



# Leveraging ChatGPT: Your GenAI Advantage

Course ID #: 7000-858-ZZ-Z

Hours: 7

## Course Content

### Course Description:

Embark on a journey of Natural Language Processing (NLP) with this comprehensive course on GPT-3.5 and the future of transformer-based language models. Gain a deep understanding of the evolution of these groundbreaking models and how they are shaping the future of AI-driven text generation and understanding.

### Prerequisites:

None.

### Target Audience:

NLP Researchers and Practitioners, Data Scientists and Machine Learning Engineers, Product Managers and Technical Leads, AI Enthusiasts and Hobbyists, Business owners, Professionals in HR.

### Topics:

#### Module 1: Natural Language Processing (NLP) and ChatGPT

- Training data selection and augmentation for NLP models.

#### Lesson 1: Introduction to NLP

- Definition of NLP and its role in machine learning and AI.
- Techniques like tokenization, lemmatization, and syntactic parsing.
- Challenges: Named Entity Recognition (NER), sentiment analysis, etc.

#### Lesson 3: The GPT Architecture

- Detailed explanation of the Generative Pre-trained Transformer (GPT) model.
- Insights into the inner workings of the Transformer architecture.
- Advanced concepts like positional encoding and multi-head attention.

#### Module 2: Models and Fine-Tuning Techniques

#### Lesson 1: Advanced GPT Architectures

- Evolution of the GPT series (GPT-1, GPT-2, GPT-3).
- Comparison with other transformer-based models (e.g., BERT, XLNet).

#### Lesson 2: Understanding ChatGPT

- Overview of recurrent neural networks (RNNs) and attention mechanisms.
- Architectural components: Embeddings, attention heads, etc.



# Leveraging ChatGPT: Your GenAI Advantage

Course ID #: 7000-858-ZZ-Z

Hours: 7

## Lesson 2: Fine-tuning and Transfer Learning

- Techniques for fine-tuning GPT models on custom tasks.
- Domain adaptation and transfer learning for specific applications.

## Lesson 3: Large-scale Model Handling

- Strategies for training and deploying large-scale models.
- Handling memory constraints and distributed computing.

## Lesson 3: Model Interpretability and Debugging

- Techniques for understanding and visualizing model outputs.
- Debugging common issues in NLP models.

## Module 3: Assessing and Deploying ChatGPT

### Lesson 1: API Integration

- Setting up API endpoints for seamless interaction with ChatGPT.
- Utilizing API parameters for enhanced user experience.

### Lesson 2: Deployment Strategies

- Hosting options: Cloud platforms (AWS, GCP) and serverless architectures.
- Model versioning and rollback procedures.



# Leveraging ChatGPT: Your GenAI Advantage

Course ID #: 7000-858-ZZ-Z

Hours: 7

## Module 4: Advanced Topics and Ethics in NLP

### Lesson 1: Cutting-edge NLP Techniques

- Recent advancements in NLP research (e.g., unsupervised learning, transformers beyond GPT).
- Applications in areas like dialog systems, summarization, and more.

### Lesson 2: Ethical Considerations in NLP

- Addressing biases and fairness in language models.
- Responsible AI practices, explain ability, and model accountability.

### Lesson 3: Accessing and Using ChatGPT

- Exploring ChatGPT interface to interact with it for tasks
- Communication with the model
- Ethical Use of ChatGPT
  - Understanding potential biases in language models
  - Responsible use and limitations of ChatGPT
  - Avoiding plagiarism, inaccurate information, biased responses

Register for this class by visiting us at:

[www.tcworkshop.com](http://www.tcworkshop.com) or calling us at 800-639-3535