



# Training Course: Natural Language Processing (NLP)

18 - 22 May 2025 Alexandria (Egypt)

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## Training Course: Natural Language Processing (NLP)

Training Course code: IT235239 From: 18 - 22 May 2025 Venue: Alexandria (Egypt) - Training Course Fees: 4345 🛛 Euro

### Introduction

Natural Language Processing NLP training program designed by Global Horizon is a dynamic and exciting field at the intersection of linguistics, artificial intelligence, and machine learning. It focuses on the interaction between computers and human language, enabling machines to understand, interpret, and generate human language. NLP has numerous real-world applications, from chatbots and virtual assistants to sentiment analysis, translation, and more. This 5-day NLP training program provides a concise yet comprehensive introduction to the fundamental concepts and practical skills required to kickstart your journey in the world of NLP.

## **Objectives**

By the end of the NLP training program, participants will:

- Understand the Basics: Gain a solid understanding of NLP, its history, and the key challenges it addresses.
- Preprocess Text Data: Learn to clean, tokenize, and preprocess textual data effectively.
- Master NLP Fundamentals: Grasp the fundamental NLP concepts such as part-of-speech tagging, named entity recognition, and sentiment analysis.
- Explore Deep Learning: Get an introduction to deep learning techniques and their application in NLP.
- Leverage Pre-trained Models: Discover the power of pre-trained models and the Transformer architecture in NLP.
- Apply NLP to Real-world Problems: Work on hands-on projects, including sentiment analysis and text summarization.
- Collaborate and Present: Collaborate with peers to develop an NLP project and present findings.
- Understand Model Deployment: Learn how to deploy NLP models and consider ethical implications.

### **Target Audience**

- Aspiring data scientists looking to expand their skill set into NLP.
- Software developers interested in incorporating NLP into their applications.
- Linguists and language enthusiasts curious about the intersection of language and technology.
- Students and professionals in fields related to data science, AI, or computer science who want to understand NLP's capabilities.
- Anyone seeking a foundational understanding of NLP and its practical applications.

## **Training Program Outline**



#### Day 1: Introduction to NLP and Text Preprocessing

- · Overview of NLP and its applications
- Basic text preprocessing: cleaning, tokenization, stemming/lemmatization
- Hands-on exercise: Text preprocessing with Python

#### Day 2: NLP Basics and Text Classification

- Understanding language models and grammar
- Part-of-speech tagging and named entity recognition
- · Introduction to text classification and sentiment analysis
- Practical exercise: Sentiment analysis using NLTK or spaCy

#### Day 3: Deep Learning for NLP

- Introduction to deep learning
- · Basics of neural networks for NLP
- Word embeddings: Word2Vec and GloVe
- Hands-on project: Building a simple text classifier using deep learning

#### Day 4: Advanced NLP Techniques and Applications

- Introduction to pre-trained models and Transformers
- · Sequence-to-sequence models and attention mechanisms
- Exploring advanced NLP applications: text summarization, machine translation
- · Practical exercise: Text summarization using a pre-trained model

#### Day 5: Project Development and Deployment

- Working on an NLP project: choose from sentiment analysis, chatbots, or named entity recognition
- Collaborative project work with peer review
- · Model deployment options: API, web application, or container
- · Ethical considerations in NLP and closing remarks



## Registration form on the Training Course: Natural Language Processing (NLP)

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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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Person Responsible for Training and Development			
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