Yufeng (Eric) Wu

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Education

Tufts University – Medford, MA

Bachelor of Science in Mechanical Engineering with a minor in Studio Art May 2021

Relevant Courses: Intro to Robotics & Mechatronics, Machine Design, Instrumentation & Experimentation, Intro to Computer Science.

GPA: 3.83, Fall 2019 Dean's List

Skills

Fabrication: 3D printing, laser cutting, (reflow) soldering, turning, CNC milling, woodworking.

Programming: Python (uPython, Numpy, PIL, OpenCV, sklearn), Arduino, LabVIEW, C++, MATLAB, JavaScript.

Software: SolidWorks, KiCAD, Rhino, Overleaf, Microsoft Azure, Slack, Adobe Illustrator, Adobe Photoshop, Webflow.

Language: Mandarin (Native).

Projects

Hexapod robots: Built 4 six-legged walking robots from scratch, including main structures, PCB, and Arduino code.

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

Banned from Vegas: Designed and built an automatic playing card sorting robot during a Make-a-Thon at Harvard.

Mini Roomba: A palm-size vacuuming robot with wireless control, suspension drive mechanism and cliff detection sensors.

Ceramics 3D printer: Redesigned and built the physical structure based on a tutorial and configured the printer firmware. Currently working on designing a large-scale, multi-material paste 3D printer from scratch.

Silicone 3D printer: Built and improved an open-source silicone extruder for printing soft robot actuators.

Experience

Tufts University Center for Engineering Education and Outreach, LEGO Developer, Summer Intern **Nov. 2017 - Present**

- Developed and tested a LabVIEW front end interface that allows user to utilize advanced machine learning libraries with LEGO SPIKE Prime educational robotics system. Gave a virtual presentation in front of more than 20 people from LEGO Leadership.
- Prototyped adapters and printed circuit boards that combine LEGO SPIKE Prime and 3rd-party devices.
- Designed a universal hardware plug-in system for communication between LEGO SPIKE Prime products and other devices. The system was then used by 10 other student LEGO developers for software testing, learning experience design, and more backpacks design.

Tufts University Nolop FAST Facility, Fabrication Specialist **Jan. 2019 - Present**

- Support incoming faculty and students through their brainstorm, design, and fabrication process.
- Lead workshops in CAD modeling, PCB design, wire management, and advanced laser-cutting techniques.
- Maintain makerspace machines and tools.

Tufts University Soft Robotics Exosuit Research Project, Hardware Team Lead, Member **Jan. 2019 - Present**

- Manage hardware team project development through Microsoft Azure Platform. Coordinates with Faculty Advisors regarding project status and future directions.
- Train new members on silicone casting, mold designs, and other skills related to the project.
- Built a silicone 3D printer for prototyping soft actuators. Adapted and improved an existing design from Soft Robotics Toolkit.
- Built a fluidic control board to control air flow from an air compressor to soft actuators.

Tufts University Robotics Club, Treasurer, Project Leader **Sept. 2017 - Present**

- Performed rapid prototyping and fabricated the main structure of a robot for the 2018 Trinity College International Robot Contest using Onshape and Adobe Illustrator.
- Lead the chassis design team for the 2019 Trinity Robot Competition by managing project development process and guiding team members brainstorm and rapid prototype.

Tufts University Autonomous Intelligent Robotics (AIR) lab, Undergraduate Researcher **Oct. 2018 – June 2019**

- Designed and fabricated a robot head for a UR5 arm system using 3D printed parts.
- Designed the system in SolidWorks and export to URDF files to aid simulations in Robot Operating System (ROS).

Awards

- 3rd Place, 2019 Harvard Pacbot Competition.