Sai Akhilesh Tulluri

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EDUCATION

Northeastern University — Boston, MA, United States
Master of Science in Computer Science — *Sep 2024 – May 2026*
<u>Coursework:</u> *Programming Design Paradigms, Computer Systems*

Vellore Institute of Technology — Andhra Pradesh, India
Bachelor of Technology in Computer Science and Engineering (CGPA: 9.03/10.0) — *Aug 2020 – May 2024*
<u>Coursework:</u> *Data Structures & Algorithms, Web Development, Database Systems, Cloud Computing*

EXPERIENCE

Incoming Graduate Teaching Assistant — Sep 2024 - Dec 2024
Khoury College of Computer Sciences, Northeastern University — *Boston, MA, United States*
- Incoming Teaching Assistant for CS4500 Software Development course under the guidance of Dr. Matthias Felleisen and Dr. Benjamin Lerner.

Software Engineering Intern — Jan 2024 – Apr 2024
Jarobe Labs | Next.js, TypeScript, PostgreSQL, Vercel — *Jackson Center, OH, United States (Remote)*
- Engineered a GitHub App and web platform for a cutting-edge developer tool designed to enhance organizational security using GitHub.
- Integrated the Web Authentication API to implement a critical security feature, enabling two-factor authentication (2FA) for GitHub Pull Request approvers.

Software Engineering Intern — May 2023 – Aug 2023
DigitalFortress | Python, Django REST Framework, MySQL, AWS — *Andhra Pradesh, India*
- Enhanced the Point of Sale (POS) system's sales dashboard API latency by 50% through SQL query optimization, refining inefficient queries and reducing unnecessary database lookups.
- Orchestrated a robust CI/CD pipeline to automate unit tests, build Docker images, and deploy to GitHub Container Registry; streamlined updates with Watchtower on AWS EC2 and optimized backend API delivery using Nginx.

Software Engineering Intern, Platform Team — Nov 2020 – Apr 2022
eFuse | Node.js, Next.js, Redux, TypeScript, Python, MongoDB, AWS — *Columbus, OH, United States (Remote)*
- Mitigated potential data exfiltration and IDOR attacks by identifying and remediating at least three critical security vulnerabilities in backend API endpoints.
- Enhanced user experience in low-bandwidth areas by improving gaming video content delivery through the integration of Cloudflare Stream and HLS video format.
- Led the initiative to connect over 150,000 gamers across 100+ communities with esports internships, scholarships, and more, leveraging eFuse's API through the development of a Discord bot.
- Improved code quality and reduced production errors through the standardized migration to TypeScript, implementation of Cypress integration testing, and establishment of a CI pipeline for eFuse's frontend.

PROJECTS

VTAPP - Event Platform | *Next.js, MySQL, Airtable, Cloudflare pages* — <u>GitHub</u> | <u>Demo</u> (Feb 2024)
- Developed a user-friendly web platform for a technical fest using Next.js, MySQL and Drizzle ORM (**5k+ users**).
- Integrated QR-code based ticketing system & Airtable spreadsheets, enabling easier event management (**generated 50k+ tickets for 80+ events**) and deployed to serverless environment on Cloudflare.

Restaurant Monitoring - API | *FastAPI, PostgreSQL, SQLAlchemy, SQLModel, Redis* — <u>GitHub</u> (Jun 2023)
- Built a robust monitoring API to generate restaurant uptime/downtime reports for 10k+ stores.
- Implemented an efficient algorithm for calculating store's uptime/downtime. Utilized Redis and Python-Arq to asynchronously handle report generation. Achieved a benchmark of 155 seconds for processing 14,000 stores.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, Java, C
Frameworks: Flask, FastAPI, Django, Express.js, React.js, Next.js, Redux, Webpack
Databases: PostgreSQL, MySQL, SQLite, MongoDB, Redis
Other Tools: Amazon Web Services, Cloudflare, Vercel, Firebase, Docker, Git & GitHub