SANTHOSH

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Skills

Svelte, TypeScript, JavaScript, SCSS, Git, Docker, GitHub Actions, Selenium, Kotlin, Go, Python, Java, Jira, PHP, Bash, Software Development, Frontend, Web Design, REST APIs

Education

Pennsylvania State University   **Dec. 2025**
Master of Software Engineering   *Pennsylvania, USA*

- Awarded a $12,000 merit-based scholarship in recognition of academic excellence and potential.

Shiv Nadar University   **May 2024**
*B.Tech Computer Science Engineering, with specialisation in Cyber security (**Dean's List**)*   *Greater Noida, India*

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 10+ Data Science problems in the context of **Software Engineering** and **Artificial Intelligence**.
- Crafted code for **Data Science** problems using LLMs, selecting tasks from platforms such as **LeetCode** and **StrataScratch**.
- Formulated methodologies to measure code maintainability index using both traditional tools and LLM-based approaches to assess the **quality**, **maintainability**, and **readability** of LLM-generated code.
- Leveraged upto 4 different **LLM APIs** to automate coding tasks and evaluate outcomes through **statistical analysis**.

Utilities developer for Nanoelectronics Computation Lab   **Sept. 2023 – Nov. 2023**
Shiv Nadar University   *Greater Noida, India*

- Migrated the lab's **Network File System (NFS)** from the university's data center to a local machine, reducing hosting costs by 40% and boosting data retrieval speed by 25%.
- Architected scripts to **automate** the NFS-based user account creation and deletion process, enhancing operational efficiency for 10+ team members, ensuring proper memory allocation for each user.
- Optimized data management through the implementation of rotational backups for daily, weekly, and monthly periods, and built archival scripts to zip and delete unused accounts, optimizing system resources.

Web 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

Verse - Lyric finder | *Kotlin, Android Studio, Playstore*   **Github | Live | Blog**

- 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 web scraping techniques to obtain and parse lyrics from Google pages, ensuring accurate content extraction in sub 1,000ms.
- Attained over **1,500+** organic downloads on the Play Store with an average rating of **4.6 stars**, demonstrating global user satisfaction and engagement.

react-quizlet-flashcard | *React, Typescript, SCSS*   **Github | Live | Blog**

- 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 **60+ stars on GitHub**, indicating community approval and engagement.
- Streamlined widespread use with **over 100 downloads** on NPM, demonstrating the library's utility and adoption by developers.

rslookup | *Svelte, Typescript, SCSS, PWA*   **Github | Live | Blog**

- Conceptualized and programmed a university website, collecting and displaying detailed information about professors, labs, and amenities, garnering **5,000+ views** and **300+ 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.