

# **What is a Vector Database?**

A vector database is a specialized type of database designed to store and retrieve high-dimensional vector embeddings. These embeddings are numeric representations of unstructured data (like text, images, audio) generated using machine learning models. Unlike traditional databases that use exact matching, vector databases perform similarity searches using metrics like cosine similarity or Euclidean distance. They are essential in applications like semantic search, recommendation systems, and retrieval-augmented generation (RAG).

Examples: ChromaDB, Pinecone, FAISS, Weaviate.