Evan Chang

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Education

University of California, Berkeley — August 2025
Major: Electrical Engineering and Computer Science B.S. — *GPA: 4.0/4.0*

Relevant Coursework: *Robotic Manipulation and Interaction, Computer Vision & Computational Photography, Machine Learning, Deep Neural Networks, Digital Signal Processing, Efficient Algorithms, Optimization Models*

Skills: Python, C/C++, Java, Matlab, ROS, PyTorch, OpenCV, Pandas, SQL, HTML, CSS, Javascript

Relevant Experiences

National Taiwan University – *Summer Research Program Student* | Taipei, Taiwan — June 2025 - August 2025
- Developed algorithms for control of a custom robotic arm system designed for infant cardiac surgery.
- Utilized a ResNet UNet architecture for precise tool point localization and proportional feedback control to accurately perform autonomous surgery

Mercor - *Quality Assurance Engineer* | Remote — August 2024 - December 2024
- Evaluated LLM outputs for accuracy, intent alignment, and code correctness across diverse tasks.
- Performed comparative analysis of model responses and finalized evaluations delivered to clients.

NASA – *Systems Analysis Intern* | Moffett Field, CA — June 2023 - January 2024
- Ported aircraft design and mission analysis software to Python as part of NASA's GASCON project, reimplementing legacy FORTRAN and GASPy logic using the Condor modeling framework with CasADi-backed automatic differentiation
- Implemented test suites to validate ported analysis tools against an industry-standard reference, achieving ~4x runtime improvement on representative test cases

UCSF – *CI2 Summer Intern* | San Francisco, CA/Remote — June 2021 - August 2021
- Participated in a machine learning bootcamp culminating in building a vertebrae fracture detection model
- Segmented knee cartilage data for a continual learning project aimed at assisting in knee osteoarthritis assessment.

Projects

HandshakeBot | satish.dev/projects/106a_final | *Python, ROS* — December 2024
- Built a vision-based robotic system to enable a Sawyer robotic arm to track and follow a human hand in real time.
- Implemented hand detection and tracking using the *MediaPipe* machine learning library.
- Integrated ROS path planning algorithms to generate smooth, adaptive trajectories for a handshake-like motion.

NeRF Implementation | ewc999.github.io/projects/cs180-final-proj | *Python, PyTorch* — December 2024
- Implemented Neural Radiance Fields (NeRF) to synthesize photorealistic 3D scenes from a 2D image dataset.
- Trained an MLP with sinusoidal positional encoding to map 3D coordinates to RGB and density values.

Robotic Car | *C, Arduino* — January - December 2023
- Developed a voice controlled robotic car utilizing analog filtering, system ID, closed loop control, and principal component analysis to recognize and respond to audio keywords

Extracurricular Leadership Experiences

UC Berkeley EECS Department - *Course Staff* — January 2024 - June 2025
- Teaching Assistant - EECS 127/227AT (Optimization Models in Engineering), Tutor - CS 170, EECS 16B

Eta Kappa Nu (EECS Honor Society) - *Service Committee* — Spring 2023 - June 2025
- Organized and led community outreach initiatives, including offering weekly tech help for seniors and hosting electrical engineering and computer science workshops for local students.