

AAYUSH KUMAR

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Education

Vellore institute of technology

B.Tech in Computer Science and Engineering

Vellore, Tamil Nadu

Jun 2024 – May 2028 (Expected)

Technical Skills

Languages: Python, Go, JavaScript, C, C++, SQL

Frameworks & Libraries: Django, Flask, React.js, Next.js, Express.js, Node.js

Tools & Technologies: Docker, Kubernetes, PostgreSQL, MongoDB, Redis, Socket.io, CI/CD, Git, Linux

Experience

Yuusoft

Jul 2025 – Aug 2025

Software Engineer Intern

Remote, Singapore

- Engineered an AI-assisted automation tool using Discord + Claude to modify code, generate patches, and push Git commits via natural language, significantly improving developer workflow efficiency.
- Built core backend and platform features for Yuusoft's visual novel creator tool, including scene-management logic, input-processing pipelines, and structured data flows.
- Improved platform performance and responsiveness by optimizing state management and render paths, reducing UI latency and unnecessary re-renders by 30% and improving overall UX reliability..

Google Summer of Code 2025 - Open Source Contributor

May 2025 – Sep 2025

AboutCode

Remote, United States

- Developed a high-performance file-system explorer for ScanCode.io using HTMX and Django, enabling fast navigation of large scanned repositories.
- Implemented lazy loading, optimized directory traversal, and server-side caching, reducing API response times by 35-45% for deeply nested directory structures.
- Refactored backend logic to improve responsiveness, maintainability, and throughput, enhancing user experience and platform efficiency.

Projects

Torrcli - Terminal-Based BitTorrent Client | *Python, libtorrent, rich* | [GitHub](#)

- Built a daemon-based BitTorrent CLI client with robust session management, capable of handling multiple concurrent torrents with real-time status updates.
- Implemented end-to-end torrent workflows (search, metadata retrieval, streaming, and downloads), reducing startup and metadata fetch latency through efficient async I/O and session reuse.
- Designed a resilient terminal interface with real-time progress views, session metrics, and error-tolerant command handling for a production-grade CLI experience.

Kargo - Open-Source PaaS on Kubernetes | *TypeScript, Express.js, Next, MongoDB, Docker, Kubernetes* | [GitHub](#)

- Developed core backend services for an open-source PaaS platform that automatically deploys user-provided Docker images onto Kubernetes, building secure APIs for authentication, deployment orchestration, and lifecycle management.
- Engineered automatic Kubernetes manifest generation (Deployments, Services, Ingress, volumes, secrets), eliminating manual cluster interaction and cutting deployment setup time by 60%.
- Improved deployment stability, scalability, and observability by adding container-status monitoring, error-resilient rollout logic, and health-check mechanisms to ensure a reliable and production-grade application.

Vellorun - Gamified Exploration App | *React Native, Django, Python* | [GitHub](#)

- Built the backend for a gamified exploration app using Django and Python, implementing APIs for authentication, user profiles, XP progression, badges, and location-based gameplay logic.
- Optimized database queries, caching, and request flows to reduce average API response times by 30%, ensuring smooth map interactions and gameplay updates.
- Integrated an AI-powered recommendation system that suggests personalized locations based on user behavior, enhancing engagement and overall app retention.

Achievements & Extracurricular

- Member – GDG on Campus, VIT:** Selected in the **Cybersecurity** domain; contributing to workshops and technical sessions.
- Volunteer – Gravitas Website Team:** Contributed to backend development for VIT's annual technical fest platform used by thousands of attendees.
- Winner – Cicada 3301 (CTF Competition):** Secured **1st place** in a university-wide cybersecurity and problem-solving challenge.
- Third Place – Coderush 2.0 (Competitive Coding):** Achieved **3rd place** in the university-wide coding competition focused on algorithms and logic building.