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*Lab Task 11*

**Difference between**

**1. Lang-Chain**

**2. RAG 3. LLMs**

**4. FAISS 5. Vector**

**6. VectorDB 7. Generative AI**

**8. GANs**

• LangChain

LangChain is a framework for building applications that are based on language models. It provides tools for "chaining together" elements such as LLMs, prompt templates, memory and data sources external to the programming language.

• RAG

RAG uses both retrieval techniques and generative models to retrieve relevant documents from a knowledge base and use them as contextual data for the language model to provide more accurate responses.

• LLMS

LLMs are AI models trained on vast amounts of text data to understand and generate human-like language. Examples include GPT-4, BERT, and LLaMA.

• FAIS

FAISS (Facebook AI Similarity Search) is a library for efficient similarity search and clustering of dense vectors. It is popularly used to find related documents in vector databases.

• Vector

In artificial intelligence (AI), a vector is a numerical representation of data (e. g. text or image) in a high-dimensional space used for comparison of similarity between objects.

• Vecter DB

A VectorDB is a database that stores and retrieves vectors efficiently. It lets you do similarity searches (by storing vector embeddings of the data) and can be fast to query. Examples are Pinecone, Weaviate and FAISS.

• Generate AI

Generative AI refers to models that can generate new content (text, images, music or code ). This includes the tool set GPT for text and DALLE for images.

• GANS

GAN is a kind of generative AI in which two neural networks ( a generator and a discriminator ) are used in a game - like architecture to generate realistic synthetic data.