

Jagpreet Singh Rahi

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SUMMARY

Computer Science Engineering graduate and open-source contributor with experience building full-stack web applications using **React.js**, **Next.js**, **Node.js**, and **Express.js**. Skilled in developing **RESTful APIs**, responsive user interfaces, and **SQL/NoSQL** database integrations. Contributed through **Google Summer of Code** and independent projects, with strong expertise in Git workflows, code reviews, and collaborative software development.

EXPERIENCE

GSoC Mentor **May 2026 – Present**

JSON Schema *Remote*

- Reviewing and guiding contributor pull requests for the JSON Schema ecosystem, providing technical feedback to maintain code quality and project standards.
- Supporting incoming Google Summer of Code contributors with onboarding, scoping, and implementation guidance, building on prior experience as a GSoC contributor.

Open Source Contributor & Triage Member **Jan 2026 – Present**

JSON Schema *Remote*

- Reviewed and triaged GitHub issues by validating bug reports, reproducing problems, and identifying edge cases to improve issue quality
- Collaborated with maintainers and contributors to clarify feature discussions, improve documentation, and maintain project standards
- Contributed to JSON Schema ecosystem using Git workflows, pull requests, and community collaboration best practices

Google Summer of Code Contributor **June 2025 – Aug 2025**

JSON Schema *Remote*

- Engineered an interactive JSON Schema visualization tool for Draft 2020-12, enabling developers to graphically understand complex nested structures and recursive \$ref resolutions — reducing schema comprehension time significantly.
- Implemented frontend logic to accurately process and render nested schema structures with multiple validation keywords.
- Analyzed real-world schemas and edge cases to deliver reliable, production-ready features in an open-source environment.

PROJECTS

JSON Schema Visualization Tool | View **June 2025 – Present**

- Engineered an interactive visualizer tool that parses the schema into intuitive graphical representations, supporting recursive **\$ref resolutions**, enabling real-time schema analysis and validations.
- Developed a local-only processing engine using React Flow, enabling real-time visualization of large-scale schemas without server-side data transmission.

Automated Recommendation System | View **Nov 2025 – Present**

- Developed a privacy-preserving federated movie recommendation system using IFCA clustering and knowledge distillation, achieving more accuracy improvement over FedAvg.
- Built a multi-modal BERT + ResNet50 pipeline with attention-based fusion and secure distributed training across federated clients.

ACHIEVEMENTS

- Selected for **Google Summer of Code 2025** with JSON Schema organization among global open-source contributors.
- Selected to represent college at **Smart India Hackathon (SIH)**, a national-level government innovation challenge with thousands of competing teams across India.

EDUCATION

B.E in Computer Science Engineering **Nov 2022 – June 2026**

Trinity Academy of Engineering, Pune (Final Year)

CGPA: 8.65/10.0

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, C++, Python

Frontend: React.js, Next.js, Tailwind CSS, Responsive Design

Backend: Node.js, Express.js, RESTful APIs, Client-Server Architecture, Serverless Computing (AWS Lambda, Amplify, Cloudflare Workers)

Development Tools: Git, GitHub, VS Code, Vim, Docker

Databases: MySQL, PostgreSQL, MongoDB

Core Concepts: OOPs, DBMS, Data Structure & Algorithm

Cloud: AWS S3, CloudFront (CDN)