# Oliver Ni

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#### **EDUCATION**

## University of California, Berkeley

Electrical Engineering and Computer Sciences, B.S.

Mathematics, B.A.

\* currently taking course

Grade: 4.0/4.0

**Expected Graduation:** May 2026

**Relevant Coursework:** Data Structures  $\cdot$  Computer Architecture  $\cdot$  Operating Systems\*  $\cdot$  Discrete Mathematics & Probability Theory  $\cdot$  Structure and Interpretation of Computer Programs  $\cdot$  Linear Algebra  $\cdot$  Abstract Algebra\*  $\cdot$  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 accommodate 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

 $\textbf{Languages:} \ Python \cdot JavaScript \cdot TypeScript \cdot Rust \cdot Elixir \cdot C \cdot Java \cdot SQL \cdot HTML/CSS$ 

Web Frameworks: React · React Native · Next.js · Remix · Svelte · SvelteKit · Vue.js · Django · Flask · Starlette

**Developer Tools:** Docker · Kubernetes · Nix · LATFX · 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.