



BINCOM ACADEMY CURRICULUM www.bincom.net

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Introduction to Generative Artificial Intelligence course

Version Number:2.0

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Prerequisite:

This Bincom academy class is based on the following courses

Requirement:

Day 1 : 1st Contact Session

Topic: Introduction to Generative AI

- Fundamentals of Generative AI
- Overview of Language Models (LMs)
- Basics of Prompt Engineering: crafting prompts for effective outputs

https://www.cloudskillsboost.google/paths/118/course_sessions/19198412/video/500791

https://www.cloudskillsboost.google/course_templates/539

Day 2: 2nd Contact Session

Topic: Introduction to prompt Design

- Introduction to Retrieval-Augmented Generation
- Building a basic RAG system using Llama Index and Gemini Pro

<https://cloud.google.com/vertex-ai/generative-ai/docs/learn/prompts/introduction-prompt-design>

<https://www.datacamp.com/blog/what-is-prompt-engineering-the-future-of-ai-communication>

Day 3: 3rd Contact Session

Topic: Overview of AI Agents and their applications

- Building an AI Research Agent: guiding an agent to retrieve, analyze, and summarize information.
- Understanding Vector Embeddings

<https://www.youtube.com/watch?v=YIAWtEAJl9g&pp=vgURdmVjdG9yIGVtYmVkZGluz3M%3D>

Day 4: 4th Contact Session

Topic: Vertical-Specific LLMS Using CrewAI

- Introduction to vertical-specific LLMs (focused on particular domains, such as medical, legal, or finance)
- Overview of dataset curation and preprocessing for fine-tuning an LLM

<https://kili-technology.com/large-language-models-llms/building-domain-specific-llms-examples-and-techniques>

Day 5: 5th Contact Session

Topic: Introduction to Retrieval Augmented Generation

<https://cloud.google.com/use-cases/retrieval-augmented-generation?hl=en>
<https://learnbybuilding.ai/tutorials/rag-from-scratch>

Day 6 : 6th Contact Session

Topic: Build RAG system

<https://python.langchain.com/docs/tutorials/rag/>
<https://machinelearningmastery.com/building-a-simple-rag-application-using-llamaindex/>

Day 7: 7th Contact Session

Topic: Introduction to Agents

<https://aws.amazon.com/what-is/ai-agents/>

Day 8: 8th Contact Session

Building an AI research agent

<https://mongodb-developer.github.io/ai-agents-lab/docs/create-agent/concepts>

[Build an AI Research Agent: Apoorva Joshi](#)

Day 9: 9th Contact Session

Introduction to Vertical LLM

<https://cloud.google.com/blog/products/ai-machine-learning/three-step-design-pattern-for-specializing-llms>

<https://toloka.ai/blog/domain-specific-llm/>

Day 10 : 10th Contact Session

Build a simple vertical llm using prompt engineering and RAG

<https://kili-technology.com/large-language-models-llms/building-domain-specific-llms-examples-and-techniques>

<https://www.civo.com/learn/build-rag-system-gemini-financial-forecasting-kubernetes>

Day 11: 11th Contact Session

Topic: Introduction to Replit Agents

[Getting started with Replit | Introduction to Replit](#)

<https://www.youtube.com/playlist?list=PLto9KpJAqHMT57MEWOZqrZogOIpfFQxs>

Day 12: 12th Contact Session

Topic: Build an End to End App with replit for the Simple Vertical LLM(created previously)