Machine Learning Fundamentals for Analysts

Duration: 5 Days (approximately 35 instructional hours)

Course Goal:

A conceptual and applied introduction to machine learning, covering supervised vs. unsupervised learning, key algorithms (classification, regression, clustering), and model evaluation using libraries like scikit-learn.

Learning Objectives:

- Understand the key concepts, principles, and processes of the methodology.
- Apply principles and processes to practical project scenarios.
- Effectively use management products and tools.
- Prepare for and successfully pass any relevant certification exams.

Target Audience:

- Project Managers (aspiring, new, or experienced).
- Team Managers and Team Leaders.
- Business Analysts and Programme Office staff.
- Anyone involved in the design, development, and delivery of projects.

Detailed Day-by-Day Curriculum:

Day 1: Foundations & Strategic Alignment

Module 1: Evolution and Principles of the Subject (Approx. 2 hours)

Module 2: Establishing the Context & Plan (Approx. 2.5 hours)

Module 3: Advanced Identification Techniques (Approx. 3 hours)

Day 2: Sophisticated Qualitative and Quantitative Analysis

Module 4: Advanced Qualitative Analysis (Approx. 3 hours)

Module 5: Introduction to Quantitative Analysis (Approx. 1.5 hours)

Module 6: Starting Up a Project Process (Approx. 2 hours)

Day 3: Quantitative Analysis (Cont.) & Response Planning

Module 7: Advanced Simulation & Analysis (Approx. 3 hours)

Module 8: Initiating a Project Process (Approx. 2 hours)

Module 9: Advanced Response Planning (Approx. 2 hours)

Day 4: Implementation, Monitoring, & Control

Module 10: Implementing Responses & Monitoring Risks (Approx. 3 hours)

Module 11: Controlling a Stage Boundary (Approx. 1.5 hours)

Module 12: Management in Agile & Hybrid Environments (Approx. 2 hours)

Module 13: Closing a Project Process (Approx. 1.5 hours)

Day 5: Culture, Communication & Review

Module 14: Fostering a Proactive Culture (Approx. 2.5 hours)

Module 15: Advanced Communication & Reporting (Approx. 2.5 hours)

Module 16: Specialized & Emerging Topics (Approx. 1.5 hours)

Module 17: Course Review, Action Planning & Wrap-up (Approx. 1 hour)

Review of key advanced concepts and techniques.

- Open Q&A session.
- Action planning: Applying learning to organizational or project challenges.
- Resources for continued learning and professional development.
- Course evaluation and feedback.

Important Notes for this Course

- **Case Study Driven:** A complex, evolving case study is essential for applying concepts.
- **Software Tools:** This course demonstrates hands-on practice with relevant software to enhance learning.
- **Facilitator Expertise:** The instructor is a seasoned professional with deep practical and theoretical knowledge.
- **Interactive and Participative:** We encourage high levels of interaction and collaborative problem-solving.