

SANTHOSH ANITHA BOOMINATHAN

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SKILLS

Svelte, React, TypeScript, SCSS, Git, Docker, GitHub Actions, Linux, Selenium, Kotlin, Go, Python, Java, Jira, PHP, Bash

EDUCATION

Pennsylvania State University - 3.92 GPA

Pennsylvania, USA

Master of Software Engineering, with specialization in Data science

Dec. 2025

Shiv Nadar University - 3.52 GPA

Delhi, India

B.Tech Computer Science Engineering, with specialization in Cyber security (Dean's List)

May 2024

EXPERIENCE

Research Assistant

Sept. 2024 – Present

Pennsylvania State University

Pennsylvania, USA

- Conducted experiments evaluating Large Language Models (LLMs) for generating and assessing code quality in 100+ Data Science problems in the context of **Software Engineering** and **Artificial Intelligence**.
- Built Typescript pipelines to generate solutions for data science questions, from platforms such as LeetCode and StrataScratch using LLMs.
- Authored published research evaluating 6 LLMs for data science code generation, achieving up to 72% success rates across 100 problems while assessing **code quality**, **maintainability**, and **efficiency**.
- Leveraged upto 6 different **LLM APIs** to automate coding tasks and evaluated outcomes through **statistical analysis**.

Software Developer

Oct 2023 - Dec 2023

Department of Engineering, Shiv Nadar University

Greater Noida, India

- Designed and developed a website for a university maker space, architected for real-time data synchronization and scalability to support a large user base, with **authentication**, **authorization** and **Role-Based Access Control(RBAC)**.
- Created responsive UIs with SASS and integrated real-time data synchronization.
- Set up CI/CD pipelines with GitHub Actions for automated testing and deployment.
- Coordinated with university staff to define features and ensure the website met stakeholder needs.

Software developer Intern

July 2023 – Oct. 2023

Indian Institute of Management(IIM Bangalore)

Remote

- Led a team of two frontend developers to research and integrate software solutions, resulting in the design and development of an intuitive UI and UX for a Carbon accounting portal.
- Deployed a web portal for 500+ businesses in India, ensuring 100% compliance with government mandates and reducing emission reporting time by 30%, enhancing overall efficiency and accuracy.

PROJECTS

rslookup | *Svelte, Typescript, SCSS, PWA*

[Github](#)

- Conceptualized and programmed a university website, collecting and displaying detailed information about professors, labs, and amenities, garnering **34,000+ page visits** and **3,000+ clicks** from Google Search.
- Facilitated student council operations by integrating features for sharing important documents, Google Forms, and other essential student resources, enhancing accessibility and usability.
- Optimized data retrieval for data-rich pages using **HTTP caching** techniques, reducing number of requests up to 20%.

react-quizlet-flashcard | *React, Typescript, SCSS*

[Github](#)

- Developed a responsive, reusable component library for creating Quizlet-like flashcards, improving website interactivity and functionality. Boosted user engagement through customizable features and streamlined integration.
- Garnered recognition with approximately **80+ stars on GitHub**, indicating community approval and engagement.
- Streamlined widespread use with **over 300 downloads** on NPM, demonstrating the library's utility and adoption by developers.

Verse - Lyric finder | *Kotlin, Android Studio, Playstore*

[Github](#)

- Engineered a **Kotlin**-based native application leveraging Spotify's Broadcast Status feature to capture and display currently playing song information, resulting in efficient lyrics retrieval.
- Incorporated robust web scraping techniques to obtain and parse lyrics from Google search results, addressing dynamic content and anti-bot measures to ensure accurate content extraction in sub 100ms.
- Gained over **1,500+** organic downloads on the Play Store with an average rating of **4.6 stars**, demonstrating global user satisfaction and engagement.