

Harsh Dabas

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Summary

Full-Stack Engineer with a proven track record of shipping end-to-end features, optimizing high-traffic web applications and right-sizing cloud infrastructure. Specializing in **TypeScript, React, Node.js and Go**, with a primary focus on **dropping operating costs, eliminating UI render bugs** and engineering **highly efficient data pipelines** under strict resource limits.

Work Experience

Pixelwand Studio | Software Engineer Intern

(Aug 2025 – Feb 2026)

- Migrated campaign messaging workflows from managed cloud streams (**AWS MSK**) to a self-hosted distributed queue architecture (**BullMQ/Redis**), resolving system blocking during peak traffic and **cutting infrastructure costs by 82%** (~\$820/month).
- Engineered asynchronous worker processing pipelines to execute heavy background campaigns, utilizing **strict per-task throttling** to maintain **100% compliance with external API rate limits**.
- Implemented **database-level transaction locking** and idempotency keys across distributed checkout pathways, preventing race conditions and maintaining absolute **transaction integrity** during concurrent checkouts.
- Architected product interfaces using **Next.js** and **React** while refining integrated **LLM core prompts**, directly driving increased user engagement across consumer platforms.
- *Secured a full-time Backend Engineer offer based on architectural impact.*

Beta Test Solutions Pvt. Ltd. | Software Engineer Intern

(Mar 2025 – Apr 2025)

- Refactored core **PostgreSQL** database schemas and data retrieval logic for a live trading application, **reducing API response latencies by 36%** under peak user traffic.
- Re-engineered frontend data-fetching layers and isolated UI states, accelerating peak-traffic interface rendering speeds and **reducing client-side bug reports by 30%**.

Business Web Solutions | Web Developer Intern

(Jan 2023 – Jan 2024)

- Developed client-facing trading dashboards using modern **JavaScript frameworks**, optimizing client-side state architectures to **drop page load times by 20%**.

Projects

High-Throughput Data Ingestion Service (Go, UDP, OS I/O)

🔗 [Repository](#)

- Developed a **zero-allocation** data collection service designed to capture continuous 1000Hz hardware sensor arrays without performance degradation.
- Achieved a **600+ MB/s write throughput** by streaming raw payloads directly to an append-only binary file format.
- Eliminated runtime garbage collection pauses by utilizing a recycled **sync.Pool** allocation architecture to process **1.55 GB of incoming network telemetry** over 24 hours.

Code-to-PDF Documentation API (Go, Worker Pools, Typst)

🔗 [Repository](#)

- Built a highly concurrent documentation and PDF generation engine using **Go**, processing text to PDFs via memory buffers for stdin/stdout to **remove disk write bottlenecks entirely**.
- Sustained a secure throughput of **90+ PDFs per second** across 12 CPU cores by implementing **fixed worker pools** and strict timeout controls to halt infinite execution loops.

Skills

- **Languages:** TypeScript, JavaScript, Go, Python
- **Frontend Engineering:** React, Next.js, Redux, TailwindCSS
- **Backend & Architecture:** Node.js, Microservices, RESTful APIs, BullMQ, Redis, Kafka, NATS
- **Databases & Infrastructure:** PostgreSQL, MongoDB, Linux, Docker, AWS

Education

PDM University Bachelor of Technology (BTech) in Computer Science

June 2026