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. * currently taking course

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 *Software Engineering Intern* June – August 2023

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

Pokétwo *Creator, Lead Developer* May 2020 – Present

- Created chat-based Pokémon game enabling **5 million users** across **1 million communities** to connect online.
- Architected distributed systems handling **2,000+ requests per second** with Kubernetes, RabbitMQ, gRPC, and Elixir/OTP.
- Optimized MongoDB database to efficiently accomodate complex queries across 1.7 billion documents.

Project Code Foundation *President* April 2018 – June 2022

- Directed 2 middle school hackathons (200+ concurrent participants each) with workshops on Python, Unity, Swift, and AI.
- Oversaw 30+ free online programming classes taught to **1,100+ youth** total; personally wrote and taught 6 six-week courses.

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

- Modernized assignment download and submission for **180+ students** by creating VS Code extension for autograder system.
- Fulfilled CS department's long-awaited wish to migrate from older Eclipse IDE for smoother learning experience.
- Taught students Java, data structures (BSTs, heaps, hash tables), and algorithms (searching, sorting, graph traversals).

Projects

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

- Built online math competition platform hosting over **11,000+ students** in the **Stanford** and **Berkeley** Math Tournaments.
- Reduced required manpower to grade tests by **95%** while simultaneously enabling more flexible answer formats.
- Empowered independent student groups around the world to run their own math tournaments, inspired by SMT and BMT.

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

- Developed cross-platform app enabling **1,400+ students** to keep up with news from the school and their clubs.
- Automated attendance tracking for **20+ clubs**, unifying dozens of Google forms and eliminating hours of manual work per week.
- Trained team of **5** other students in React & React Native to continue 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.