

AI ACADEMY

# Hands-on LLM Training for Deep Technical Enablement

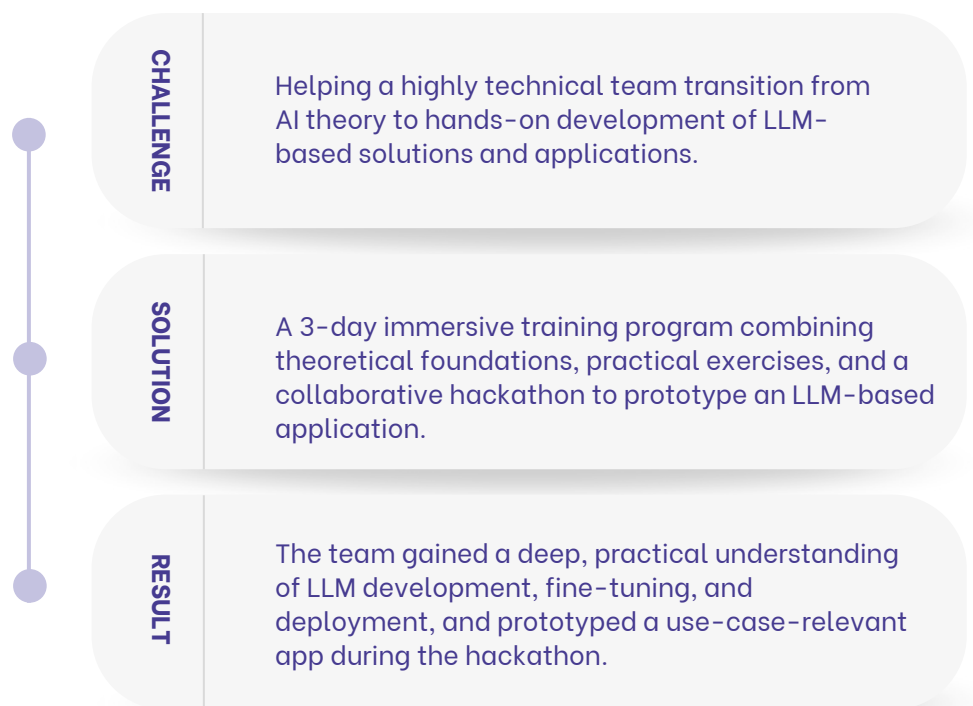
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# Introduction

When a highly technical software team seeks to move beyond AI theory and into real-world application, they need depth, context, and hands-on experience. This 3-day AI Academy was designed for that kind of team: developers with a strong engineering foundation, eager to gain practical skills around Large Language Models (LLMs), fine-tuning, and agent-based systems.



## Challenge

A technically advanced software engineering team was exploring how to integrate Large Language Models into their offerings and workflows. While they had a conceptual understanding of AI and LLMs, what they needed was direct, hands-on experience—how to build, fine-tune, and deploy these systems effectively. The challenge wasn't just learning what LLMs are, but understanding how to turn them into functional, production-ready tools.

## Solution

To address this need, Clearbox AI delivered a 3-day on-site AI Academy tailored to technically proficient participants. The program combined theoretical grounding with live coding, collaborative problem-solving, and in-depth exploration of modern AI architectures.

- Day 1 covered LLM principles and real-world use cases. The team explored the GPT architecture in depth and participated in a hands-on session aimed at recreating a simplified version of GPT-2. In the afternoon, they practiced fine-tuning pre-trained open-source models for specific tasks.
- Day 2 focused on building Retrieval-Augmented Generation (RAG) systems. Through guided exercises, the team implemented and tested RAG pipelines—combining search and generation for scalable, knowledge-aware applications.
- Day 3 addressed productionization and AI applications. The participants applied their new knowledge during a collaborative hackathon, designing and prototyping an LLM-powered application. The final session was dedicated to brainstorming use cases and discussing how to bring LLMs into the team's day-to-day development practices.

## Result

The workshop delivered to the team a working, intuitive understanding of how modern LLM systems function, how to interact with them programmatically, and how to fine-tune and deploy them effectively. By the end of the AI Academy, participants had built and tested components of real-world AI pipelines, including fine-tuning workflows and RAG architectures. The hackathon resulted in a concrete prototype of an LLM-based application, demonstrating how quickly ideas could be turned into functional tools when equipped with the right methods and frameworks.

humans && machines

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