



Types of Databases

Blockchain **Database**

- Ensures data integrity and security
- Supports decentralized applications Ideal for transactional
- Examples:- BigchainDB Chainbase

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Database

- -
- Structured data storage and retrieval and retrieval Supports ACID properties
- for transaction
- Uses relational data
- MySQL
 Examples:- Microsoft SQL Server

Blockchair

Darabase

Columnar **Database**

- Optimised for reading/writing columns of data
- Efficient in analytical and OLAP systems Compresses data for

Amazon Redshift Apache Cassandra Examples:- .

NewSQL Database



- Combines SQL reliability with NoSQL scalability
- Supports ACID transactions at scale
- analytics

• Google
Examples:- Spanner
• CockroachDB

In-Memory Database

- Stores data in RAM
- for speed Offers ultra-fast data processing Suitable for real-
- time analytics Volatile or persistent storage options
- · SAF Examples:- HANA
 • MemSQ

Spatial Database



- Stores and queries
- spatial data types Supports location-based services and
- Enables spatial
- indexing and querying Used in mapping and navigation
- PostGIS

Examples:- • Oracle Spatial

Vector Database

- Optimized for vector
- data storage Supports Al and machine learning
- models Enables fast
- similarity search Used in image and voice recognition
- Examples:- Milvus
 Pinecone

Vector Database

In-Memory Database

ime-series Database

Key-Value Database

Database

Database

Hewsal

Database

Spatial Database

Oriented Dandodse

Graph Database Graph Database

- Stores data in nodes and edges Optimized for
- complex relational queries Supports network and social graph analyses Ideal fo recommendation
 - systems

Examples:- *

Time-Series **Database**

- Supports metrics and
- event tracking
- Ideal for IoT and
- monitoring applications

 Efficient in data
- aggregation over time
- InfluxDB Examples: - • TimescaleD

Key-Value Database

- Stores data as key
- value pairs Fast access via key
- lookup Suitable for caching and session storage
- Examples:- Amazon
- Redis DynamoDB

Document Database



- Stores data in document-like structures Schema-less, flexible data model Ideal for content
 - management systems Supports JSON, XML
- Examples:- * MongoDB Couchbase

Object-**Database**



- Stores data as objects Supports complex data
- types Aligns with objectoriented programming

 Used in Engineering

Examples:- • db4o • ObjectDB