Oliver Ni

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Education

University of California, Berkeley **Expected Graduation:** May 2026
Electrical Engineering and Computer Sciences, B.S. **Grade:** 4.0/4.0
Mathematics, B.A.

Relevant Coursework: Data Structures · Computer Architecture · Operating Systems · Discrete Mathematics & Probability Theory · Structure and Interpretation of Computer Programs · Linear Algebra · Abstract Algebra · Real Analysis

Experience

Apple *Wireless System Simulation Intern* June – August 2023

- Accelerated wireless simulation workflow by building a unified internal platform for **data processing** and visualization
- Designed and implemented specialized query language using **parsing expression grammars** and executed them in **ClickHouse**

Pokétwo *Executive Director, Developer (Self-employed)* May 2020 – Present

- Developed chat-based Pokémon game on the messaging platform Discord, enabling **5,000,000+ users** to connect online.
- Wrote **20,000 lines** of Python, Rust, and Elixir code using MongoDB and PostgreSQL.
- Scaled services to handle **2,000+ requests per second** with Kubernetes, gRPC, distributed systems.
- Recruited and led support team with 6 administrative staff members and 30+ community moderators.

Project Code Foundation *Founder, President* April 2018 – June 2022

- Directed 2 hackathons for middle and high school students with 200+ concurrent participants each.
- Led 30+ free online programming classes taught to **1,000+ youth** total, personally developed and taught 6 courses.

Lynbrook High School *Teaching Assistant, AP Computer Science A* August 2021 – June 2022

- Developed Visual Studio Code extension to modernize assignment download and submission for **200+ students**.
- Extension was integrated into CS department's curriculum to replace older Eclipse IDE for smoother learning.
- Assisted with teaching Java, Algorithms, and Data Structures to students.

Projects

ContestDojo *TypeScript, React, Next.js, Remix, Firebase* February 2021 – Present

- Developed an online math competition platform (registration, test-taking, scoring, ranking) with React and Next.js.
- Partnered with **Stanford**, **Berkeley**, **Johns Hopkins** to host their math tournaments throughout 2021 and 2022.
- Served **3,000+** competitors from **200+** schools in over 10 online contests so far; continuing to expand to more.

Lynbrook Mobile App *Python, Django, PostgreSQL, TypeScript, React Native* September 2019 – June 2022

- Developed application with React Native for my high school, serving **2,000+** students, teachers, and parents.
- Trained team of **5** other students to continue maintaining and improving the app after my own graduation.

Technical Skills

Programming Languages: Python · JavaScript · TypeScript · Rust · Elixir · C · Java · SQL · HTML/CSS
Web Frameworks: React · React Native · Next.js · Remix · Svelte · SvelteKit · Vue.js · Django · Flask · Starlette
Developer Tools: Docker · Kubernetes · Nix · LaTeX · Typst · Linux · Git · GitHub Actions
Other Technologies: NumPy · PyTorch · Pandas · gRPC · PostgreSQL · MongoDB · Redis · Microsoft Excel

Honors & Awards

USA Computing Olympiad, Platinum Contestant Top ~500 pre-college students in US (2022)
USA Physics Olympiad, Semifinalist Top ~400 pre-college students in US (2020, 2022)
American Invitational Mathematics Examination, Qualifier Top 5% of AMC 12 participants (2019, 2021, 2022)
Advent of Code, Global Rank 29 29/250,000+ (2022), 39/200,000+ (2021), 34/175,000+ (2020)
Eagle Scout Developed extensive leadership and planning skills through my 8-year scouting journey.