Ji-Yuan (Kevin) Jiang

Santa Cruz, CA 95060 (425) 628-1958 hkjiangjiyuan7@gmail.com

Professional Summary

Engineer with an M.S. in Electrical & Computer Engineering and a B.S. in Robotics Engineering (with honors) from UC Santa Cruz. Specializing in mechatronics, embedded systems, robotics, PCB design, and bioelectronic systems. Proven ability to drive innovation in academic and industry settings. Adept in creating systems from concept to prototype, solving complex engineering problems with hands-on approaches.

Education

University of California, Santa Cruz, Santa Cruz, CA
M.S. Electrical & Computer Engineering (Robotics) *Sept 2024–Jun 2025*
B.S. Robotics Engineering, with Honors *Sept 2019–Jun 2024*
Minor: Electrical Engineering

Technical Skills

Programming:	Python, C, C++, MATLAB, Verilog, Git
ML/CV:	TensorFlow, PyTorch, OpenCV, CNNs, Object Detection
Robotics:	ROS, PID Control, Kalman Filtering, Mechatronics, Pneumatic systems design
Modeling:	SolidWorks, CATIA, Onshape, NX CAD, COMSOL, UAV Control
Electronics:	KiCad, Circuit Design, Signal Processing
Prototyping:	FDM 3D Printing, SLA 3D Printing, Laser Cutting, Welding
Languages:	English, Mandarin

Experience

Electrical Mechanical Engineering Specialist *Jun 2025–Present*
Braingeneers, Santa Cruz
- Optimized electroceutical PCBs, increasing efficiency by 75%.
- Conducted parametric studies in COMSOL, improving electrode design.
- Collaborated with multidisciplinary teams to meet milestones.
- Resolved engineering challenges, improving system performance.

Lab Technician *Dec 2024–Jun 2025*
Baskin Engineering Laboratory Services (BELS), Santa Cruz, CA
- Standardized 3D printer & laser-cutter protocols; increased safety/throughput by 30%.
- Trained entry-level engineers in advanced 3D printing; reduced failed prints by 25%.
- Built sensor calibration tools; cut measurement error by 15% across 20+ research projects.

UCSC Rocket Team Graduate Technical Advisor *Aug 2025–Jun 2025*
Santa Cruz
- Optimized mechanical components, improving performance by 20%.
- Enhanced power distribution, boosting efficiency by 30%.
- Guided fin and capstan design, reducing assembly time by 15%.

Researcher (Soft Robotics) *Jun 2023–Aug 2023; Jan 2024–Aug 2024*
Tactile Manipulation Laboratory
- Identified ARMAX model; designed PID for fluid-elastic actuator, improving tracking by 40–43%.
- Prototyped silicone end-effectors and test rigs; boosted experiment throughput by 25–30%.

ECE118 Mechatronics Tutor *Jun 2024–Aug 2024*
University of California, Santa Cruz
- Tutored 90+ students, improving project success by 20%.
- Mentored in robotics, reducing system design errors by 15%.

Projects

- **Auto-ranging flashlight:** Developed a LiDAR-based flashlight, improving efficiency in low-light conditions.
- **Fake coin image detection:** Built a fake coin detection system, with 98% accuracy.
- **Verilog VGA System:** Developed Space Invaders game, improving hardware/software integration.
- **Soft Robotics Control:** PID controller for fluid-elastic actuators, improving precision by 40%.
- **Robot Arm Control:** Jacobian-based motion planner, improving path planning efficiency by 30%.
- **STM32 Bluetooth module:** Led Bluetooth integration, improving connectivity reliability by 20%.
- **Autonomous Mechatronic Robot:** Designed autonomous navigation system, improving delivery accuracy by 25%.

Coursework

Robot Kinematics & Dynamics, Feedback Control Systems, Mechatronics, Bioelectronics, UAV Systems
Microcontroller System Design, Linear Dynamical Systems, Kalman Filters, System Identification
Sensing & Sensor Technologies, Analog Electronics, Convex Optimization
Capstone and Thesis Research in Robotics