RAHUL ARYA

rahularya@berkeley.edu
(510) 246-9831
www.linkedin.com/in/rahul-arya
github.com/rahularya50

Education

University of California, Berkeley

Electrical Engineering and Computer Sciences
GPA: 4.0, SAT: 1600
Expected graduation: May 2022

Languages: Python, JavaScript, Java, C, SQL

Completed Coursework: Structure and Interpretation of Computer Programs (CS 61A), Data Structures (CS 61B), Discrete Mathematics and Probability Theory (CS 70), Designing Information Devices and Systems I + II (EE 16A + 16B), Multivariable Calculus (Math 53);

In Progress: Machine Structures (CS 61C), Efficient Algorithms and Intractable Problems (CS 170), Probability and Random Processes (EE 126);

Personal Projects

Code Editor (code.cs61a.org)

- Web-based IDE for Python, Scheme, and SQL now used by staff and approx. 1500 students each semester taking the course CS 61A
- Integrates with the course autograder and existing debugging tools
- Built using React on the frontend and Python / Flask on the server

Scheme Debugger (git.io/61a-scheme)

- Web-based debugging tool for Scheme, written in Python and JavaScript, used by students in CS 61A
- Visualizes sub-expression evaluation and the stack at all points during program execution
- Transpiles Scheme to Python or JavaScript for significant (×100) performance gains

Queryable SQL Visualizer (sql.cs61a.org)

- Web-based SQL visualizer written in JavaScript
- Parses, executes, and generates step-by-step visualizations of SQL queries

Rubik's Cube Solver (git.io/cube-solver)

- Designed and built a robotic Rubik's Cube solver capable of scanning and solving a cube in under 2 seconds

Competitions

International Olympiad in Informatics

- Silver medal at the 2018 International Olympiad in Informatics.

Berkeley Blue ACM-ICPC Team

- Member of UC Berkeley's top ACM-ICPC team
- Placed 3rd (as a team) at the 2018 ACM-ICPC Pacific Northwest Regional Round (Division I)

International Physics Olympiad

- Gold medal at the 2018 International Physics Olympiad

Experience

Undergraduate Researcher 2019-present

- Conduct research at UC Berkeley into control theory under the supervision of Prof. Gireeja Ranade
- Work on problems related to learning linear control systems using random low-dimensional projections

UC Berkeley EECS Department 2019-present

Undergraduate Student Instructor

- Hold office hours and develop course content for EE 16A and EE 16B, the introductory circuits and linear algebra course sequence
- Develop software and lead weekly office hours and small-group discussion sections for CS 61A, an introductory course on Python, Scheme, and SQL
- Received the "Outstanding Academic Intern Award" in Spring 2019, awarded to the top 4 out of over 200 academic interns in CS 61A

Research Intern 2017

- Implemented various machine learning models, such as deep Q-learning, to be applied to financial engineering
- Worked at the Hong Kong University of Science and Technology

King George V School 2015-18

Student Mobile and Web Developer

- Developed Android and iOS apps for King George V School displaying student schedules and homework assignments
- Achieved 200,000 app visits yearly by about 1200 unique users
- Worked using Java and Objective-C