

# 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

### Pokétwo *Creator, Lead Developer*

May 2020 – Present

- Created Pokémon-themed game chatbot enabling **5 million users** across **1 million communities** to connect online.
- Managed distributed Linux server cluster handling **10,000+ requests per second** with Kubernetes, RabbitMQ, gRPC, and Redis.
- Optimized MongoDB database to efficiently accommodate complex queries across 1.7 billion documents.

### 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**.

### UC Berkeley AUTOLab *Undergraduate Researcher, Systems Administrator*

August 2023 – Present

- Managed GPU compute cluster and desktop workstations for **30+ researchers** in robotics, computer vision, and machine learning.
- Deployed centralized authentication server supporting LDAP, enabling single sign-on across all lab workstations and servers.
- Automated deployment and configuration of new workstations with Ansible, reducing setup time from hours to minutes.

### UC Berkeley Open Computing Facility *Site Manager*

July 2023 – Present

- Administered Linux infrastructure serving **petabytes of data** annually for **80,000+ students and faculty** as technical lead.
- Architected and built new bare-metal Kubernetes infrastructure, directing migration of **40+ services** from legacy systems.
- Developed bespoke Infrastructure-as-Code tool to declaratively automate continuous building and deployment on the new cluster.

## 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.
- Designed atomic grading system enabling **1,000+ tests** to be graded in parallel within 20 minutes, reducing manpower by 95%.

### Lynbrook Mobile App *Python · Django · PostgreSQL · TypeScript · React Native*

September 2019 – June 2022

- Developed cross-platform iOS and Android 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.

## TECHNICAL SKILLS

**Programming Languages:** Python · JavaScript · TypeScript · Rust · Elixir/OTP · C · Java · SQL

**Infrastructure and Tools:** Docker · Kubernetes · Nix · NixOS · Ansible · L<sup>A</sup>T<sub>E</sub>X · Typst · Linux · Git · GitHub Actions

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

**Other Technologies:** NumPy · PyTorch · Pandas · gRPC · PostgreSQL · MongoDB · Redis · Prometheus · Grafana

## HONORS & AWARDS

### USA Computing Olympiad, Platinum Contestant

Top ~500 pre-college students in US (2022)

### Advent of Code, Global Rank 29

29/250,000+ (2022) · 39/200,000+ (2021) · 34/175,000+ (2020)

### American Invitational Mathematics Examination, Qualifier

Top 5% of AMC 12 participants (2019, 2021, 2022)

### USA Physics Olympiad, Semifinalist

Top ~400 pre-college students in US (2020, 2022)

### Eagle Scout

Developed extensive leadership and planning skills through my 8-year scouting journey.