Wilson Xie

(925)785-3549 - wxie27@ucsc.edu - wizwilzo.github.io - github.com/wizwilzo

EDUCATION

University of California, Santa Cruz   **Santa Cruz, CA**
GPA: 3.95/4.0, BS Applied Mathematics, Minor in Computer Science   *Sep 2023 - June 2026 (expected)*

Relevant Courses: Algorithms & Data Structs, Computer Systems & C Programming (A+), Computer Systems & Assembly (A+), System Design (in prog) Applied Discrete Math (A+), Linear Algebra (A+ top 1/280)

AWARDS

- ICPC 2024: Advanced to **International Collegiate Programming Contest (ICPC) North American Championship 2024**. Competing against 50 total top schools across the entire North American Continent.
- ICPC 2024: 5th best school out of 27 schools and 140+ teams, advancing to North American Championship. ICPC Pacific North West Regional, including schools from California, Oregon, Washington, BC, and Hawaii
- Leetcode: Rank 30 out of 12,541 in Weekly Contest 232; Rank 47 out of 11,024 in Contest 267   Handle: wizwilzo
- Codeforces Rating: 1647   Handle: wizwilzo
- World Cube Association: 5x 1st place in Skewb (SacCubing XI, SacCubing XIV, Basc 31B, Berkeley Spring 2023, Cal Poly SLO Winter 2023).   WCA ID: 2017XIEW02
- World Cube Association: Top 10 in 3x3 (Cal Poly SLO Winter 2023)

PROJECTS

- **Random Blog Post Generator**, wizwilzo.pythonanywhere.com/
  - Utilized the Google Blogger API to generate random blog posts for the 500+ posts on my personal blog, providing an elegant and interactive way for blog readers to explore posts.
  - Deployed full-stack site via pythonanywhere. Added caching to drastically speed up calls.
- **Last.fm Racing**, GitHub
  - Integrated Last.fm API and prefix sum algorithm to generate Spotify listening data across cumulative date ranges.
  - Automated CSV generation for dynamic racing bar charts, visualizing artist and album trends over time.
  - Used REST API, Pandas library, and Python to process large datasets.
- **Wordle Solver in C**, GitHub
  - A solver in C guessing the Wordle secret word in 3.64 guesses on average.
  - Developed iterative heuristic maximizing highest frequency of commonly occurring letters within the remaining candidate vocabulary to reduce solution space in each guess.
  - Developed memory management framework, custom Makefile, and header files.
  - Designed and executed valgrind tests to verify 0 memory leakage and high efficiency.

WORK EXPERIENCE

BinarySearch.com Problem Testing
binarysearch.com (Leetcode competitor)   *October 2021 - May 2023*

- Selected by Binarysearch.com admin for Java testing for new problems for 100,000+ users.
- Set a time limit for Java submission runtime, navigating difficulties with high-variance Java performance (compared to fast languages like C++) and testing extensively.
- Detect edge cases and contribute faulty and incomplete test cases.

Solo Python Instructor
Red Dragonfly Tutoring, Pleasanton, CA, USA   *June 2021 - August 2021*

- Taught 8 students (grades 3-5) about Python basics (sets, maps, sorting algorithms, recursion).
- Developed entire 10wk curriculum and communicated with administrators and parents.

TECHNICAL SKILLS

Programming Languages: Python, C++, C, Java, Javascript, Rust, Typescript
Libraries and Tools: Git, React, Flask, Google Colab, VSCode, Node.js, Matlab, Ruby, Go
Languages: English (Native), Mandarin (Native), Spanish (Proficient)