NLP Boot Camp / Hands-On Natural Language Processing (TTAI3030)

Category: AI, Data & Analytics | **Vendor:** Trivera Tech

Duration: 24.00 hours (3 days) **19.5 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

The®Hands-on Natural Language Processing (NLP) and Generative AI Boot Camp®is an immersive, three-day course that serves as your comprehensive guide to building machines that can read, interpret, and even generate human language. This unique interdisciplinary field blends computational linguistics with artificial intelligence, allowing machines to understand, interpret, generate, and interact using human language.®

About This Course

The Hands-on Natural Language Processing (NLP) and Generative AI Boot Camp is an immersive, three-day course that serves as your comprehensive guide to building machines that can read, interpret, and even generate human language. This unique interdisciplinary field blends computational linguistics with artificial intelligence, allowing machines to understand, interpret, generate, and interact using human language. In a data-centric world, mastering NLP and Generative AI skills gives you a competitive edge, enabling the development of sophisticated applications like voice assistants, text analyzers, chatbots, and more, with an added flair of creativity and human-like interaction.

Our expansive curriculum encompasses a wide array of NLP and Generative AI topics. Beginning with an introduction to NLP, feature extraction, and the basics of Generative AI, the course progresses to hands-on development of text classifiers and exploration of web scraping, APIs, and AI assistants. Delving deeper, you'll explore topic modeling, vector representations, advanced text manipulation, sentiment analysis, and the innovative world of text and image generation using AI. Half of your time will be dedicated to practical labs, where you'll apply your knowledge in real-world scenarios®®creating pipelines, text classifiers, working with web data, analyzing sentiment, and experimenting with AI-generated content. These labs mirror actual industry challenges, equipping you with the necessary skills to efficiently process, analyze, and generate text data. Time permitting, you'll engage with modern tools like Python libraries, the OpenAI GPT-4 API, TensorFlow, and others in a series of hands-on exercises.

By the end of this course, you'll have a comprehensive understanding of both NLP and Generative AI. You'll leave equipped with practical skills and insights to process and analyze text data, implement advanced text representations, apply machine learning algorithms for text data, build simple chatbots, and creatively use AI for generating text and images. You'll be adept at harnessing these technologies to gain valuable insights from text data, enhance business processes, and improve user interactions with automated text-based and generative AI systems.

Who Should Attend

This in an intermediate and beyond-level course is geared for experienced Python developers looking to delve into the exciting field of Natural Language Processing. It is ideally suited for roles such as data analysts, data scientists, machine learning engineers, or anyone working with text data and seeking to extract valuable insights from it. If you're in a role where you're tasked with analyzing customer sentiment, building chatbots, or dealing with large volumes of text data, this course will provide you with practical, hands-on skills that you can apply right away.

Prerequisites & Entry Requirements

General Prerequisites:

To ensure a smooth learning experience and maximize the benefits of attending this course, you should have the following prerequisite skills:

-Proficiency in Python: As the course involves Python for hands-on labs and examples, attendees should have a good understanding of Python programming, including data structures, control flow, and basic coding practices.

-Basic knowledge of Machine Learning: Understanding the principles of machine learning, including concepts like training and testing splits, model evaluation, and overfitting, will be beneficial.

-Familiarity with Linear Algebra and Statistics: Some fundamental concepts in linear algebra (such as vectors and matrices) and statistics (mean, median, standard deviation, etc.) are essential for understanding the theory behind NLP.

-Experience with any Data Analysis Libraries: Having experience with Python data analysis libraries like Pandas, NumPy, or Matplotlib can be beneficial as they are often used in the preprocessing and analysis of text data.

-General Understanding of Natural Language Processing: While not strictly necessary, having a basic understanding of what NLP is and its potential applications can help attendees contextualize the learnings better.

Learning Outcomes

Upon successful completion of this course, participants will be able to:

This course combines engaging instructor-led presentations, insightful demonstrations, real-world hands-on labs and engaging group activities. Throughout the course you'll:
-Master the fundamentals of Natural Language Processing (NLP) and Generative AI, understanding their role in interpreting and generating human language for valuable insights.
-Develop the ability to transform raw text into structured formats and generate creative content using AI, enhancing machine understanding and human interaction.
-Discover how to collect and utilize web data, navigate through semi-structured data sources, and integrate AI APIs for enriched project capabilities.
-Learn how to implement sentiment analysis, topic modeling, and AI-generated content to extract meaning from text data, identify trends, and add creative dimensions.
-Gain proficiency in applying machine learning, deep learning, and generative AI techniques to text data for tasks like classification, prediction, and creative generation.
-Learn to analyze text sentiment, train emotion detectors, and interpret results, while also exploring the creative potential of AI in generating novel text and images, providing new ways to gauge public opinion, understand customer feedback, and enhance user engagement.

