

Week (Dates)	Topics & Objectives	Hands-on Project	Relevant Links & Resources	Supplementary Materials/Activities
1 (Aug 1–7)	Topic: Introduction to large language models (LLMs) and Transformer architecture (e.g., GPT, Llama)[1]. Objectives: Understand tokenization and self-attention in Transformers[2]; set up Python environment.	- Write a Python script to call an LLM (e.g., OpenAI GPT-4) for a simple task (text summarization or Q&A). - Tokenize sample text using Hugging Face's tokenizers.	- OpenAI API docs – official API reference. - How Transformer LLMs Work (course)[2] . - LLM Architecture (Medium) .	- Install required Python packages (openai, transformers). - Watch an intro video on transformers (e.g., Jay Alammar's <i>Illustrated Transformer</i>).

Sources: Authoritative tutorials and documentation (as cited above) were used to inform topics and tools[2][1][3][4].

[1] [2] How Transformer LLMs Work - DeepLearning.AI

<https://www.deeplearning.ai/short-courses/how-transformer-llms-work/>

[3] [4] Best practices for prompt engineering with the OpenAI API | OpenAI Help Center

<https://help.openai.com/en/articles/6654000-best-practices-for-prompt-engineering-with-the-openai-api>