



# Gen AI Cohort / Bootcamp For Developers

- Project based Learning
- Live sessions spanning 3 to 4 weeks
- Cohort begins **2nd week of April, 2024 | Batch Size : 20**
- Mentors: Working IT software professionals with over a decade of industry expertise.

# What you will Learn

## 1. Embeddings

- What are embeddings?
- How do you convert text into embedding vectors?
- Practical: Create embeddings of PDF file

## 2. Vector database (ChromaDB, Pinecone)

- Introduction to Vector DB
- Insert embeddings into Vector DB
- Perform CRUD operation on Vector DB

## 3. What is Retrieval-Augmented Generation (RAG)?

## 4. What distinguishes Semantic Search from Generative Search?

## 5. RAG utilizing Embeddings, Vector Database, Semantic search, and LLM Recommended strategies for RAG:

- Integration of semantic search and re-ranking
- Implementation of caching to decrease LLM costs and latency
- Continuous training and education

## 6. Implementing RAG through LangChain.

- Developers can easily construct LLM-powered apps using LangChain's framework

## 7. Implementing RAG through LangChain.

- A straightforward and adaptable data framework that links custom data sources to expansive language models

## 8. Model Evaluation

# What to Expect

**Hands-on Training:** Gain practical experience with industry-leading tools and techniques.

**Expert Guidance:** Learn from seasoned professionals with years of experience in the field of AI.

**Collaborative Environment:** Engage with like-minded individuals and foster creative collaboration.

**Real-World Applications:** Discover how Generative AI is revolutionizing various industries, from art and design to healthcare and beyond.

## Who Should join

- Professionals seeking to enhance their skills and stay ahead in their careers.
- Students are eager to explore the intersection of technology and creativity.
- Anyone with a passion for innovation and a desire to make an impact with AI.

## Instructors

- Our cohort will be led by experienced working AI professionals with expertise in Generative AI and deep learning

## Certification

- Upon successful completion of the cohort, participants will receive a certificate of completion

## Prerequisites

- Basic knowledge of Python programming language
- Familiarity with machine learning concepts is helpful but not required

## Project 1: Multiple PDF Bot by using RAG, LangChain

The goal is to develop a question-answering bot capable of extracting relevant information from multiple PDF documents. Leveraging the RAG (Retrieval-Augmented Generation) model and LangChain for transcription, the bot will retrieve passages from the PDFs, generate answers to user questions, and provide accurate responses, streamlining information retrieval and enhancing user experience.



## Project 2: YouTube Playlist QnA Bot by using RAG, LLaMA Index

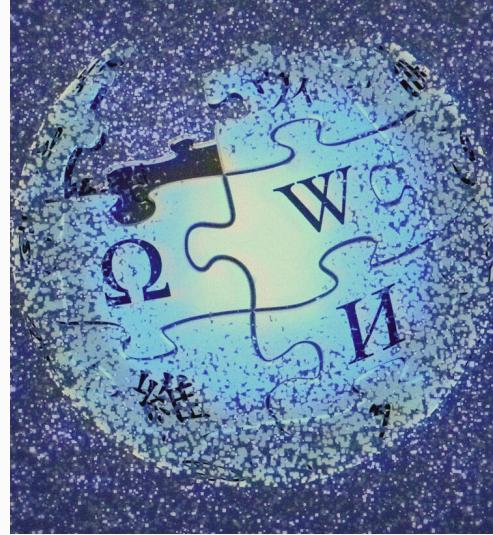
The "YouTube Playlist QnA Bot" aims to address the challenge of efficiently extracting relevant information from YouTube playlists. Leveraging Generative AI, particularly the RAG (Retrieval-Augmented Generation) model and LLaMA Index, the bot will retrieve and generate answers to user queries based on the content of YouTube playlists, enabling seamless interaction and retrieval of information from within the platform.



# Project 3: Wikipedia QnA Bot



The Wikipedia QnA Bot aims to provide accurate and informative responses to user queries by leveraging generative AI technology. By analyzing vast amounts of Wikipedia articles, the bot generates contextually relevant answers to questions asked by users, facilitating easy access to information and enhancing the user experience.



# Programming Language and Tools



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**Minimum Eligibility:** Basic Python Programming Proficiency