Yufeng (Eric) Wu

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Experience

1X Technologies, Mechanical Engineer — **Apr 2026 – Present**

- Designing hand structures and mechanisms for the humanoid robot NEO.
- Leading a team of 5 technicians to establish in-house manufacturing for molded elastomer components, supporting hand production.

UCLA Robotics and Mechanisms Laboratory (RoMeLa), Researcher — **Nov 2024 – Mar 2026**

- Research lead for Project MiNI-Q: Miniature, No-wire, Intelligent Quadruped.
- Developed LoRa hardware and firmware for BALLU: Buoyancy Assisted Lightweight Legged Unit.
- Maintain and demo legacy lab robots for lab visits and outreach events.

Formlabs, Mechanical Engineering Intern — **Jun 2025 – Sep 2025**

- Sourced, tested, and validated key components for Formlabs' next-generation SLA printer.
- Explored printer subsystem architectures by building high-fidelity prototypes.
- Extensive hands-on experience with industry-leading SLA and SLS systems.

Samsung Research America, Think Tank Team, Mechanical Design Engineer — **Jul 2021 – Mar 2024**

- Explored new business opportunities for Samsung by building high-fidelity prototypes ready for mass production.
- Designed electro-mechanical systems for projects spanning home robotics, wearables, and smart appliances.
- Coordinated with model shops, machine shops, and external vendors to deliver projects under accelerated timelines.

Tufts University Center for Engineering Education and Outreach, Mechatronics Designer — **Nov 2017 – Jul 2021**

- Designed a hardware framework that integrates LEGO SPIKE Prime products with sensors.
- 10+ researchers used the framework for derived hardware and learning experience design.

Education

University of California, Los Angeles – Los Angeles, CA — **Sep 2024 – Present**

Master of Science in Mechanical Engineering, GPA: 3.86.

- Relevant Courses: Robotic Systems (Kinematics, Dynamics, Control), Linear Dynamic Systems, Compliant Mechanisms Design.
- Expected graduation: March 2026.

Tufts University – Medford, MA — **Sep 2017 – May 2021**

Bachelor of Science in Mechanical Engineering, GPA: 3.83.

- Relevant Courses: Robotics & Mechatronics, System Dynamics and Controls.
- Dean's List: Fall 2017 - Spring 2021.

Technical Skills

Design: Mechanisms, DFM/DFA, GD&T, ISO limits & fits, mechatronics, PCBA.

Application: SolidWorks, Onshape, Altium, PlatformIO, Adobe Creative Suite.

Equipment: CNC & manual mill, waterjet, 3D printing (FDM, SLA, SLS), soldering, oscilloscope, logic analyzer.

Programming: Arduino, C++ (embedded), Python, MATLAB, LabVIEW, Git.

Language: Mandarin (native), English (fluent).

Personal Projects

Q8bot: Miniature, high-performance quadruped robot; now a popular open-source platform with published papers.

OrbitDrive**:** Quasi direct-drive (QDD) actuator for dynamic robots; built with machined aluminum and a custom gearbox.

Drawing Robot**:** Delta-configuration drawing robot; derived kinematics models and software.

Syringe Control System: Low-cost, modular pneumatic system for controlling soft robot actuators.

Ceramics 3D printer**:** Large-scale ceramics 3D printer built from scratch; configured electronics and printer firmware.

Awards, Patents, & Publications

- 2021 Samsung Research America President's Award.
- Preventing Sensor Contamination. U.S. Patent US12251739B2, issued Mar 18, 2025.
- Automatically Adjusting Display-Screen Pose. U.S. Patent US12277260B1, issued Apr 2025.
- Adjustable Venting System. U.S. Patent Application US17/988,633, filed Nov 2022.
- *DexEXO: A Wearability-First Dexterous Exoskeleton for Operator-Agnostic Demonstration and Learning*. Published Mar 2026. [arXiv]
- *MiNI-Q: A Miniature, Wire-Free Quadruped with Unbounded, Independently Actuated Leg Joints*. Published Mar 2026. [arXiv]
- *Design of Q8bot: A Miniature, Low-Cost, Dynamic Quadruped Built with Zero Wires*. IROS 2025. [IEEE Xplore]