

BHARATH KUMAR MERIGALA

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Summary

Highly curious and passionate Computer Sciences student with a solid grasp of low-level computer science concepts and algorithmic problem-solving skills, proven through completion of 400+ problems on Data Structures & Algorithms and Projects. Ambitious to start a full stack web development career with a desire to code and design scalable web solutions.

Education

Vellore Institute of Technology

B.Tech in Computer Science and Engineering CGPA: 8.65

Sep 2022 – Jun 2026

Chennai, Tamil Nadu

Sri Chaitanya Junior College

Maths, Physics and Chemistry Score: 97.7%

Jun 2020 – May 2022

Khammam, Telangana

Technical Skills

- **Core Stack:** Node.js, TypeScript, Next.js, C++ (DSA), JavaScript, Python
- **Backend Systems:** Redis (Caching/Rate-limiting), WebSockets, REST APIs, WebHooks, DBMS
- **Databases:** PostgreSQL, MongoDB
- **DevOps & Tools:** Docker, Git, CI/CD, Postman, Linux (Fedora/Arch) , NeoVIM

Work Experience

Software Engineer Intern (Full Stack)

Suminite Holdings — aptiandapti.com

June 2025 – July 2025

Howrah, West Bengal

- **End-to-End Ownership:** Owned the development of the global ranking module, translating fuzzy business requirements into a concrete technical design and delivering the solution independently.
- **Performance Optimization:** Diagnosed slow query performance on large datasets and implemented **MongoDB indexing**, improving response times by **40%** for the leaderboard API.
- **Agile Execution:** Participated in regular product reviews and iterative sprints to incrementally build features, ensuring alignment with changing business goals.
- Wrote clean, modular TypeScript code to implement search and filtering, enhancing code reusability for future modules.

Projects

Multi-Tenant Insights – SaaS Analytics Platform 🌀 | *Next.js, Node.js, Redis, Python (ML)*

Oct 2025

- Built a multi-tenant backend using **Node.js** and **PostgreSQL**, utilizing **Shopify Webhooks** to sync real-time order data with strict tenant isolation.
- Engineered an asynchronous job queue using **BullMQ** and **Redis** to offload database synchronization tasks, preventing server blocking during high traffic.
- Developed a **Python** ML model with **Scikit-learn** to perform **RFM analysis** and **K-Means clustering**, automating customer segmentation (e.g., "Champions", "At-Risk").
- Integrated **SendGrid API** to trigger automated, targeted email campaigns based on ML-derived user segments.

TickingTickets – Event Booking Platform | *Next.js, Node.js, PostgreSQL, Redis, WebSockets, Bull*

Nov 2025

- Architected a high-concurrency backend using **Node.js** and **PostgreSQL**, optimizing search performance with **raw SQL queries** and **ILIKE** filtering.
- Engineered a two-stage seat locking mechanism (Hold → Reserve) using **Redis Sets** and **Bull Queues** to prevent race conditions during flash sales.
- Developed a real-time availability service using **WebSockets**, synchronizing seat states across clients instantly to eliminate double-booking risks.
- Integrated **Razorpay** for secure payments and implemented robust **JWT authentication** with **HTTP-only cookies** for session security.