Vector Stores:

Vector Stores

Vector stores are specialized databases that store embeddings and support fast similarity search. They are critical in RAG pipelines for retrieving the most relevant context chunks based on a user's query.

Vector Stores

❏ **What it is**

- Databases that store **vector embeddings** and support **similarity search**.

❏ **Why it's important**

- Acts as the knowledge base that stores indexed documents in vector format, enabling efficient search.
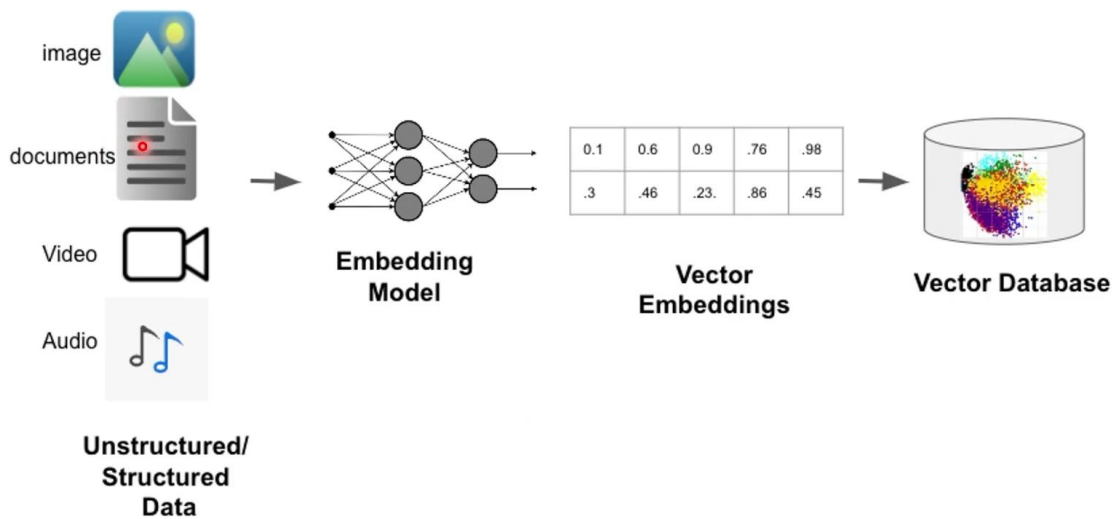
❏ **Examples**

- FAISS (Facebook AI Similarity Search)
- Pinecone
- Chroma
- Weaviate
- Qdrant

Chroma

Pinecone

Weaviate

FAISS
Scalable Search With Facebook AI

Milvus

What is Vector Database
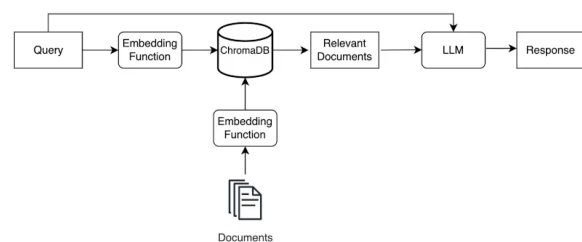
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What is ChromaDB?

ChromaDB – Lightweight Local Vector Store for AI Apps

❑ Open-source vector database written in Python.

❑ Ideal for local development and prototyping.

❑ Supports document storage with metadata.

❑ Integrated with LangChain and LlamaIndex.

❑ Backed by DuckDB for persistence (optional).

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Key Features of ChromaDB

❑ **Simple API**: Add, update, and query vectors with ease.

❑ **Local-first**: Runs in memory or with disk-based DuckDB.

❑ **Document-aware**: Supports documents, metadata, and embeddings.

❑ **Python-native**: No setup or external services needed.

❑ **Integrations**: Works seamlessly with LangChain and LlamaIndex.

Use Cases for ChromaDB

❑ Local RAG pipelines (e.g., PDF/chatbots).

❑ Streamlit or notebook-based assistants.

❑ AI research tools and semantic memory stores.

❑ MVPs and offline demos.