London TDM

Artificial Intelligence and Data Science Training Courses

Course Venue: United Kingdom - London

Course Date: From 14 June 2026 To 18 June 2026

Course Place: London Paddington

Course Fees: 7,500 USD

Introduction

As artificial intelligence becomes increasingly integrated into decision-making processes, understanding and interpreting these models is crucial for building trust and ensuring ethical AI systems. This 5-day professional course on "Explainable AI and Model Interpretability" is designed to equip participants with the knowledge and skills needed to make AI models transparent, understandable, and accountable.

Objectives

- Understand the importance of explainability in AI systems.
- Explore various techniques and tools for model interpretability.
- Analyze case studies and real-world applications of explainable AI.
- Develop skills to evaluate and implement interpretability methods.
- Address ethical concerns and regulatory requirements related to AI transparency.

Course Outlines

Day 1: Introduction to Explainable AI

- Overview of AI development and the need for explainability.
- Key concepts and definitions in explainable AI.
- The role of transparency in AI model trustworthiness.
- Introduction to tools and frameworks for AI explainability.
- Discussion on the ethical implications of non-explainable models.

Day 2: Techniques for Model Interpretability

- Local interpretability versus global interpretability.
- Introduction to SHAP (SHapley Additive exPlanations) and LIME (Local Interpretable Model-agnostic Explanations).
- Visualization techniques for interpreting model decisions.
- Hands-on practice with model interpretability tools in Python.
- Comparison of different interpretability techniques and their applications.

Day 3: Case Studies and Applications

- Real-world examples of explainable AI in healthcare, finance, and other industries.
- Analysis of successful and unsuccessful attempts at model interpretability.
- Guest speakers sharing experiences with implementing explainable AI solutions.
- Interactive group activity: Developing an interpretability plan for a sample model.
- Discussion on the challenges of scaling interpretability methods in large systems.

Day 4: Evaluating and Enhancing Model Interpretability

- Criteria for assessing model interpretability effectiveness.
- Strategies for improving model transparency and user comprehension.
- The role of feedback loops in iterative model improvement.
- Exploring the boundaries of interpretability: What can and cannot be explained?

- Practical session: Evaluating interpretability in student projects.

Day 5: Ethical and Regulatory Considerations

- Understanding the regulatory landscape around AI Transparency (GDPR, CCPA, etc.).
- Addressing bias and fairness in AI models.
- Developing guidelines for ethical AI deployment.
- Workshop: Creating an ethical framework for AI development in an organization.
- Concluding remarks and presentation of certificates.