

# Jeremy Louie

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## EDUCATION

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### University of California - Los Angeles

Mathematics of Computation (Bachelor of Science)

## WORK EXPERIENCE

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### Oma Robotics

San Jose, CA

Software Engineer

Nov 2022 - Aug 2023

- Developed a spermatozoa cell health analysis UI feature using Qt framework and C++, enabling fertility doctors to visualize individual health classifications for head, neck, and tail
- Designed and implemented a C++ pop-up UI feature for unattended video recording notifications, preventing data loss in a Linux medical software application
- Implemented a robotic algorithm leveraging Linear Algebra for pixel-to-vector space calibration, achieving micrometer-level precision for medical pipette movements within a petri dish
- Developed key component for robotic in-vitro fertilization by developing needle injection fertilization algorithm
- Developed C++ API for a new stepper motor, replacing a bulky power supply and improving production readiness
- Proactively prevented software failures by implementing real-time error detection dashboards using New Relic and SQL
- Improved AI training turnaround time by 50% using Python, Cron, and Amazon Web Services S3

### Juni Learning

San Francisco, CA

Computer Science Instructor & Hiring Manager

Jul 2022 - Dec 2022

Computer Science Instructor

Sept 2020 - June 2021

- Screened candidates and conducted live-teaching interviews to assess potential instructors
- Spearheaded launch of Mobile Programming club by developing curriculum and instructional Swift tutorials
- Privately tutored middle school students in Python Advanced Data Algorithms to Intermediate C++

### University of California - Los Angeles

Los Angeles, CA

Web Developer

Nov 2021 - Oct 2022

- Designed and developed web pages featuring comprehensive tutorials on building and deployment of self-driving RC cars, promoting accessibility and affordability within the enthusiast community
- Eliminated annual website maintenance costs by migrating website from Squarespace to GitHub Pages
- Leveraged JavaScript and Google Analytics Reporting API to develop a user consent-driven data tracking system, providing valuable insights into user behavior while adhering to privacy regulations
- Enabled real-time Deep Reinforcement Learning by migrating Robot Operating System from Python to C++

## PROJECTS

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### Portfolio Website

- Utilized ReactJS, Vite, Tailwind, and Netlify to build a responsive website featuring my professional experience
- Designed and implemented an AI chatbot using Python3 and LangChain framework to answer professional resume-related questions. Containerized the chatbot using Docker and deployed as a microservice on AWS Lambda

### Zoomie Roomies

- Led the Frontend development team in the design and development of core user interfaces for a postgraduate roommate matching platform
- Utilized ReactJS to develop reusable components for the landing, login, and search pages

## SKILLS

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**Languages:** C++, C, Python, Java, Shell Script, Bash, HTML5, CSS, JavaScript, PostgreSQL, Swift, MATLAB

**Tools & Frameworks:** Git, Qt Framework, ReactJS, Flask, GNU Debugger, CMake, Docker, Visual Studio, Agile

**Platforms:** Linux, Amazon Web Services, Google Cloud Platform, Netlify, New Relic, Jira