KARTIK KUMAR

Senior Backend Engineer

New York City, NY | kartik@axsysllc.com | kartik.sh | github.com/kartikk221 | linkedin.com/in/kartikk2

Software engineer building backend systems, mobile applications, and open-source infrastructure. Creator and maintainer of HyperExpress, a Node.js HTTP/WebSocket framework.

CORE SKILLS:

Backend: Node.js, MySQL / MariaDB, Redis / Lua, HTTP / WebSockets

Systems: Linux, worker threads, process orchestration, CPU / memory profiling, native add-ons

Mobile: React Native / Expo, Objective-C / Java native modules, APNS / FCM

EXPERIENCE:

Founder & Principal Software Engineer - AXSYS LLC **November 2020-present**

- Founded AXSYS LLC and owned product development end-to-end as its sole developer and technical lead, from implementation and launch through ongoing operation.

Zyrable

- Built Zyrable's ingestion, processing, and fanout pipeline, with WebSocket streaming and inter-service communication.
- Used queueing, backpressure, rate limits, and isolated CPU- and memory-heavy work to manage bursty workloads.

Resellify

- Implemented notification routing with in-memory dispatch, Redis caching, and direct delivery to APNS and FCM.

Supply - Co-Founder / Developer

- Joined Supply as a commissioned developer and later became a co-founder.
- Built Supply's React Native application for sneaker news, release information, and real-time alerts.

defye - Freelance Software Developer **April 2018-October 2021**

- Delivered production websites and operational dashboards through defye, covering frontend, backend, integrations, and deployment.

OPEN SOURCE:

HyperExpress

- HyperExpress combines an Express-like JavaScript API with uWebSockets.js for HTTP and WebSocket services. It includes routing, middleware, server-sent events, multipart uploads, and TLS host support. Compatibility with Express middleware is partial.
- The project documents separate runtime, TypeScript, and load-test commands. Its load gate covers HTTP, multipart handling, aborts, WebSockets, and memory stress.

2K+ GitHub stars; 5K+ npm downloads in the week of September 10-16, 2026. GitHub snapshot: September 18, 2026.

EDUCATION:

B.S. Computer Science - CUNY College of Staten Island, September 2021-December 2023.

Co-created SchoolCrypt with Anthony Squillacioti and David Remyes, the 2018 Congressional App Challenge winner for New York's 11th District.

Selected engineering detail

HyperExpress / public technical evidence

NATIVE LIFECYCLE

Native request objects are only valid inside their callback. HyperExpress copies request metadata at entry and guards response operations after completion. Incoming callback memory must be copied before it is retained.

The native lifecycle contract tracks listen-token ownership and forbids closing foreign or already-closed handles. Shutdown is designed to avoid duplicate native closes.

COMPLETION AND STREAMING

Version 7 prevents middleware from advancing the chain twice when callbacks and promises both complete. The migration guide also documents serialized multipart handlers and single-settlement error propagation.

The v7 migration guide describes a bridge between Node stream and native backpressure, with source cleanup when a response aborts.

WEBSOCKET PAYLOAD OWNERSHIP

WebSocket payload ownership is explicit: callback-lifetime ArrayBuffer messages are distinct from copied ArrayBufferSafe messages that can survive asynchronous work. This exposes a choice between retention safety and copying.

MAINTENANCE AND VERIFICATION

The HyperExpress repository was created in April 2021; its public history includes updates in July 2026.

Version 7 supports Node.js 22, 24, and 26, preserves CommonJS and snake_case APIs, and pins uWebSockets.js to v20.69.0.

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SOURCE MATERIAL

Repository and documentation

Native lifecycle contract

Version 7 migration guide

Resellify by AXSYS LLC

AXSYS product work

Technical descriptions summarize documented project behavior; no benchmark speedup or production SLO is asserted. Adoption figures are dated observations.