Shiva Raghav Rajasekar

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Education

Illinois Institute of Technology- Chicago, IL	May 2026
Object-Oriented Design , Data Structures and Algorithms, Operating Systems	**GPA:3.73**
College of Engineering, Guindy Anna University, Chennai, India	May 2023
Computer vision, machine learning, Object Oriented Programming	**GPA:3.8**

Work Experience

Mermory July 2025 – Present

Software Developer Intern

– Developed SEO-optimized landing pages using Next.js, React, and TypeScript, improving crawlability and boosting Lighthouse SEO scores by 20+ points.
– Built a Node.js-based transformation layer to fetch and cache data from Strapi CMS (hosted in a private VPC) into Redis, reducing content retrieval time by 50%.
– Implemented dual sync mechanisms using webhooks and scheduled polling, ensuring real-time consistency and high availability of CMS content for server-rendered pages.

Illinois Institute of Technology Jan 2025 – June 2025

Graduate Developer

– Managed and developed the college website using Next.js and React, ensuring modern user interfaces and responsive design.
– Assisted in the migration of the college's legacy website to a new Next.js platform, improving performance, scalability, and user experience.

Agnikul Cosmos July 2023 – June 2024

Software Developer

– Accelerated interface validation by 35% for Agnibaan launch vehicle by building async microservices using Node.js, Redis, and GraphQL APIs, enabling engineers to run real-time compatibility checks across mechanical, electrical, and fluidic subsystems.
– Boosted debugging efficiency by 25% by building a React + TypeScript interface with GraphQL and Material UI, visualizing real-time inter-component dependencies and enabling engineers to identify failure points with precision.

Open Source Contributions

– Implemented a sliding-window rate limiting system for LLM requests in the Void IDE, preventing API overload and enabling user-configurable request caps via settings.
– Integrated real-time user notifications, automatic cleanup, and concurrency-safe request handling across services — improving stability and reducing runtime API failures.
  GitHub PR: https://github.com/voideditor/void/pull/765

Projects

AI Resume Analyzer – RESUMID June 2025 – Ongoing

– Built a full-stack AI resume analyzer using React 19, TypeScript, and Claude AI, delivering real-time feedback on tone, structure, and ATS compatibility — improving resume quality by up to 60% in internal testing.
– Integrated Puter.js cloud services (Auth, AI, Storage, KV DB) with a pay-as-you-go model and a Tailwind + Zustand UI, enabling 100% free deployment and boosting user engagement by 40% with features like drag-and-drop uploads and animated feedback.

Satellite Collision Prediction Platform Mar 2025 – June 2025

– Engineered a full-stack satellite collision risk dashboard using FastAPI, Skyfield, and PostgreSQL, visualizing real-time orbit data via CesiumJS.
– Engineered a scalable backend to analyze 11,643 satellites and 135M+ orbit pairings for potential collision risks. Optimized spatial computations to reduce processing time by 85% using distributed querying and scheduled batch processing.

Real-Time Messaging Platform Jan 2025 – Mar 2025

– Developed a real-time, scalable messaging platform using React, Express, MongoDB, and Socket.IO, enabling 1:1 messaging with instant delivery, read receipts, and persistent chat history via RESTful APIs.
– Integrated Stripe Checkout and Webhooks, enabling 100% secure payment processing within the app; streamlined payment flow reduced transaction time by ~40%, supporting in-chat purchases and receipts.

Technical Skills

Programming Languages: TypeScript, JavaScript, Python, Java, HTML5, CSS
Frameworks/Libraries: Node.js, Next.js ,React ,Flask ,Material UI ,ExpressJS ,Tailwind CSS ,Bootstrap
Other Tools and Technology: OpenAI APIs, LangChain, Embeddings, ChromaDB, Vector Search, Cursor, REST API, Swagger, Git, GitHub Actions, Docker, Jenkins, GCP, AWS, Redux, Jira, MySQL, PostgreSQL, JUnit