London TDM

Artificial Intelligence and Data Science Training Courses

Course Venue: United Kingdom - London

Course Date: From 01 February 2026 To 05 February 2026

Course Place: London Paddington

Course Fees: 7,500 USD

Introduction

Welcome to the "Natural Language Processing and Text Analytics" course. This comprehensive 5-day program is designed to equip participants with the fundamental concepts and practical skills necessary for understanding and implementing natural language processing (NLP) techniques and text analytics. Through a blend of theoretical insights and hands-on activities, participants will gain proficiency in various NLP tools and methodologies that are transforming industries today.

Objectives

- Understand the fundamental concepts of natural language processing and text analytics.
- Work with popular NLP libraries and frameworks for text analysis.
- Analyze and process large datasets using advanced NLP techniques.
- Develop applications that leverage NLP for real-world scenarios.
- Explore emerging trends and research in the field of NLP.

Course Outlines

Day 1: Introduction to NLP and Text Analytics

- Overview of natural language processing and its applications.
- Introduction to text analytics and its importance in data science.
- Understanding language models and NLP pipelines.
- Setting up the Python environment for NLP.
- Hands-on: Analyzing textual data using basic NLP tools.

Day 2: Text Preprocessing Techniques

- Understanding text normalization and tokenization.
- Exploring stemming and lemmatization processes.
- Removing stopwords and handling punctuation.
- Dealing with categorical text data.
- Practical session: Preprocessing a dataset using Python.

Day 3: Feature Extraction and Representation

- Introduction to bag-of-words and TF-IDF models.
- Exploring word embeddings and vectorization techniques.
- Understanding topic modeling with LDA and LSA.
- Using advanced NLP models for feature extraction.
- Hands-on: Implementing feature extraction on a large dataset.

Day 4: Sentiment Analysis and Text Classification

- Overview of sentiment analysis methods and applications.
- Building text classifiers using machine learning techniques.
- Implementing sentiment analysis with popular NLP libraries.
- Evaluating and optimizing text classification models.
- Workshop: Developing an end-to-end sentiment analysis pipeline.

Day 5: Advanced NLP Applications and Future Trends

- Exploring chatbots and conversational agents.
- Understanding the role of NLP in AI and machine translation.
- Examining deep learning approaches in NLP, such as transformers.
- Discussing ethical considerations in NLP solutions.
- Closing session: Future trends and research directions in NLP.