Vector Store Vs Vector Databases

Vector Store

What it is

A lightweight library or tool focused on storing and searching vectors efficiently

Core Function

Simple similarity search - find the K nearest neighbors to a query vector

Architecture

Usually runs in-memory or as a local file, single-machine operation

Best For

Prototypes, research, small applications with <1M vectors

Vector Database

What it is

A full-featured database system designed for vector data at scale

Core Function

Advanced search with filters, metadata queries, and database operations

CRUD

Architecture

Distributed system with replication, sharding, and high availability

Best For

Production systems, enterprise applications, billions of vectors

Quick Comparison

SCALE		SETUP TIME		COST	
~1M vectors	Billions+	Minutes	Hours/Days	Free/$	$$$/$$$$
QUERY SPEED		FEATURES		DEPLOYMENT	
Microseconds	Milliseconds	Basic Search	Full CRUD	Local	Cloud

Popular Examples

Vector Stores

FAISS · Annoy · ChromaDB · ScaNN · NMSLIB

Vector Databases

DATASTAX

Pinecone · Weaviate · Qdrant · Milvus · Vespa

Use Vector Store When

- → Building a proof of concept
- → Working with < 1 million vectors
- → Need fastest possible search speed
- → Have limited budget
- → Want full control over the implementation
- → Building embedded applications

Use Vector Database When

- → Building production applications
- → Need to scale beyond millions of vectors
- → Require high availability & reliability
- → Need advanced filtering & metadata search
- → Have multiple users/tenants
- → Want managed infrastructure

The Simple Rule

Start with a Vector Store for prototyping and learning. Graduate to a Vector Database when you need production-scale features, reliability, and advanced querying capabilities.