Tianqi Yu

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EDUCATION

Carnegie Mellon University Pittsburgh, PA
Master of Science in Mechanical Engineering May 2025
Selected Coursework: Multivariable Linear Control, Signal processing, Robot Localization and Mapping, Bioinspired Robots, Introduction to Computer Systems, Engineering Computation, Machine Learning and Artificial Intelligence for Engineers

University of Illinois Urbana-Champaign Champaign, IL
Master of Science in Mechanical Engineering August 2023
GPA: 3.86/4.0
Selected Coursework: Numerical Thermo-Fluid Mechs, Signal processing, Engineering Materials, Dynamics of Mechanical Systems, Analog Circuits and Systems, Internal Combustion Engines

SKILLS

Engineering Software: SolidWorks, Fusion 360, CREO, ANSYS, ADAMS, KiCad
Programming Languages: C/C++, MATLAB, Python

ACADEMIC AND RESEARCH PROJECTS

e-VTOL drone
Champaign, IL
University of Illinois Urbana-Champaign Jan 2023 - June 2023

- Stabilized the aircraft with gyroscopic control of its attitude during vertical take-off and landing, switched from vertical takeoff & landing to horizontal flying
- Utilized calculations and airfoil selection based on experimental data, produced precise wings via light-PLA 3D printing to reduce 50% of wing weight
- Built body structure with laser cut and 3D printing, use FEA methods and experimental methods to test and improve structure strength
- Designed and constructed circuits using teensy 4.0, servos, brushless motors, ESCs, Gyro, radio receiver, and batteries. Designed body structure to accommodate circuits and balanced the center of mass
- Established and launched a drone club at school, established an enduring platform for new members to build upon and enhance the ongoing project

Multi-Actuator Bio-hybrid Walkers Champaign, IL
University of Illinois Urbana-Champaign May 2022 - Sep 2022

- Optimized and 3d-printed soft robot scaffolds using PEDGA
- Fabricated muscle actuators through cellular differentiation and maturation
- Performed the movement of biohybrid walkers operating optical and electrical signals, the motion of the walker was analyzed in Tracker and MATLAB from simulation videos
- Published a journal as fourth Author: Wang J, Wang Y, Kim Y, Yu T, Bashir R. 'Multi-actuator light-controlled biological robots.' APL Bioengineering. (Aug 2022)

EXPERIENCE

Hangzhou Mowan Technology Co Hangzhou, China
Mechanical Engineering Intern June 2023 - August 2023

- Developed test requirements and test codes for various electronic sensor with C programming language
- Engineered and constructed more than 10 control circuits, including both breadboard prototypes and printed circuit boards (PCBs)
- Crafted more than 10 comprehensive libraries and a robust API to bolster support for the company's robots

Zhejiang University-University of Illinois Urbana-Champaign Institute Haining, China
Teaching Assistant September 2021 - June 2023

- Taught Fundamentals of Fluid Dynamics (ME 310) and Design for Manufacturability (ME 270)
- Instructed 10 lab sections and answer students' questions in office hours