PromptCraft

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Welcome

PromptCraft is a course to take developers from the basics of using language models to developing a prototype application in three days.

LLMs and Generative AI have revolutionised the field of machine learning. The power of the foundational models, prompt tuning and model adaption mean practitioners can achieve what used to take weeks or months in a matter of days.

This course uses Google Cloud's Generative AI Studio and the material is formatted to spread over three sessions, or days:

The LLM toolkit:

- Use clever prompting to categorize data
- Get relevant responses grounded in data
- Validate outputs
- Evaluate performance

LangChain:

- An introduction to LangChain, a popular library for interacting and building applications with LLMs including:

    - Memory
    - Chains
    - Agents

Semantic exploration and adaption:

- Retrieval augmented generation (RAG): embedding data such as PDF reports or a product catalog to get nuanced and accurate answers to detailed questions
- Deep neural retrieval: embed a product catalog, create an index and perform nearest neighbour searches in response to user input
- Fine-tuning a foundational model

An optional part four is a hackathon, where participants choose a use case, bring or create (via an LLM!) some data, and create a proof-of-concept application.

All lessons are launched via Colab. The course only requires the free tier to complete.

Prerequisites

- A Google Cloud account.
- A Google Cloud project with billing enabled.
- Familiarity with programming in Python.

Part I

The LLM Toolkit