Shreyas Adireddy

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Education

University of Florida **B.S. in Computer Engineering**
Major GPA: 4.00 **May 2026**
CS Coursework: Data Structures & Algorithms, Software Engineering, Computer Organization
CE Coursework: Digital Logic, Microprocessor Applications, Digital Design

Work Experience

Researcher at APRILabs (*Assistant)* ***Aug 2022 – Dec 2023***

- Assisted graduate students in understanding **C code** and use **Linux** machines.
- Solved compatibility issues and fixed cmake/scripting issues to set up environment.

University of Florida Discrete Math *(Teaching Assistant)* ***May 2023 – Present***

- Assisted **380+** students in fostering their problem-solving abilities and **sharpened my communication** skills in front of a crowd.
- Played a crucial role in **facilitating student learning.** My section performed 15% better than the other sections on exams.

Projects

FinAna *(Full Stack, Typescript, Machine Learning)*

- Developed a MERN **(MongoDB, Express, React, Node.js)** stack app to analyze sales data.
- Built a Finance Analysis app with a **scatterplots, bar charts, pie charts, and line charts** to visualize revenue.
- Used **Material UI** and **Recharts** for the front end and **MongoDB** and **Mongoose** to get data from the backend **NoSql** database.
- Added Linear Regression to the sales data to predict next year's sales.

bNicer (SASEHack 1st place) *(Full Stack, Python, C++)*

- Designed a **full-stack web app** with **Streamlit** as the front-end and integrated it with a **back-end** running a **TensorFlow neural network**.
- Trained our network on a large **Twitter dataset** to accurately identify negativity in user comments through **natural language processing**. To combat these issues, we provided users with informative articles aimed at educating against such behaviors.
- Worked with members to identify and debug issues to ensure seamless integration between our parts of the project.

Microprocessor Emulator *(C++)*

- Learned the design of the school's G-**CPU** and implemented that in **C++**.
- Takes in .**mif** files (memory initialization files) and runs the program contained in the mif files.
- Allows step-by-step walk through **assembly** instructions and visualization of **registers** and **flags**.

Machine Learning from Scratch! *(Python, NumPy)*

- Created common statistical machine learning models from scratch in NumPy.
- Developed models such as **K-Nearest Neighbors (KNN), Support Vector Machine (SVM), Decision Trees, Linear Regression, and Logistic Regression**. Gained a strong ability to translate mathematical concepts into working code, while also gaining valuable experience in working with real-world datasets.

Personal Website *(HTML, Tailwind CSS, JS, React)*

- Developed a dynamic and interactive **React** website using **HTML, Tailwind CSS, and JavaScript**. Leveraging the power of **React's** component-based architecture. Built a responsive **user interface** that provides a seamless user experience.
- Deployed the React app on **Azure.**

Activities

Officer of PC Building Club ***Jan 2022 – Present***

- Helped secure **$30,000** to spend on a streaming setup to stream PC builds.
- Designed PC builds and bought parts for futures PC builds.

Skills

Python **:** NumPy, Scikit-Learn • C++ / C • Javascript **:** React.js, HTML w/ CSS, Express.js, Node.js, PostgreSQL, MongoDB • Assembly (ARM, XMEGA, etc) • VHDL/Quartus • Linux • Flask