


# Oliver Ni

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## EDUCATION

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### 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

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### 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

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### 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

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**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

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### 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.