Sneha Nagaraju

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Sneha Nagaraju — GitHub — Portfolio

TECHNICAL SKILLS

Languages: Python, Java, C++, C, Flutter, TypeScript, JavaScript, Smalltalk, Ruby on Rails

Backend & Frameworks: Node.js, Express.js, C#, Microservices, RESTful APIs

Frontend: React.js, Next.js, Angular, HTML5, CSS3, Tailwind CSS, WebSockets

Databases & Data: PostgreSQL, MySQL, MongoDB, Redis, Snowflake, Tableau, Data Modeling, Kafka, Spark

Cloud & DevOps: AWS, GCP, Azure, Docker, CI/CD

Testing & QA Tools: JUnit, Postman, Unit & Integration Testing

Collaboration: Agile/Scrum, Git (GitHub, GitLab, Bitbucket), Jira, Confluence

AI/LLM Tools: Hugging Face, RAG, Agentic AI (LangGraph, AutoGen)

EXPERIENCE

Software Engineer, *OpenSplitTime, Boulder, Colorado* **Sept 2025 – Present**

- Contributed to **OpenSplitTime.org** to improve race-day user experience streamlining live split tracking/prediction.
- Shipped full-stack features in **Ruby on Rails** with **PostgreSQL, Redis, Sidekiq, Hotwire.js** and JSON APIs, improving p95 API latency and reducing background job processing time by **70%**.
- Built a cross-platform **Flutter** app deployed on **Android, iOS, and Windows**, reducing race-day manual operations workflow time by **80%**.
- Integrated OpenSplitTime with **Raceresult** RFID timing systems by mapping event data and consuming webhooks to record timing triggers accurately in real time; supporting chip timing (RFID) and the **OST Remote iOS app**.
- Designed event-driven pipelines to ingest, process, and persist high-frequency timing data; practiced **TDD** with **RSpec**

Graduate Research Assistant – Web Developer, *LearnChemE, Boulder, Colorado* **Jan 2025 – Sept 2025**

- Architected a **scalable simulation platform** for Chemical Engineering labs, enabling 200+ students to access real-time browser-based experiments with **90% fidelity**.
- Designed **React** + **Node.js** full-stack features, integrating **Hadoop pipelines** to support multi-user concurrency.
- Partnered with faculty to define roadmap and delivered incremental releases via **CI/CD pipelines**.

Software Engineer, *Lam Research, Bengaluru* **Feb 2022 – Jul 2024**

- Built and enhanced software for **PECVD** and **ETCH** equipment for semiconductor systems using Java and Smalltalk, ensuring 95%+ real-time data reliability.
- Spearheaded a high-performance **VID Tracker** in Python (multiprocessing, async I/O), integrated with **Jenkins** CI/CD, reducing inspection turnaround time by **60%**.
- Re-engineered a legacy monolith into **containerized microservices**, improving release cadence from quarterly to bi-weekly and scaling to several daily requests.

Research Intern, *Indian Institute of Science, Bengaluru* **May 2021 – Jan 2022**

- Built an interactive **React** + **Flask dashboard** for AR/VR/MR visualization, enabling large-scale dataset analysis with real-time rendering.
- Developed **RESTful APIs** and automated Python pipelines to streamlinedata collection, boosting throughput by **90%**.
- Presented work in weekly research seminars, leading to adoption of the dashboard by two labs for ongoing projects.

EDUCATION

University of Colorado Boulder **Aug 2024 – Present**

Master's in **Computer Science** CGPA: 3.7/4

Ramaiah Institute of Technology, Bengaluru **Aug 2018 – Jun 2022**

Bachelor of Engineering in **Electronics and Communication** CGPA: 3.9/4

Women Safety System, IEEE Journal, **Mar 2023**

PROJECTS

MindBloom: Mental Health Journal Web App *Prisma, JWT, Jest, Supertest*

- Designed a secure journaling platform with **JWT authentication** and mood-tagged workflows, improving backend reliability by **40%**.
- Implemented automated tests (Jest, Supertest, Prisma mocks), increasing coverage and stability by **25%**.
- Deployed frontend on **Vercel** and backend on **GCP Cloud Run** with CI/CD via GitHub Actions.

Autonomous Research Paper Reproduction Agent *Agentic AI, PyTorch, FAISS/Chroma, PyMuPDF, Pydantic*

- Built an **LLM-driven agent** that ingests ML papers (PDF) and uses **RAG** to extract datasets, architectures, hyperparameters, and reported metrics, reducing manual experiment setup effort.
- Designed a **multi-agent orchestration** workflow with **LangGraph** to auto-generate **PyTorch** training code, run lightweight experiments, and validate outcomes, cutting reproduction iteration time by 70%.
- Implemented automated evaluation with a quantitative **reproducibility score** and **Markdown reports**, reducing metric mismatch/debug cycles by 50%.

Course Experience Exchange *Node.js, NextAuth.js, Tailwind CSS, Vercel*

- A comprehensive, **web-based platform** to help students make informed course decisions using senior feedback.
- Included ratings for each course based on Difficulty, Relevance, and Practical Knowledge.
- Search and filter with **Next.js & PostgreSQL**, enabling students to query courses with improving navigation by 30%.