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Section: BSDS-4A

Lab 11-Task

1. LangChain

LangChain is a framework for building applications using Large Language Models (LLMs). It helps developers chain LLMs with tools like APIs, databases, memory, and more to create complex AI applications such as agents, chatbots, or retrieval systems.

2. RAG (Retrieval-Augmented Generation)

RAG is a technique that retrieves relevant information from a database or documents before passing it to an LLM for generation. It enhances LLM accuracy by grounding answers in external knowledge.

3. LLMs (Large Language Models)

LLMs are deep learning models trained on massive text datasets to understand and generate human-like text. Examples include GPT-4, BERT, and LLaMA.

4. FAISS

FAISS (Facebook AI Similarity Search) is a library for efficient similarity search and clustering of dense vectors. It's commonly used in AI to quickly find documents or items most similar to a given query vector.

5. Vector

A vector is a numerical representation of data (like text or images) in multi-dimensional space. Vectors are used to compare semantic similarity between different items.

6. VectorDB

A Vector Database is a specialized storage system for vectors that supports similarity search. Examples include FAISS, Pinecone, and Weaviate.

7. Generative AI

Generative AI refers to models that can create new content such as text, images, audio, or code. Examples include GPT (text), DALL·E (images), and Jukebox (music).

8. GANs (Generative Adversarial Networks)

GANs are a type of generative model where two neural networks, a generator and a discriminator, compete to produce realistic synthetic data. Used in art, deepfakes, and super-resolution tasks.