Open Source Vector Databases

01

Vector databases, also known as vectorised databases or vector repositories, they are specifically designed to handle vector data efficiently.

02

A vector represents a mathematical representation of an object in multidimensional space. Each dimension of the vector represents a specific attribute or property of the object.

03

Vector databases are particularly useful for processing and querying high-dimensional data,

Pinecone

01

Pinecone is a cloud-based vector database that provides vector similarity search as a service. It is designed for real-time applications and supports high-dimensional vector data.

02

Pinecone Vector databases can be used with multiple programming languages and machine learning frameworks, enabling integration with existing applications.

03

Pinecone Vector databases can scale to handle large data sets and large queries. This makes them suitable for commercial applications.

Milvus

01

Milvus is an open source vector database designed to facilitate vector embedding, efficient similarity search, and artificial intelligence applications.

02

Milvus is optimized for similarity search operations, allowing users to find vectors that are most similar to a given query vector. This is particularly useful in applications like recommendation systems, image retrieval, and natural language processing.

03

Milvus can be deployed in a distributed manner, enabling users to build scalable and resilient vector database systems.

Chroma

01

Chroma DB is an open-source vector storage system (vector database) designed for vector-embedded storage and retrieval. Its main function is to store attachments and related metadata for subsequent use in language models.

02

Supports different underlying storage options like DuckDB for standalone or ClickHouse for scalability.

03

Chroma can be used with Python or JavaScript code to generate word embeddings. It has a simple API that can be used against the database backend that's running in-memory or in client/server mode.

Weviate

01

Weaviate is a cloud-based open-source vector database that is flexible, scalable and fast. The tool can convert text, photos and other data into a searchable vector database using cutting-edge machine-learning models and algorithms.

02

Weaviate modules allow the use of services and model hubs such as OpenAI, Cohere or HuggingFace, as well as native and custom models.

03

Weaviate has integrated generative search capabilities, so that the retrieval and generation steps are combined into a single query (RAG).

Qdrant

01

Qdrant is a vector similarity search engine that provides a production-ready service with a convenient API to store, search, and manage points (i.e. vectors) with an additional payload.

02

By effectively mixing high-dimensional vectors, Qdrant may power recommendation engines and is appropriate for personalised content recommendations in platforms like social media, e-commerce, and streaming services.

03

Even under severe loads, Qdrant is a robust fast vector store due to the fact it was coded in Rust.

Kdb.AI Cloud

01

KDB.AI Cloud enables users to bring temporal and semantic context and relevancy to their AI-powered applications.

02

KDB.AI Cloud works seamlessly with popular LLMs and machine learning workflows and tools, including LangChain and ChatGPT.

03

KDB.AI Cloud is built to handle high-speed, time-series data and multi-mode query data processing.

Deep Lake

01

Deep Lake is a Database for AI powered by a storage format optimized for deep-learning applications.

02

Deep Lake can be used for storing data and vectors while building LLM applications & managing datasets while training deep learning models

03

Deep Lake works with data of any size, it is serverless, and it enables the user to store all of their data in their own cloud and in one place.

The Landscape of Vector Databases

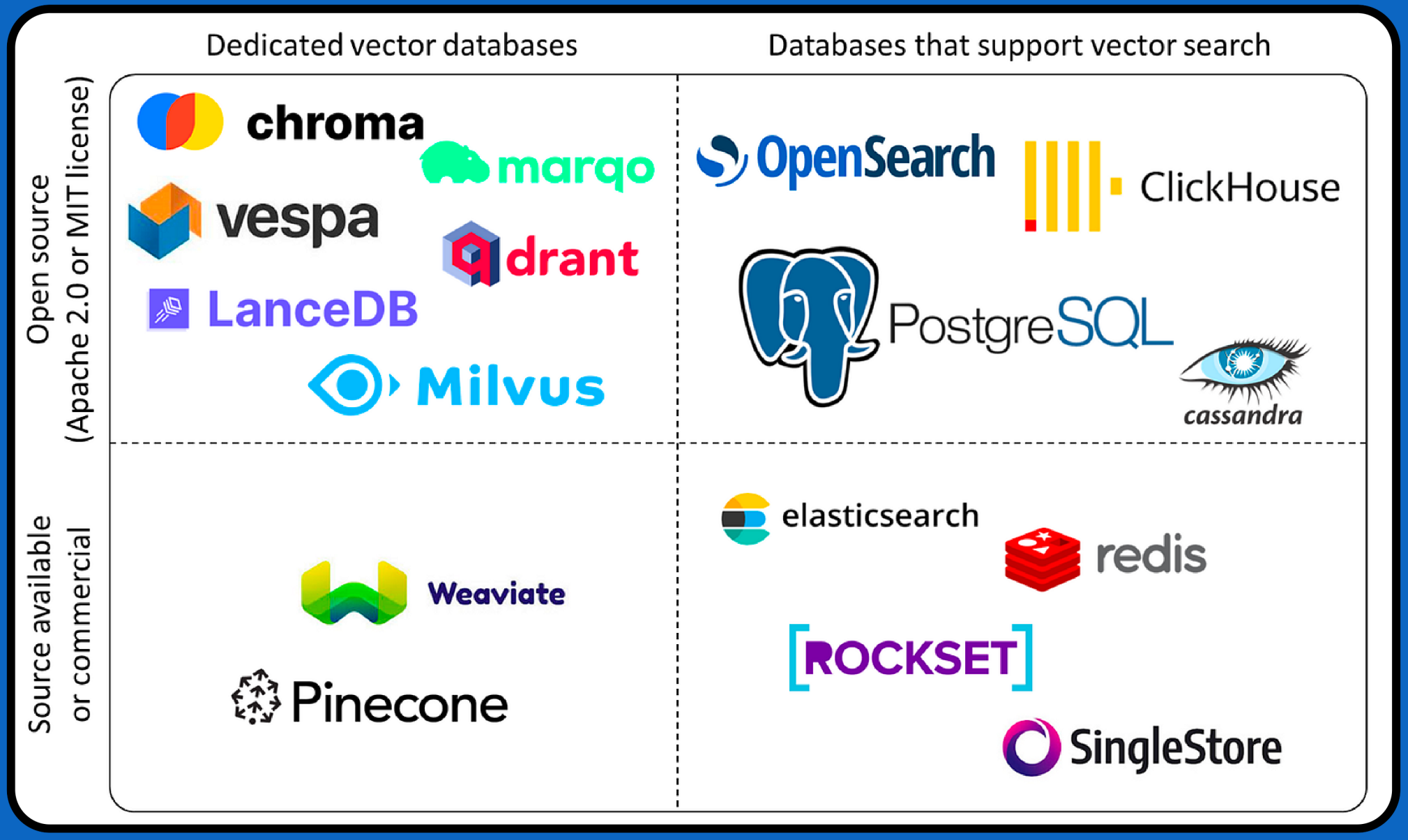

Image Source: https://blog.det.life/why-you-shouldnt-invest-in-vector-databases-c0cd3f59d23c

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