NLP BOOT CAMP / HANDS-ON NATURAL LANGUAGE PROCESSING

Course Code: 100692

Explore NLP Essentials: Learn Step By Step How to Prepare Text Data and Develop Deep Learning Models for Your NLP Projects

The Hands-on Natural Language Processing (NLP) Boot Camp is an immersive, three-day course that serves as your guide to building machines that can read and interpret human language. NLP is a unique interdisciplinary field, blending computational linguistics with artificial intelligence to help machines understand, interpret, and generate human language. In an increasingly data-driven world, NLP skills provide a competitive edge, enabling the development of sophisticated projects such as voice assistants, text analyzers, chatbots, and so much more.

Our comprehensive curriculum covers a broad spectrum of NLP topics. Beginning with an introduction to NLP and feature extraction, the course moves to the hands-on development of text classifiers, exploration of web scraping and APIs, before delving into topic modeling, vector representations, text manipulation, and sentiment analysis. Half of your time is dedicated to hands-on labs, where you'll experience the practical application of your knowledge, from creating pipelines and text classifiers to web scraping and analyzing sentiment. These labs serve as a microcosm of real-world scenarios, equipping you with the skills to efficiently process and analyze text data. Time permitting, you'll also explore modern tools like Python libraries, the OpenAI GPT-3 API, and TensorFlow, using them in a series of engaging exercises.

By the end of the course, you'll have a well-rounded understanding of NLP, and will leave equipped with the practical skills and insights that you can immediately put to use, helping your organization gain valuable insights from text data, streamline business processes, and improve user interactions with automated text-based systems. You'll be able to process and analyze text data effectively, implement advanced text representations, apply machine learning algorithms for text data, and build simple chatbots.

What You'll Learn

This course combines engaging instructor-led presentations and useful demonstrations with valuable hands-on labs and engaging group activities.

Throughout the course you'll:

- Master the fundamentals of Natural Language Processing (NLP) and understand how it can help in making sense of text data for valuable insights.
- Develop the ability to transform raw text into a structured format that machines can understand and analyze.
- Discover how to collect data from the web and navigate through semi-structured data, opening up a wealth of data sources for your projects.
- Learn how to implement sentiment analysis and topic modeling to extract meaning from text data and identify trends.
- Gain proficiency in applying machine learning and deep learning techniques to text data for tasks such as classification and prediction.
- Learn to analyze text sentiment, train emotion detectors, and interpret the results, providing a way to gauge public opinion or understand customer feedback.

Who Needs to 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

- 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.

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