

# Oliver Ma

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## EDUCATION

### University of California, Berkeley

*Bachelor of Science in Electrical Engineering & Computer Sciences*

Berkeley, CA

*Expected Graduation: May 2027*

- **GPA:** 3.8/4.0
- **Relevant Coursework:** Data Structures; Signals, Dynamical Systems, and Information Processing; Data Science

## EXPERIENCE

### Towards Data Science

*Contributing Writer*

Oct. 2024 – Present

*San Francisco, CA*

- Authored technical article on YOLOv8 computer vision achieving 7,000+ views, providing practitioners with guidance on custom dataset training, model deployment, and implementation of object detection solutions
- Published content amplified across TDS social media channels, establishing thought leadership in computer vision and object detection methodologies, and driving significant readership, discussion, and community engagement

### University of California, San Diego

*Student Researcher - Autonomous Vehicles*

July 2024 – Aug. 2024

*San Diego, CA*

- Engineered scale autonomous vehicle achieving real-time self-navigation and object classification by integrating OpenCV computer vision libraries with NVIDIA Jetson embedded Linux platform and ROS2 operating system
- Deployed edge AI inference pipeline using Luxonis OAK-D depth camera and DepthAI APIs, processing 30+ FPS for obstacle detection, path planning, lane detection, and hand gesture recognition without cloud connectivity
- Designed and 3D-printed custom mechanical components including camera mounts and sensor housings

### Milpitas Hacks

*Frontend Tech Lead*

Mar. 2024 – May 2024

*Milpitas, CA*

- Led frontend development for hackathon website serving 200+ participants, translating design mockups into responsive web interface using modern JavaScript frameworks such as React, Next.js, shaden, and Framer Motion
- Implemented search engine optimization strategies improving search visibility and organic traffic, achieving #1 search rank for main website on various search engine result pages and driving increased participant registration

### Verizon Communications

*Data Engineer - Intern*

June 2023 – July 2023

*San Jose, CA*

- Architected and deployed a full-stack DevOps monitoring dashboard integrating Jenkins and Jira APIs
- Developed real-time data visualization features enabling administrators to monitor Jenkins jobs and Jira issues/tickets at a glance, reducing administrator workflow time by consolidating metrics into a single interface

## PROJECTS

### OncoVision

- Engineered progressive web application using Svelte, Tailwind CSS, and TensorFlow achieving 85%+ accuracy in oral and skin cancer risk detection from camera image scans, securing Third Place at E-Med Hacks 2024
- Optimized CV model for real-time mobile inference, enabling instant health screening without cloud dependencies

### WorldChat

- Integrated DeepL Translation API with Svelte frontend to create real-time multilingual messaging platform supporting 20+ language pairs, enabling seamless communication across different linguistic regions
- Implemented asynchronous background translation pipeline reducing message latency to under 500ms
- Awarded Third Place at MateoHacks 2024 for technical innovation in breaking communication barriers

## PUBLICATIONS

### The Comprehensive Guide to Training and Running YOLOv8 Models on Custom Datasets, Towards Data Science

02 Oct. 2024

## TECHNICAL SKILLS

**Languages/Frameworks:** Java, Python, C/C++, SQL, Scheme, TypeScript, HTML/CSS, Node.js, React, Next.js