Ammar Y. Safdari

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EDUCATION

University of Michigan — Ann Arbor, MI
Bachelor of Science — May 2023

- Majors: Computer Science (**GitHub**) and Physics **(Vpython Physics Code Compendium**)
- GPA: 3.933/4.00
- Relevant Coursework: Data Structures and Algorithms, Computer Organization, Web Systems, Intro to AI, Operating Systems, Database Management Systems, Multivariable Calc, E&M, Thermo, Advanced Energy Solutions, and Probability and Statistics
- Relevant Coding Projects: ***Web Systems*** → Created different fidelity Instagram clones using jinja, flask, React, SQL, and EC2 instances for deployment. Created a map reduce framework like the Hadoop streaming interface using the Python threading library. Built a search engine that uses page rank and tf-idf to index results. ***Data Structures and Algorithms*** → Used and implemented priority queues, deques, pairing heaps, hash tables, and many other data structures. Coded algorithms such as Prims, Kruskal's, Dijkstra's, TSP with heuristics, branch and bound, image seam carving, and various other algorithms. **View Projects**
- Graham Sustainability Scholar- engaged in a program that catalyzes and facilitates sustainability-focused collaborations involving faculty, students, and external stakeholders to work our way towards a greener future
- Accolades: Grand Prize Winner of EECS 183 Computer Showcase for building a fully functional version of space invaders and programming it onto LED boards

Menlo-Atherton High School — Menlo Park, CA
High School Diploma — Graduated June 2019

- GPA: 4.3/4.0**,** 1520 SAT (790 Math, 730 Verbal), National Merit Commended Student (October 2017), AP Scholar With Distinction (junior year of high school), 4-year honor roll, Award of Biliteracy in French, Principal's Student Service Award (2018)

WORK EXPERIENCE

Sandia National Labs — Albuquerque, NM
Remote Software/Energy Storage Intern — May 2021 – Present

- Developed a proficiency with google cloud console and managing virtual machines to deploy websites and web servers
- Actively contributed to **batteryarchive.org** and designed an automated data upload system in python using google buckets, google cloud APIs, and client libraries that also synchronously processes the new data as it is uploaded
- Worked on back end data importers using python which process battery data and compute cycle statistics before uploading to the PostgreSQL database using sqlachemy, psycopg2, and pandas
- Learned how to schedule tasks and jobs using systemctl and cron as well as use database administration tools like dbeaver
- Used node.js and react to design staging areas to edit database tables containing battery cell metadata

DeFi App — Menlo Park, CA
Co-Founder — April 2021 – Present

- Developing a DeFi application whose native token will be forked from the Stellar Network because of the low transaction fees
- This React Native app is meant to help bolster and rejuvenate local businesses and downtown areas in the wake of COVID

Done Waiting — Ann Arbor, MI
Web Developer — September 2019-Present

- Created a website and online merchandise store for the Done Waiting organization (**https://www.donewaiting.org/)** using Wix
- Helped design and implement a custom phone banking software for Done Waiting using Flask, Bootstrap, and Firebase

Vianai — Palo Alto, CA
Summer Software Intern — May 2020 – December

- Developed an end to end AI system for analyzing music which is paired with an API to make tailored song recommendations
- Learned about and built sophisticated models with decision trees, SVMs, RNNs, CNNs, and GANs.
- Evaluated and tested a hierarchical model for recognizing stop signs which uses smaller models (octagon, individual letters, and color) to build up confidence on making a final determination, which managed to outperform some state of the art detectors

SKILLS/INTERESTS

Skills: French, C++, Python, HTML, CSS, Javascript (react and node), full stack developer, Matlab, and Excel

Interests: Table Tennis, Tennis, Basketball, Reading, Chess, Stocks, Clean Energy, AI, Blockchain, and DeFi