Detailed Course Outline

Introduction to Natural Language Processing

Overview of NLP in Data Analytics

Historical Perspective and Evolution of NLP

Feature Extraction Methods

Importance in Data Analytics

Types of Data: Structured vs Unstructured Data

Cleaning Text Data: Techniques and Best Practices

Feature Extraction from Texts: Methods and Tools

Finding Text Similarity: Applications in Data Analytics

Developing a Text Classifier

Role in Data Analytics and AI

Machine Learning: Overview of ML in NLP

Supervised Learning: Concepts and Applications

Developing a Text Classifier: Step-by-Step Guide

Building Pipelines for NLP Projects: Design and Implementation

Saving and Loading Models: Techniques and Tools

Generative AI (APIs)

Fundamentals of Generative AI

Text (OpenAI Text APIs): Usage and Case Studies

Vision (OpenAI Vision APIs): Applications in Image Recognition

Text to Speech (OpenAI APIs): Technologies and Use Cases

Speech to Text: Conversion Techniques

Overview of Key Points

Creating Assistants

The Rise of AI Assistants

GPTs (in the Browser): Implementation and Examples

Custom Assistants with APIs: Building Tailored Solutions

Live Search (Bing): Integration and Application

Code Generation Techniques and Tools

Image Generation: Exploring Creative AI

Insights and Future Trends

Vector Representation

Importance in Data Representation

What Is a Vector: Definition and Applications

Text Generation and Summarization

Overview of Text Generation

Generating Text with Markov Chains: Methodology and Use Cases

Text Summarization: Techniques and Tools

Key Input Parameters for TextRank: Algorithmic Insights

Recent Developments in Text Generation and Summarization: State-of-the-Art Techniques

Practical Challenges in Extractive Summarization: Addressing Real-World Issues

Sentiment Analysis

Relevance in Market Research

Tools Used for Sentiment Analysis (TextBlob and NLTK): Comparative Analysis

The textblob library: Features and Use Cases

Understanding Data for Sentiment Analysis: Analytical Techniques

Training Sentiment Models:

Strategies and Best Practices

Additional Course Details

Nexus Humans NLP Boot Camp / Hands-On Natural Language Processing (TTAI3030) training program is a workshop that presents an invigorating mix of sessions, lessons, and masterclasses meticulously crafted to propel your learning expedition forward.

This immersive bootcamp-style experience boasts interactive lectures, hands-on labs, and collaborative hackathons, all strategically designed to fortify fundamental concepts.

Guided by seasoned coaches, each session offers priceless insights and practical skills crucial for honing your expertise. Whether you're stepping into the realm of professional skills or a seasoned professional, this comprehensive course ensures you're equipped with the knowledge and prowess necessary for success.

While we feel this is the best course for the NLP Boot Camp / Hands-On Natural Language Processing (TTAI3030) course and one of our Top 10 we encourage you to read the course outline to make sure it is the right content for you.

Additionally, private sessions, closed classes or dedicated events are available both live online and at our training centres in Dublin and London, as well as at your offices anywhere in the UK, Ireland or across EMEA.

Frequently Asked Questions

Q: What delivery options are available for NLP Boot Camp / Hands-On Natural Language Processing (TTAI3030)?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 3-day NLP Boot Camp / Hands-On Natural Language Processing (TTAI3030) course provides up to 19.5 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the NLP Boot Camp / Hands-On Natural Language Processing (TTAI3030) training?

The training takes place over 3 day(s), with each day lasting approximately 24.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for NLP Boot Camp / Hands-On Natural Language Processing (TTAI3030)?

Yes, we provide corporate training, dedicated training, and closed classes for NLP Boot Camp / Hands-On Natural Language Processing (TTAI3030). Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: AI; Machine Learning; Deep Learning; NLP

Q: Why choose Nexus Human for NLP Boot Camp / Hands-On Natural Language Processing (TTAI3030)?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your NLP Boot Camp / Hands-On Natural Language Processing (TTAI3030) training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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