Sidharth Kumar Singh

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Computer Science Undergraduate

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EDUCATION

• Indian Institute of Information Technology, Lucknow B. Tech in Computer Science - CGPA: 8.76/10

Aug 2023 - May 2027

• GraphiteEditor ☑ | Rust, WebAssembly, TypeScript

Open-Source Contributor

- Added comprehensive vector path closing functionality via Ctrl+J shortcut, enabling automatic endpoint connection for 2 selected points or 2-endpoint subpaths across different layers
- Developed robust layer merging system that handles 3 path-type combinations (spline-spline, path-spline, path-path) while maintaining geometric properties and node graph structures.
- o Authored and integrated over 10 automated tests into the GraphiteEditor codebase, improving reliability and preventing regressions across key vector editing features.

Projects

• Affinity 🗹 | React, Rust, PostgreSQL, Kubernetes, Docker, Jenkins, Socket.IO, Redis, gRPC

- o Overview: Architected a full-stack social hub connecting 100+ users with shared interests, leveraging React for a responsive front-end and Rust for high-performance back-end tasks, reducing data processing time by 30%.
- Designed a scalable chat system with microservices communicating via gRPC, enabling modular architecture and efficient data retrieval from PostgreSQL and ScyllaDB through dedicated services, reducing average RPC latency to 30% of equivalent REST calls.
- Supports deployment with Kubernetes and Helm for orchestration and rolling updates, achieving 99.9% uptime in a scalable architecture supporting concurrent user interactions and real-time analytics.
- Crafted a powerful and customizable Discord bot 🗹 designed for seamless interaction and automation within the Affinity Discord server, featuring 6 core modules.

• Soundscore 🗹 | Solana, Next.js, PhantomWallet, Anchor, TypeScript, Tailwind

- o Overview: Launched SoundScore: a paid music evaluation platform with 4 integrated modules—Global Ratings, Listener Rewards, Smart-Contract Payments, and Auctions—enabling artists to commission song evaluations and listeners to earn incentives for their feedback.
- o Leveraged Solana, PhantomWallet, and Anchor to manage payments and reviews, ensuring fast transactions with up to 50% lower fees than traditional payment systems.
- o Developed a responsive and intuitive interface using Next.js, TypeScript, and Tailwind. Optimized design and performance reduced load times by 40%, ensuring seamless interactions for artists and listeners.

Achievements

Completed Hacktoberfest 2024 with 4 PRs merged in the Hyperswitch project.

Won the 1st prize in the **Best AI Implementation** track at UP-AISpire hackathon.

cpprofile 🗷

- Rated as Specialist on Codeforces.
- Achieved a **3-star** rating on CodeChef (max rating: 1712).
- Awarded Shubhra Khar Linux Foundation Scholarship 2024.
- Secured 1st prize in Linux Ricing contest initiated by Equinox, the techfest of IIIT, Lucknow.

SKILLS & OTHERS

- Languages: Rust, JavaScript, Python, C++, Java, TypeScript, SQL, Bash
- Frontend: React, NextJS, Tailwind, Accernity UI, Bootstrap, Shaden, Ratatui
- Backend: Express.js, Axum, SpringBoot
- Database: MongoDB, MySQL, PostgreSQL, Firebase
- Cloud & DevOps: AWS, Docker, Kubernetes, Git, Linux, Jenkins, Nginx, Github Actions
- Soft Skills: Teamwork, Communication, Initiative, Leadership
- Relevant Coursework: Operating System, Compiler Design, Database Management System, Object Oriented Programming, Data Structures

Positions of Responsibility

• Member - Axios FOSS Wing, IIIT Lucknow |

Aug 2024 - Present

o Took the lead in organizing logistics and running interactive, hands-on sessions on open-source tools and contributing to FOSS. Engaged with over 150 students, sparking interest in open-source and helping build a more active, enthusiastic community around it.

Contributions

Project Link

cpprofile 🗹

Link 🗹