Rahul Ravi

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EMPLOYMENT

Contractor   **GreenGrid Energy Storage Inc**   **June 2022 - Dec 2023**

- Developed a web application for monitoring and controlling various parameters (voltage, amperage, etc.) of embedded battery modules.
- Implemented on a Raspberry Pi and XMC board with user authentication through AWS Cognito.
- Configured Flask application to run on Apache server by compiling WSGI scripts.
- Integrated custom C APIs and built a user-friendly GUI for data visualization.
- Participated in code reviews and provided constructive feedback to other developers.
- Leveraged knowledge in JavaScript, HTML/CSS, Apache, Flask, AWS, Git.

Data Analyst, Intern   **Lawrence Berkeley National Laboratory**   **June - Aug 2021**

- Developed tools to visually represent genetic variations in the core and pan genome.
- Compiled Python scripts to organize and visualize DNA sequence data stored in .txt and .csv files.
- Utilized tools such as Circos, Bandage, & GfaViz to visualize genomic structures and explore the best strategies to mine large-scale genetic variations in a plant population.
- Leveraged knowledge in Python, Jupyter Notebook, GNU Nano, Vim, Unix, and Git.

Research Assistant   **IDEA Research Lab (UC Merced)**   **Nov 2020 - May 2021**

- Developed scripts in Python and MATLAB to automate electroencephalogram (EEG) data processing.
- Created documentation and trained small team of researchers on the use of Git version control.
- Received training in artifact correction, rejection, and independent component analysis. Additionally, developed sorting and search algorithms for filtering EEG data.
- Leveraged knowledge in Python, Jupyter Notebook, Microsoft Teams, Google Docs, and Git.

SOFTWARE PROJECTS

Personal Website: https://rravi3.github.io/Portfolio (for additional information and projects)

Live-Collaboration Software Tool (https://live-collaboration-interface-rravi.vercel.app/)

- Designed and developed a collaborative web design app using Next.js, Liveblocks, React, TypeScript and TailwindCSS.
- Enabled real-time collaboration by integrating Liveblocks for concurrent editing and syncing across multiple users.
- Built an exporter to allow users to download their designs as PDF files for sharing and documentation.
- Utilized: Next.js, Liveblocks, React, TypeScript, TailwindCSS, Git

E-Commerce Website with Payment Processing (https://nextgenposters.com)

- Built an e-commerce website from scratch using Python, Flask, HTML/CSS, JavaScript, and integrated Stripe payment gateway to enable secure online transactions.
- Deployed the website on AWS EC2 instances, utilizing load balancing through AWS ELB and managing the DNS with AWS Route 53.
- Utilized: Python, Flask, Stripe, JavaScript, HTML/CSS, AWS EC2, AWS ELB, AWS Route 53, Git

Content Summarizer (https://rravi3.github.io/PalDigest/)

- Created a website that enables the user to generate a summary of the contents of a URL.
- Integrated a custom API with RapidAPI allowing effortless access to a web scraping engine and an LLM.
- Utilized: React, Redux, RapidAPI, JavaScript, HTML/CSS, GitHub Pages, Git

EDUCATION

La Jolla, CA   **University of California, San Diego**   **June 2023**

- **Bachelor of Science** in Cognitive Science with Machine Learning & Neural Computation, Data Science Minor
- Relevant Coursework: Principles and Theoretical Foundations of Data Science, Data Analysis and Inference, Statistical Methods, Data Visualization, Data Structures and Algorithms, Business Analytics, Supervised & Unsupervised Machine Learning

SKILLS

Software: Python, Java, C/C++, HTML/CSS, JavaScript, JQuery, SQL, MongoDB, Express, NodeJS, ReactJS, Redux, AWS Services, Apache HTTP Server, Linux/Unix, Git