Jonathan Ouyang

+1 669-400-6891 | jonsouyang@gmail.com | linkedin.com/in/jon-ouyang |github.com/JonOuyang

EDUCATION

University of California, Los Angeles (UCLA) Los Angeles, CA
B.S. in Computer Science Expected Graduation: Jun 2027

ACHIEVEMENTS

Grand Prize Winner, 2024 Google Gemini API Developer Competition | Demo Video Nov 2024

- Outperformed 4,500+ submissions from 45,000 developers across 119 countries, and recognized by Google executives
- Engineered an autonomous computer agent that executes complex tasks by integrating LLM and VLM-based reasoning with real-time visual feedback for closed-loop control of applications and web environments

RESEARCH

Stanford University, Intelligent and Interactive Autonomous Systems Group Jan 2025 — Present
Visiting Researcher (advised by Prof. Dorsa Sadigh, Stanford & Google DeepMind)

- Collaborating with Toyota Research Institute (TRI) to develop shared autonomy algorithms using zone of proximal development (ZPD), and supporting validation through CARLA Python simulation with user studies
- Built a two-phase NMPC expert agent for parallel parking in CARLA, achieving 96% success by blending expert and user control, refined through iterative user study feedback and trajectory analysis using NumPy/Pandas

UCLA, Robot Intelligence Lab Sep 2024 — Present
Undergraduate Researcher (advised by Prof. Yuchen Cui)

- Adapted the Action Chunking Transformer (ACT) to a custom ALOHA setup on lab hardware, achieving 90% success on bimanual manipulation by reengineering core PyTorch code for hardware compatibility and precision control
- Fused Meta Aria glasses gaze data with LLMs for real-time intent prediction by building gaze streaming and VLM infrastructure, boosting task speed by 250%, reducing teleoperation, and enhancing robotic control in shared tasks

San Jose State University, AI/DL FPGA/DSP Lab Feb 2023 — Feb 2025
Graduate Research Advisor (advised by Prof. Chang Choo)

- Led a 3-person team to build TensorFlow-based swimmer action recognition using CMU OpenPose and YOLOv7, improving accuracy and real-time performance by 30% via novel data augmentation; presented at IEEE SSIAI 2024
- Co-authored a master's thesis benchmarking NVIDIA GeForce GPUs, Jetson Nano, and AMD Kria across 20+ deep learning models, demonstrating NVIDIA GPUs achieve 5% higher accuracy on average

WORK EXPERIENCE

Amazon Jun 2025 – Sep 2025
Software Engineer Intern

- Engineered a production-ready catalog compiler in Java to generate partner-specific outputs for Apple, Google, and Samsung, processing 7M+ titles/day and reducing manual reporting and validation for the Amazon Studios team
- Automated metadata transformation and schema checks on AWS S3/Athena for Prime Video, removing manual QA

Sighthound, Inc. Jun 2024 – Sep 2024
Computer Vision Intern

- Built an internal Python tool using Hugging Face and Google VLMs (PaliGemma, OWL) to automate object detection and classification, accelerating data labeling by 50% across the annotation pipeline
- Fixed cross-platform bugs in Python, shell scripts, and Docker for stable deployment of the redactor annotation tool

PUBLICATIONS

- T. Tay, X. Yan*, **J. Ouyang***, W. Jiang, D. Wu, J. Cao, Y. Cui, "Gaze Assisted Manipulation for Modular Autonomy (GAMMA)," Robotics: Science and Systems (RSS), 2025
- **J. Ouyang**, D. Trinh and C. C. Choo, "Optimization of Swim Pose Estimation and Recognition with Data Augmentation," 2024 IEEE Southwest Symposium on Image Analysis and Interpretation (SSIAI), Santa Fe, NM, USA, 2024, pp. 101-104.