# Resources

Live Stream recordings:

<https://www.youtube.com/watch?v=kpRyiJUUFxY&list=PLqFaTIg4myu-b1PlxitQdY0UYIbys-2es>

Generate your API Key : https://aistudio.google.com/

## Day 1:

* Read the [“Foundational Large Language Models & Text Generation” whitepaper](https://www.kaggle.com/whitepaper-foundational-llm-and-text-generation).
  + Podcast: https://youtu.be/mQDlCZZsOyo
* Read the [“Prompt Engineering” whitepaper](https://www.kaggle.com/whitepaper-prompt-engineering).
  + Or hear the podcast : https://www.youtube.com/watch?v=F\_hJ2Ey4BNc
* Complete -> <https://www.kaggle.com/code/markishere/day-1-prompting>

## Day 2:

* [Optional] Listen to the summary [podcast episode](https://youtube.com/watch?v=1CC39K76Nqs) for this unit (created by [NotebookLM](https://notebooklm.google.com/?original_referer=https:%2F%2Fwww.google.com%23&pli=1)).
* Read the [“Embeddings and Vector Stores/Databases” whitepaper](https://kaggle.com/whitepaper-embeddings-and-vector-stores).
* Complete these code labs on Kaggle:
  1. [Build](https://www.kaggle.com/code/markishere/day-2-document-q-a-with-rag) a RAG question-answering system over custom documents
  2. [Explore](https://www.kaggle.com/code/markishere/day-2-embeddings-and-similarity-scores) text similarity with embeddings
  3. [Build](https://www.kaggle.com/code/markishere/day-2-classifying-embeddings-with-keras) a neural classification network with Keras using embeddings

## Day 3:

* [Optional] Listen to the summary [podcast episode](https://youtu.be/H4gZd4BCrDQ) for this unit (created by [NotebookLM](https://notebooklm.google/)).
* Read the [“Generative AI Agents” whitepaper](https://www.kaggle.com/whitepaper-agents).
* Complete these code labs on Kaggle:
  1. [Talk](https://www.kaggle.com/code/markishere/day-3-function-calling-with-the-gemini-api) to a database with function calling
  2. [Build](https://www.kaggle.com/code/markishere/day-3-building-an-agent-with-langgraph/) an agentic ordering system in LangGraph

## Day 4:

Complete Unit 4: “Domain-Specific LLMs”, which is:

* [Optional] Listen to the summary [podcast episode](https://youtu.be/b1a4ZOQ8XdI) for this unit (created by [NotebookLM](https://notebooklm.google/)).
* Read the [“Solving Domain-Specific Problems Using LLMs” whitepaper](https://www.kaggle.com/whitepaper-solving-domains-specific-problems-using-llms).
* Complete these code labs on Kaggle:
  1. [Use](https://www.kaggle.com/code/markishere/day-4-google-search-grounding) Google Search data in generation
  2. [Tune](https://www.kaggle.com/code/markishere/day-4-fine-tuning-a-custom-model) a Gemini model for a custom task

## Day 5:

Complete Unit 5: “MLOps for Generative AI”, which is:

* [Optional] Listen to the summary [podcast episode](https://youtu.be/k9S6IhiUUj4) for this unit (created by [NotebookLM](https://notebooklm.google/)).
* Read the [“MLOps for Generative AI” whitepaper](https://www.kaggle.com/whitepaper-operationalizing-generative-ai-on-vertex-ai-using-mlops).
* No code lab for today! We will do a code walkthrough and live demo of [goo.gle/e2e-gen-ai-app-starter-pack](https://goo.gle/e2e-gen-ai-app-starter-pack), a resource created for making MLOps for Gen AI easier and accelerating the path to production. Please go through the repository in advance.

**Check out this bonus assignment:** There’s more! This [bonus notebook](https://www.kaggle.com/code/markishere/bonus-day-extra-api-features-to-try/) walks you through a few more things you can do with the Gemini API that weren't covered during the course. This material doesn't pair with the whitepapers or podcast, but covers some extra capabilities you might find useful when building Gemini API powered apps.