Sadakopa Ramakrishnan T

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Education

- **Sri Sivasubramaniya Nadar College of Engineering, Kalavakkam** — Chennai, India
  Bachelor of Technology - Information Technology; GPA: ***8.716*** — *Oct 2022 - Present*
  Ranked 13th among 160+ students in the department
- **Indian Institute Of Technology, Madras** — Chennai, India
  Diploma in Programming and Data Science; GPA: ***8.67*** — *Jan 2023 - Present*
- **D. A. V. Boys Senior Secondary School, Gopalapuram** — Chennai, India
  10th Standard: ***96%****, 12th Standard:* ***95.2%*** — *June 2018 - 2022*

Skills Summary

- **Languages:** : Python, Java, SQL, C++
- **Databases:** : Firebase, MySQL, Oracle SQL* Plus, SQLite
- **Web Technologies:** : Flask, HTML, CSS, Bootstrap, Streamlit
- **Version Control:** : Git, GitHub

Experience

- **IEEE Computer Society** — On-Site
  Event Manager — *March 2024 - Present*
  - **Event Management**: Successfully planned, organized, and executed various events, including workshops, seminars, and coding competitions. Coordinated with speakers, managed logistics, and oversaw event promotion to ensure high attendance and engagement.
  - **Coordination Experience**: Collaborated with team members to develop event schedules, prepare materials, and ensure smooth operations. Demonstrated strong organizational and leadership skills, contributing to the club's vibrant community and professional development opportunities for members.

Projects

- **Household Services Application** **GitHub**: *Python (Flask), Jinja2, Bootstrap, SQLite*
  - Developed a multi-user web platform for managing household services, supporting over **3 distinct roles**: admin, service professionals, and customers.
  - Implemented an admin dashboard for user management, service creation, and approval of over **50 service professionals**, with actions like blocking users based on activity and reviews.
  - Built customer-side functionalities allowing more than **100 service requests**, including status updates, reviews, and location-based service search.
- **SSN Students Grade Analysis - IT Department** **GitHub**: *React.js, Firebase, Node.js, Chart.js, Vercel*
  - **Automated Grading & Analysis:** Reduced teacher workload by **70%** by enabling instant grade calculation through Excel sheet uploads, eliminating manual errors.
  - **Interactive Visualizations:** Provided comprehensive insights via **4 visualization options** using Chart.js, showcasing roll number range and section-wide views.
  - **User Management:** Developed a secure login system for teachers and tools to manage student data and results efficiently.
- **AI-Powered Test Case Generator (Streamlit App)** **GitHub**: *Python, Streamlit, Google Gemini API, PIL*
  - Built a Streamlit application that generates manual test cases for image-based functionalities using Google's Gemini API, handling up to **20 images** per upload session.
  - Implemented a system for users to upload images and provide optional context to generate highly detailed test cases, reducing manual effort by **50%**.
  - Integrated multimodal AI to process both image and text inputs, providing up to **10 comprehensive testing steps**, preconditions, and expected results per case.
  - Enabled support for multiple image uploads (**up to 5 per session**), enhancing the testing process for a variety of use cases.
- **RAG System - Chat & Learn (NCERT PDF-based)** **GitHub**: *Python, NVIDIA NIM, Vector Database, LLMs*
  - Designed and deployed a **Retrieval-Augmented Generation (RAG) system** to process and extract key insights from over **50 NCERT textbooks**, leveraging NVIDIA NIM and vector databases.
  - Enhanced the system's efficiency by implementing vector database retrieval, reducing query response time by **30%**, and improving text chunk retrieval accuracy.
  - Processed over **10,000 pages** of NCERT content, utilizing language models to generate detailed and contextually relevant responses for user queries.

Achievements

Adobe Gensolve Hackathon 2024 - Placed among the top 5% of participants — *July 2024*

- Developed a tool to transform hand-drawn line art into smooth cubic Bezier curves by implementing curve regularization, symmetry detection, and completion algorithms.