



*Training Course:  
Natural Language Processing (NLP)*

*21 October - 1 November 2024  
Tbilisi (Georgia)*

## Training Course: Natural Language Processing (NLP)

Training Course code: IT235240 From: 21 October - 1 November 2024 Venue: Tbilisi (Georgia) - Training Course Fees: 9240 € Euro

### Introduction

Natural Language Processing NLP training program designed by Global Horizon is a transformative field that enables machines to understand and interact with human language. It has revolutionized industries ranging from healthcare and customer service to finance and education. This 10-day NLP training program is designed to provide a comprehensive foundation in NLP, equipping participants with the knowledge and skills needed to work with text data, build NLP models, and understand the practical applications of this technology.

### Objectives

By the end of this 10-day NLP training program, participants will:

- Comprehend NLP Fundamentals: Develop a deep understanding of NLP, its historical context, and the key challenges it addresses.
- Master Text Preprocessing: Learn to preprocess text data effectively, including cleaning, tokenization, and feature engineering.
- Acquire NLP Core Concepts: Gain expertise in core NLP techniques, such as part-of-speech tagging, named entity recognition, and sentiment analysis.
- Deep Dive into Deep Learning: Explore the fundamentals of deep learning and its application in NLP, covering neural networks, word embeddings, and sequence-to-sequence models.
- Leverage Pre-trained Models: Understand the power of pre-trained models, particularly the Transformer architecture, and practice fine-tuning them for specific tasks.
- Apply NLP to Real-world Problems: Work on hands-on projects, including text summarization, machine translation, and chatbot development.
- Collaborative Project Development: Collaborate with peers on an NLP project, applying your knowledge to real-world challenges.
- Presentation and Peer Review: Present your project findings, receive peer feedback, and enhance your project based on the insights.
- Model Deployment and Ethical Considerations: Explore model deployment options and understand the ethical implications of NLP.
- Preparation for Further Exploration: Equip yourself to dive deeper into advanced NLP topics or pursue research in this dynamic field.

### Target Audience

This 10-day NLP training program is tailored for individuals who want to gain a strong foundation in NLP and its practical applications. The target audience includes:

- Aspiring data scientists and machine learning engineers looking to specialize in NLP.

- Software developers interested in integrating NLP into applications, chatbots, or virtual assistants.
- Linguists and language enthusiasts intrigued by the intersection of language and technology.
- Students and professionals in computer science, data science, AI, or related fields who want to harness NLP's capabilities.
- Anyone enthusiastic about learning how machines understand and generate human language.

## Training Program Outline

### Day 1: Introduction to NLP

- Overview of NLP and its real-world applications.
- Historical evolution of NLP.
- Key challenges in NLP.

### Day 2: Text Preprocessing

- Data cleaning: handling noise, removing HTML tags, etc.
- Tokenization and stemming/lemmatization.
- Stop word removal and special character handling.

### Day 3: NLP Fundamentals

- Introduction to language models and grammar.
- Part-of-speech tagging and named entity recognition.
- Basic text classification and sentiment analysis.

### Day 4: Deep Learning for NLP Part 1

- Introduction to deep learning.
- Basics of neural networks for NLP.
- Word embeddings: Word2Vec and GloVe.

### Day 5: Deep Learning for NLP Part 2

- Sequence-to-sequence models.
- Attention mechanisms.
- Hands-on exercise: Building a basic text generation model.

#### Day 6: Pre-trained Models and Transformers

- Introduction to pre-trained models.
- Overview of Transformer architectures.
- Practical exercise: Fine-tuning a pre-trained model for a specific task.

#### Day 7: Advanced NLP Applications

- Exploring advanced NLP applications: text summarization, machine translation, and question answering.
- Project brainstorming and team formation.

#### Day 8: Hands-On Project Work

- Collaborative project work.
- Guidance and assistance from instructors.
- Progress monitoring and problem-solving.

#### Day 9: Project Presentation and Evaluation

- Teams present their NLP projects.
- Peer review and constructive feedback.
- Model evaluation and improvement.

#### Day 10: Model Deployment and Ethical Considerations

- Model deployment options: API, web application, or container.
- Ethical considerations in NLP.

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

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Course Fees: 9240 € Euro

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

### Delegate Information

Full Name (Mr / Ms / Dr / Eng): .....  
Position: .....  
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Personal E-Mail: .....  
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### Company Information

Company Name: .....  
Address: .....  
City / Country: .....

### Person Responsible for Training and Development

Full Name (Mr / Ms / Dr / Eng): .....  
Position: .....  
Telephone / Mobile: .....  
Personal E-Mail: .....  
Official E-Mail: .....

### Payment Method

- ☐ Please find enclosed a cheque made payable to Global Horizon
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### Easy Ways To Register

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