

Barnett Yang

adamzuyang@gmail.com | 626.365.2809

linkedin.com/in/barnettyang | barnettyang.herokuapp.com | github.com/adamzuyang

EDUCATION

UNIVERSITY OF CALIFORNIA: BERKELEY

BA in Computer Science and Applied Mathematics

May 2024 | Berkeley, CA

Cum. GPA: 4.0 / 4.0

SOUTH PASADENA HS

June 2020 | South Pasadena, CA

Cum. GPA: 4.0 / 4.0

National Merit Finalist

National AP Scholar with Distinction

\$10,000 Oneonta Scholarship Recipient

Concertmaster: SPSHS and Pasadena Youth Symphony Orchestras

President: SPSHS Academic Decathlon

Vice President: SPSHS Math Club

COURSEWORK

Data Structures and Algorithms

Discrete Mathematics

Probability Theory

Linear Algebra

Differential Equations

Multivariable Calculus

Number Theory

Structure and Interpretation of Computer Programs

SKILLS

PROGRAMMING LANGUAGES

Java • Python • Javascript • CSS

HTML • \LaTeX • SQL

LIBRARIES AND FRAMEWORKS

Data Analysis

NumPy • Pandas • Keras • Matplotlib

Sklearn • Tensorflow • Jupyter Notebook

Web Development

Node.js • Django • Flask • Bootstrap

SOFTWARE ENGINEERING

Quality Assurance • Github and Git Workflow

Lead Generation • Web Research

APIs and APMs

SOFT SKILLS

Mandarin Chinese • Communication

Initiative • Leadership • Determination

Critical and Quantitative Thinking

PUBLICATIONS

Yang B. Impacts of the COVID-19 Pandemic on the American Socioeconomic Academic Achievement Gap Through the Perspective of Race, Income, Unemployment, and Poverty. *Towards Data Science*. 2020.

EXPERIENCE

PHOTON COMMERCE | Software Engineer Intern

Nov 2020 - Present | San Francisco (Remote), CA

- Developed and deployed Python web applications with API and APM integration (New Relic, Google APIs, etc.). Performed quality assurance.

UC BERKELEY URSATECH | Data Analyst

Sep 2020 - Present | Berkeley, CA

- Investigated the socioeconomic factors influencing student success and development and the possible effects of the COVID-19 pandemic on the racial achievement gap.
- Visualized, modeled, and analyzed data from government studies using data analysis libraries in Python (Pandas, NumPy, Matplotlib, Sklearn, Keras, Tensorflow, etc.).

BERKELEY IEEE | Full-Stack Developer

Sep 2020 - Present | Berkeley, CA

- Developed a web drawing game inspired by Skribbl.io with 50-100 players so far.
- Created the design document, configured debugging directory settings, developed overall Javascript functionalities and websockets with Node.js, integrated and engineered backend systems, and created the chat and drawing board.

ANAVIA JEWELRY AND GIFTS | Software Engineer Intern

Jul 2019 - Dec 2020 | City of Industry, CA

- Assisted in lead generation and web research by developing software to scrape meaningful web data and automate conversion to Microsoft Excel.
- Generated a cumulative total of 100,000+ line items from publicly available online directories, improving advertising efficiency and data accuracy.

PROFESSIONAL TUTOR | Self-Employed

Jan 2017 - Present

- Tutored 50+ middle and high school students in mathematics and chemistry. Improved student performance at school by up to 2 whole letter grades.
- Partnered with the UC Berkeley Public Service Sector to provide free weekly tutoring sections in math, computer science, and studying strategies at King Middle School.

PROJECTS

URSATECH

A data analysis project analyzing the links between the economic effects and racial disparities of the COVID-19 pandemic, student socioeconomic status, and the racial achievement gap. Analyses and visualizations were done in Python using data science libraries (e.g. Pandas, NumPy, Matplotlib, Sklearn, Keras, etc.), and the findings of the study were compiled into a research report and published on *Towards Data Science*. The source code and relevant documentation can be found on [Github](#).

PATHFINDING AND SORTING VISUALIZERS

My personal portfolio hosts [pathfinding](#) and [sorting](#) visualizers created using Node.js, Bootstrap, and Javascript. The pathfinding visualizer features Dijkstra's, A*, bidirectional, greedy, BFS, and DFS algorithms. The visualizer is interactive, allowing the user to add walls and weighted nodes and utilize a random maze generator. The sorting visualizer features six comparison-based sorts (selection, bubble, heap, merge, insertion, and quick sort) and two radix sorts (LSD and MSD radix sorts).

BEARMAPS

An interactive web mapping application of Berkeley capable of giving and plotting detailed routing instructions. The project was developed with an emphasis on data structures and algorithms. Tries are used to autocomplete search queries, A* is used for direction routing, and rastering is used to generate the map interface.

AWARDS

- 2019 Twice American Invitational Mathematics Examination Qualifier
- 2018 National Chemistry Olympiad Qualifier
- 2017 Southern California Junior Bach Festival Gold Medalist