Advay Ratan

+65 9169 9871   advayratan@berkeley.edu   advayratan.com   linkedin.com/in/advay-ratan/

EDUCATION

University of California, Berkeley	**Aug 2022 - May 2025**
B.S. in Electrical Engineering and Computer Science	Berkeley, CA

Relevant Coursework: Structure & Interpretation of Computer Programs (**Python**, **SQL**), Data Structures (**Java**), Machine Structures (**C**, **Assembly**, **Logisim**)

GPA: 4.0

SKILLS

Languages: Python, C++, Java, C, Javascript, PHP; **Web Development**: HTML/CSS, JQuery, VueJS, Webpack, Django, Flask, Ruby on Rails; **App Development**: Flutter/Dart; **Game Development**: HTML5 Canvas, Unity; **Competive Programming**: Graph theory, greedy algorithms, dynamic programming, etc., USACO Gold; **Software Engineering**: Git,Jira, GitHub, GitLab;

HIGHLITED PROJECTS & EXPERIENCE

Software Engineering Intern | **GlobeSisters**	**Sep 2022 - Jan 2023**

- Developed from early stages and helped launched app in a small team.
- Translated UI/UX requirements from Figma to frontend Flutter/Dart user interface.
- Handled Firebase backend, including Cloud Firestore, Firestore Rules, Firebase Functions etc.
- Led creation of CI pipelines on GitLab to set up unit, widget and integration testing.

Berkeley, CA

Data Engineering Intern | **Nugit**	**May 2021 - Jul 2021**

- Led creation of a new data pipeline (extract, transform, load) optimizing core tech for all clients using Apache Airflow/Python. Wrote integrations for various APIs such as GoogleAdwords, Facebooks Ads etc. and handled MongoDB server for transformed data storage.
- Followed AGILE framework/Jira roadmaps to work effectively with team of twelve engineers

Singapore

CS 61A Academic Intern | **UC Berkeley EECS**	**Jan 2023 - Present**

- Weekly Office Hour assistant for introductory programming course at UC Berkeley.

EECS 16A Junior Mentor | **Computer Science Mentors**	**Jan 2023 - Present**

- Ran weekly 1.5 hour EECS 16A mini-lecture/tutoring sessions for five students.
- Organized rooms, planned material, and reviewed worksheets every week to prepare for sections.

Creator | **Time Trial Racing**	**Oct 2017 - Present**

- Independently conceived game and developed car physics with Javascript, rendered with HTML5. Currently in 7th major version; current version has 3000+ lines of code.
- Managing Ruby on Rails web server hosted with Heroku which handles thousands of requests a day.
- Worked with Node and Webpack to optimize code performance, reliability and ease-of-development.

Freelance Web Developer	**Jan 2018 - Present**

- Designed multiple commercial websites, including a website for my school to systematically managea house point system of 1000 students.Employed HTML, CSS, PHP, SQL, Javascript (VueJS and JQuery) for 5+ personal and professional projects to make frontends, admin pages, analytics and implement security features such as CSRF tokens.

LEADERSHIP & EXTRACURRICULAR ACTIVITIES

Vehicle Dynamics Member | **Berkeley Formula Racing**	**Oct 2022 - Present**

- Selected to be on Vehicle Dynamics team consisting of five people to plan and optimize properties of th car.Wrote physics simulations with MATLAB, used live sensor data to make changes to car and validate design choices.

Unit 1 Representative | **Berkeley Residence Hall Assembly**	**Aug 2022 - Present**

- Won school of the year against 60+ RHAs from other schools on the West Coast.Organized general activities for 1600 residents in residence hall, managed the Residence Hall Assembly's $50k+ budget.Liaised for Residence Hall Assembly, collated and represented resident's voice to bring about change in my residence hall.

Experiment Lead | **SpaceLab**	**May 2020 - May 2021**

- Selected on a team of ten people to design and build an experiment to be sent to the International Space Station.Wrote software to be run by the experimental module aboard the ISS using PBasic.