Pranav Banwasi

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EDUCATION

University of California, Berkeley — Berkeley, CA
BS in Electrical Engineering and Computer Science — *Expected Graduation: Dec 2025*

- Relevant Coursework: Structure and Interpretation of Computer Programs, Designing Information Devices and Systems I and II, Multivariable Calculus, Data Structures and Algorithms
- Spring 2024: Computer Architecture and Machine Structures, Discrete Math and Probability Theory

EXPERIENCE

Research Intern — Feb 2022 – May 2022
SELCO Foundation — *Bangalore, KA*

- Collaborated remotely with colleagues from Bangalore to plan strategies and analyze data for projects involving rural farming, textile, and food businesses
- Crafted research papers analyzing hundreds of case studies of how affordable solar-powered solutions improve rural and impoverished businesses in India and Zimbabwe

Math/Physics Tutor — Dec 2019 - May 2022
BASIS Chandler and Private Tutoring — *Chandler, AZ*

- Tutored math and physics up to AP Calculus BC and AP Physics 2 for 30-35 students
- Students reported significant improvements to their grades and every student passed their APs

PROJECTS

Fantasy Football Projections | *Python, pandas* — May 2023 - Present

- Developing a fantasy football projection algorithm that considers over 30 stat-lines and external factors such as matchups and injuries to make a helpful projection for each player
- Program currently utilizes 3 seasons of data and is in process of efficiency upgrades and website implementation

Wordnet | *Java* — Oct 2023

- Developed an online Ngram viewer that displays a word(s)' history lexically and graphically since 1400 constructed through extensions of TreeMap, handling approximately 500,000 words simultaneously given a user's queries
- Also implemented hyponym handler which unveils a word(s)' hyponyms in a specific time frame depending on its historical popularity

2048 | *Java* — Aug 2023

- Implemented core algorithms of the game 2048 including movement, scoring, and game instance checks
- Constructed algorithm such that any input is processed as one general movement, making the program efficient

E-Commerce Website | *HTML, CSS* — Aug 2023

- Developed a modern e-commerce platform modeled after popular fashion and shopping websites
- Website supports mobile devices and allows users to add an item to cart, then proceed to a simulated checkout

Scheme Interpreter | *Python, Scheme* — Apr 2023

- Implemented a fully functional scheme interpreter in Python utilizing a series of evaluation functions that handle general scheme properties and edge cases
- Program recursively parses through Scheme code pointing to particular classes as necessary for interpretation

Speed-Typing Game | *Python* — Feb 2023

- Developed software that measures typing speed which has multiplayer capabilities for a competitive component
- Crafted an autocorrect feature using an algorithm that functions depending on a word's similarity to the dictionary

TECHNICAL SKILLS

Languages: Python, Java, SQL, JavaScript, HTML, CSS, Scheme, C++, C sharp
Frameworks: Node.js, MongoDB, Git
Developer Tools: VS Code, Eclipse, PyCharm, Intelli, BracketsJ
Libraries: pandas, NumPy, Matplotlib