

Tianqi Yu

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EDUCATION

Carnegie Mellon University

Pittsburgh, PA

Master of Science in Mechanical Engineering

Dec 2024

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

Bachelor 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, CATIA, AutoCAD

Programming Skills: C/C++, MATLAB, Python, Arduino, Git, Linux(Ubuntu)

Other: Excel, Data visualization, SLAM, Electronic Design

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
- Electro-Mechanical design: Designed body structure to accommodate circuits and balanced the center of mass
- Established and managed a drone club at school, established an enduring platform for new members to build upon and enhance the ongoing project, gain time management and communication skills

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)
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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 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)
- Instruct students in projects of CAD mechanical design, Design for assembly, and communication skills.
- Help students work with Rapid Prototyping techniques like laser cutting and 3D printing, standardize manufacturing operations.