Brij Kishore Pandey
@brijpandeyji **in**

COMPREHENSIVE GUIDE

JSON
VS
TOON

Token-Oriented Object Notation

Introduction

This document provides a comprehensive comparison between JSON (JavaScript Object Notation) and TOON (Token-Oriented Object Notation). As LLMs evolve into agentic systems, the need for token-efficient, model-friendly data formats increases. TOON is designed specifically to address the limitations of JSON when used inside LLM prompts, agent memory, RAG workflows, and multi-agent orchestration.

What is JSON?

JSON is a widely used, human-readable data interchange format originally designed for APIs and configuration. It relies heavily on braces, quotes, commas, and repeated keys, which increases token usage in LLM contexts. JSON is excellent for structured storage but not optimized for prompt efficiency.