LI (LIAM) YUAN

230 W 126TH ST
New York, NY 10027
www.linkedin.com/in/liam594c
https://liy594c.wixsite.com/liam594c
(+1) 937-312-5991
ly2596@columbia.edu

EDUCATION

Columbia University — New York, NY
Master of Science, Mechanical Engineering — Expected Dec 2023
- **Robotics and Control Concentration**
- GPA 3.91/4.0

Shanghai Normal University — Shanghai, China
Bachelor of Mechanical Design and Manufacturing Automation — Jun 2022
- GPA: 3.67 / 4.0

University of Dayton — Dayton, OH
Bachelor of Engineering, Mechanical Engineering Technology — May 2022
- GPA: 3.87 / 4.0

SKILLS

- Write Reinforcement Learning Algorithms, Machine Learning, and other scripts with python
- Develop Linux (Ubuntu) embedded systems on Arduino, Raspberry Pi, or similar platforms using C/C++
- Have experience in PIC programming, specifically with PIC16F747/PIC16F737 microcontrollers
- Possess basic skills in MATLAB for solving problems, performing calculations, plotting data, and simulating systems
- Proficient in 3D modeling and 2D drawing using Solidworks and AutoCAD
- Experienced in Rapid prototyping using 3D printing, laser cutting, waterjet cutting, and hand tools
- Create simulated circuits on LabView with NI (National Instruments) and Proteus
- Proficient in Microsoft Office, including Word, Excel, and PowerPoint

PROFESSIONAL EXPERIENCE

Qicai Precision Industry (Wuxi) Co., Ltd — Jiangsu, China
Summer Intern - CAD Drafter — Jul 2020 - Aug 2020
- Drafted 14 designs including several rod feeding structures, chamfering structures of both ends of rods, as well as specified length-cutting mechanisms
- Managed atomized production pipeline and allow a single worker to manage 3-4 cutting machines or grinders in the plant safely with equipment designed
- Applied and added 14 UMPs (Utility Model Patents) into the company patent library following designs developed

HUST-Wuxi Research Institute — Jiangsu, China
Summer Intern - Engineering Assistant — Jul 2019 - Aug 2019
- Assisted an engineering team to work on an Automatic Coffee Capsule Loading Line project
- Executed reverse force test for hundreds of finished coffee capsules and welding inspection
- Tracked testing process and supported engineering to manage four steps of the manufacturing process in the factory

PUBLICATIONS

- Li Yuan, Xiang Cui, A Kind of Feeding Mechanism for Rod Flaw Detection Machine, Patent No. CN213770291U (Granted)… (See Linkedin Profile for all 14 patents)
- Zechen Xiong, Zihan Guo, Li Yuan, Yufeng Su, Yitong Liu, Hod Lipson, Rapid grasping of fabric using bionic soft grippers with elastic instability

ACADEMIC EXPERIENCE

Intro to Robotics Project-Automatic Robot Grabber
Group Partner
- Designed a robot with a **serial link PPPR** structure that is capable of safely grabbing books for humans.
- Formulated the **DH table and Jacobian** of the robot to conduct inverse kinematics.
- Conducted **motion planning** using the LSPB method to design a route for the robot to pick up a book and send it back to the robot's interface spot.

Robotic Studio Project – Danghu Bird
Group Partner
- Designed an **under-actuated bipedal robot** that can walk robustly on a platform or road with thin obstacles, and can be extended to move on complex surfaces or 1D surfaces.
- Completed the preliminary design of the robot using Solidworks and will build a prototype using 3D printed components and carbon fiber tubes.
- Applied Reinforcement Learning to the robot in MuJoCo simulation to enable the robot to stand and walk. Please check: https://www.youtube.com/watch?v=89xdrQuspBU