Jonathan Ouyang

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EDUCATION

University of California, Los Angeles (UCLA)   Los Angeles, CA
B.S. in Computer Science   Expected Graduation: 2026
Relevant Coursework: Computer Science, AI in Robotics (Graduate Level), Linear Algebra, Multivariable Calculus

WORK EXPERIENCE

Software Engineer Intern   Oct 2024 – Present
UCLA Daily Bruin   San Jose, CA
- Contributing to the maintenance of the UCLA Daily Bruin newspaper's main website using ReactJS and optimization of backend infrastructure to improve the site's stability and performance and support mass server requests using load balancing
- Integrating a new chatbot feature onto the main website trained on past Daily Bruin articles to increase user engagement

Software Engineer Intern   Jun 2024 – Sep 2024
Sighthound, Inc.   Longwood, FL
- Developed internal tool using Python leveraging Google's Vision Language Models (PaliGemma and OWL) for object detection and classification to accelerate data labeling speed by 50%
- Identified and resolved critical bugs in Python and shell script code and Docker deployment to enhance functionality and enable cross-platform compatibility of an internal annotation tool
- Implemented image augmentation code that increased company training data by up to 500%, increasing neural network model accuracy and overall performance by 5%

Undergraduate Researcher   Apr 2023 – Aug 2024
San Jose State University, AI/DL FPGA/DSP Laboratory   San Jose, CA
- Led a team of 3 students to develop and deploy a high-performance application using Python for automated technique feedback for swimmers of all skill levels
- Improved AI model accuracy and real-time performance by 30% on swimmers, by developing and implementing new data augmentation techniques, which was presented at a national conference in New Mexico
- Collaborated with SJSU's D1 swim team to compile and process the world's first comprehensive public dataset of underwater footage for training and enhancing deep learning algorithms
- Wrote Python scripts to preprocess over 13 hours of video data and train deep learning models to analyze processor speeds

Head Instructor   Dec 2022 – Jan 2024
Pi & World   San Jose, CA
- Coordinated lessons teaching coding fundamentals to 50+ middle schoolers through engaging OOP lessons in Python, Java, and C++, resulting in demonstrable student progress and increased engagement
- Directed hands-on coding practice through 3 hackathons and workshops organized in collaboration with other instructors

PROJECTS

Project Montgomery (CalHacks 2024)   Oct 2024
- Created a full-stack website using Next.js and Chakra UI on the frontend, connected to a Google Gemini model in the backend using FastAPI in order to generate math and physics animations through natural language prompting automatically

Berry Tongue Chrome Extension   Oct 2024
- Developed an AI chrome extension to teach users different languages using any source material of choice, using Python on backend and Javascript and HTML/CSS for frontend, connected with Flask API

UCLA Course Navigator Website   Sep 2024 – Present
- Developed a full-stack web application using React and Vue.js, Node.js, MongoDB, and a RESTful API in the backend, enabling UCLA students to plan four-year course schedules and visualize academic progress

ADDITIONAL

Technical Skills: Python, Java, JavaScript, TypeScript, C++, Swift, HTML/CSS, React, Vue, SQL, Git, Linux/Unix, Docker, Selenium, Object-Oriented Programming (OOP), Data Structures & Algorithms, Machine Learning