

# **Vector Databases and Similarity Search**

## **What is a Vector Database?**

A vector database stores embeddings for fast semantic search.

## **Embeddings**

Numerical representations of meaning produced by ML models.

## **Similarity Metrics**

Cosine similarity, dot product, and Euclidean distance are commonly used.

## **Indexing Techniques**

Approximate Nearest Neighbor (ANN) indexes improve retrieval speed.

## **Role in RAG**

Vector databases retrieve context documents for LLM generation.