



GenAI: LLM Capabilities and Alignment

About

This module explores the key stages of building and optimizing large language models (LLMs). You will gain hands-on experience with fine-tuning, optimizing training efficiency, and exploring alternatives such as retrieval-augmented generation (RAG). By the end of this module, you'll understand when fine-tuning is necessary, how to optimize LLM performance, and how retrieval-based approaches can complement or replace traditional fine-tuning.



- **Assess** the advantages and limitations of vector databases in RAG-based architectures.

Content Overview

Lesson	Est. Delivery Time	Skills
Setup	2 min	Setup the development environment.
The Stages of Building LLMs	45 min	Fine-tuning, optimization, and when to apply fine-tuning vs. prompt engineering vs. retrieval.
Introduction to RAG	45 min	Exploring Retrieval-Augmented Generation, its workflow, components, and evaluation for AI applications.
Total Content	90 min	