# Oliver Ni

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### **EDUCATION**

## University of California, Berkeley

Electrical Engineering and Computer Sciences, B.S.

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

Grade: 4.0/4.0

**Expected Graduation:** May 2026

- 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  $\cdot$  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.