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# Ammar Y. Safdari

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## EDUCATION

### University of Michigan

*Bachelor of Science*

Ann Arbor, MI

Expected 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, Multivariable Calc, E&M, Thermodynamics, Advanced Energy Solutions, and Probability and Statistics
- Relevant Projects: Created different fidelity Instagram clones using jinja, flask, AWS, and SQL. Built simulators, assemblers, and linkers in C for UM's custom LC2K assembly language. Built pipelines and cache simulators compatible with LC2K. Used and implemented priority queues, dequeues, pairing heaps, hash tables, and many other data structures. Coded algorithms such as Prim's, 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 using Arduino MEGAS and UNOS using C++

### Menlo-Atherton High School

*High School Diploma*

Menlo Park, CA

Graduated June 2019

- GPA: 4.3/4.0, 1520 SAT (790 Math, 730 Verbal), 800 Math II SAT Subject Test, 770 Chem SAT Subject Test

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## WORK EXPERIENCE

### Sandia National Labs

*Remote Software/Energy Storage Intern*

Albuquerque, NM

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
- 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.js and PostgreSQL to design staging areas to edit database tables containing battery cell metadata

### Fiverr

*Freelance Coder ([see profile](#))*

Menlo Park, CA

April 2021 – Present

- Offering services in custom python scripting, data analysis, machine learning tasks, and web scraping
- Successfully delivered jobs featuring live facial recognition, habitat simulation, web crawling, and more
- Maintaining a 5 star rating with reviews from both returning and new customers

### Done Waiting

*Web Developer*

Ann Arbor, MI

September 2019-Present

- Created a website for the Done Waiting organization (<https://www.donewaiting.org/>)
- Helped design and implement a custom phone banking software for Done Waiting using Flask and Firebase

### Vianai

*Summer Software Intern*

Palo Alto, CA

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, Support Vector Machines, Recurrent Neural Nets, Convolutional Neural Nets, and Generative Adversarial Networks
- 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
- Conducted research on PGNNs (Physics Guided Neural Nets) and potential applications in industry

### Hypergrid Inc

*Startup Summer Intern*

Los Altos, CA

Summer 2017

- Collaborated with a mentor to setup and install company servers as well as run routine checkups
- Gained exposure to Cloud storage and analytic technologies to optimize and monitor clientele data storage

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**Skills:** French, C++, Python, Excel, CSS, HTML, JavaScript, SQL, MATLAB, GCP, git, and full stack developer

**Interests:** Table Tennis, Tennis, Basketball, Reading, Chess, Stocks, Clean Energy, AI, and Tech