GTC Transforming Emerging Economies

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NLP with Transformers

COURSE OVERVIEW

This course introduces participants to the powerful capabilities of transformer-based models in Natural Language Processing (NLP). Participants will explore how models like BERT, GPT, RoBERTa, and T5 work, and how to apply them to real-world tasks such as text classification, question answering, summarization, and translation. Using popular libraries like Hugging Face Transformers and tools such as PyTorch or TensorFlow, participants will gain the skills required in fine-tuning pre-trained models and deploying NLP solutions.

WHO SHOULD ATTEND?

Data scientists, machine learning engineers, NLP practitioners, AI researchers, and developers looking who are into building and deploying advanced NLP applications will need this course. It is also beneficial for professionals transitioning into AI or exploring the capabilities of state-of-the-art language models. Basic knowledge of Python and machine learning is recommended.

COURSE OUTCOMES

Delegates will gain the knowledge and skills to:

- Understand the architecture and mechanics of transformer models.
- Apply pre-trained models to NLP tasks like sentiment analysis, summarization, and Q&A.
- Fine-tune transformer models for domain-specific applications.
- Use Hugging Face Transformers library for training and deployment.
- Handle large datasets and tokenization for NLP tasks.
- Evaluate model performance and optimize output quality.
- Implement best practices in responsible and ethical use of LLMs.
- Integrate transformer models into production NLP pipelines.

KEY COURSE HIGHLIGHTS

At the end of the course, you will understand;

- The concept of transformer architecture and self-attention mechanisms.
- Hands-on with BERT, GPT, RoBERTa, T5, and other LLMs.
- Fine-tuning techniques for custom datasets.
- Using Hugging Face, PyTorch, and TensorFlow for NLP modeling.
- Tokenization, embeddings, and sequence classification.
- Applications such as; chatbots, sentiment analysis, summarization, and translation.
- Evaluation metrics and performance optimization.
- Ethical considerations in deploying large language models.
- Practical labs and deployment walkthroughs.

All our courses are dual-certificate courses. At the end of the training, the delegates will receive two certificates.
1. A GTC end-of-course certificate
2. Continuing Professional Development (CPD) Certificate of completion with earned credits awarded