

BSON vs JSON – One Page Visual Cheat Sheet

■ What is BSON?

BSON (Binary JSON) is a binary-encoded format used by MongoDB to store and transfer data. It extends JSON by adding more data types (like ObjectId, Date, Binary, etc.) and is optimized for fast parsing and encoding in databases.

■ Example

Format	Example
JSON	{ "name": "Mitesh", "age": 25, "active": true }
BSON	\x16\x00\x00\x00\x02name\x00\x06\x00\x00\x00Mitesh\x00\x10age\x00\x19\x00\x00\x00\x08active\x00

■■ BSON vs JSON Comparison

Feature	JSON	BSON
Full Form	JavaScript Object Notation	Binary JSON
Format Type	Text (UTF-8)	Binary
Readability	Human-readable	Machine-readable
Supported Data Types	Limited (string, number, boolean, etc.)	Extended (ObjectId, Date, Decimal128, Binary, etc.)
Speed	Slower parsing	Faster parsing & encoding
Size	Compact for small data	Slightly larger due to metadata
Use Case	APIs, config files	MongoDB internal storage
Example Use	Data exchange over web	Database storage & queries

■ Summary

JSON: Lightweight and easy to read, used for web communication. **BSON:** Extended binary form of JSON, optimized for MongoDB with richer data types. **Key Idea:** *BSON = JSON + Binary Efficiency + Extra Data Types*