

Wills Liou

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EDUCATION

University of California, Berkeley

Berkeley, CA

Bachelor of Arts in Computer Science, Applied Mathematics

Expected Graduation: Dec 2022

- Relevant Coursework: Data Structures (*Java*), Data Science (*Python*), Operating Systems (*C++*), Computer Architecture (*C++*), Intro to Machine Learning (*Python*), Advanced Algorithms, Cloud Computing
- Leadership and Activities: Course Staff, CS 61B (Data Structures and Algorithms), Berkeley Math Student Board, UPE CS Honors Society (Top 30%), Mathematics Undergraduate Student Association (Officer), Cal Judo

PROFESSIONAL EXPERIENCE

Business Analyst Intern

Jan 2021 – Present

San Francisco State University

San Francisco, CA

- Implemented more efficient solutions under the Web Development team for converting Drupal 7 to Drupal 8. Played a key role in production issues, department requests, creating custom reports, and breaking down complex ideas to easy to understand solutions.
- Self-motivated and took hand-on business systems intern role to contribute more to team. Coordinate with PeopleSoft and CMS reporting tools to produce data analysis for best intelligence for critical business decisions. Designed hundreds of new SQL queries and increased visibility of bottlenecks and tracking of specific events.

Software Engineer Intern

May 2020 – Jul 2020

Unanimous AI

Berkeley, CA

- Assembled technical analysis of three automation tools to quantify each one's viability, picking the best costs for simulating use cases for Unanimous A.I.'s Swarm.AI by a factor of 150.
- Communicated and recognized for ideas contributed with product and technology leadership to plan consistent, organized project milestones and to upgrade and deploy new technology stack.

Head TA

Jan 2017 – Jan 2019

Las Positas College Mathematics Department

Livermore, CA

- Gauged difficult development tasks, analyzed trade-offs and constraints of team projects and budgets. Managed a team of seven, led discussion sections and office hours for Algebra up to Multivariable Calculus. Increased number of students attended by 150% with automatic scheduling web application for students with Javascript and Node.js

PROJECTS

Blackjack AI | *Javascript, HTML, CSS*

Jul 2021

- Implemented object oriented Blackjack card game that uses all four pillars, polymorphism, inheritance, encapsulation, and inheritance, from scratch. Engineered design logic for all functions to follow DRY principles. Designed genetic algorithm with efficient fitness functions to find optimal solution using data over 500k hands.

Two Sigma Halite Challenge | *C++, Unix/Linux*

Jan 2020

- Placed 1st in AI Competition after competing against top 100 players with Monte Carlo Tree Search implementation. Used an object oriented programming approach to find the most optimal attack solution with applied advanced algorithms on AI bots with machine learning in a dynamic, open source environment.

Anomaly Detection | *Python, Java, Git*

Oct. 2019

- 2nd place at CalHacks 6.0. Coding during a hackathon with a client-based focus on the banking industry. Collaborated with team to create vision and ship out product of unsupervised machine learning algorithm that detects outliers and global anomalies using K-nearest neighbors.

SKILLS

Languages, Technologies and Frameworks, Other: C, C++17, Python, Java, Javascript, SQL, Node.js, jQuery, AWS, Bootstrap, Docker, Kubernetes, MatLab, IntelliJ, Windows, Linux, macOS

HONORS AND AWARDS

Awards: Robert E. Thunen Scholarship ('18), FBLA-PBL 1st Place Cybersecurity, 1st Place, Personal Finance ('17), LPC Shark Tank 1st Place ('16), 3x USA Mathematics Olympiads Finalist, 2x USA Computing Olympiads Qualifier ('15)