional collaboration: aligning AI, data, engineering, and business teams
- Portfolio operating rhythm: quarterly planning, monthly reviews, and weekly standups

Lab Exercises:

17. Design an operating model for a 3-product AI portfolio: team structure, roles, ceremonies, and decision rights
18. Run a mock quarterly portfolio review: present product health, prioritisation decisions, and roadmap updates

Module 10: Capstone Project – Portfolio Management Plan

- Capstone scenario: manage a portfolio of 4 AI and data products across all lifecycle stages
- Portfolio strategy: prioritisation, alignment matrix, and health assessment
- Roadmap and OKRs: 6-month roadmap with measurable key results per product
- Governance and risk: data contracts, risk register, and compliance review
- Presentation: portfolio summary, strategic recommendations, and operating model design

Lab Exercises:

19. Produce a complete portfolio management plan for the capstone scenario: strategy, roadmap, metrics, governance, and risk
20. Present the portfolio plan to the cohort: priorities, OKRs, risks mitigated, and operating model with stakeholder Q&A