Jiong Lin

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EDUCATION

Columbia University, Creative Machine Lab, *New York, NY* Expected Dec 2022

Master of Science in Mechanical Engineering, Robotics, GPA: 3.87/4.0

- *Coursework: Control theory, Evolution algorithm, Data Science, Database, Robot learning, Research project (A+)*

Huazhong University of science and technology (HUST), *Wuhan, CN* Jun 2021

Bachelor of Engineering in Mechanical Engineering (honor class), GPA: 3.7/4.0

- *Coursework*: *Linear algebra, Calculus, Complex function, and integral transform, Probability theory, Material mechanics(A+), Fluid mechanics(A+), Mechanical and electrical transmission control, Robotics*

University of Manchester, *Manchester, UK* Aug 2019

Summer school in Computer Science

- *Coursework*: *Machine Learning*

RESEARCH

Driving Animatronic Robotic Face with Learned Models*, Columbia University* Sep 2021 - Present

- Advised by Professor Hod Lipson
- Training the learning model mapping from facial image to robot motor control
- Mechanical Design and Manufacture for the base and neck module of the face robot
- Wrote the control code for a tracking demo on Raspberry pi and Jetson, based on Ros2

Undergraduate Thesis Project*, HUST* Nov 2020 - Mar 2021

- Advised by Professor Caihua Xiong
- Designed a five-degree-freedom manipulator
- Simulated and optimized the robot's control system with MATLAB

Undergraduate Research*, HUST* Sep 2019 - Oct 2020

- Advised by Professor Liangshan Xiong
- Designed and conducted the stainless-steel cutting experiments to investigate Build-up-edge features

PROJECTS

Soft robot Locomotion, training in simulation*, New York, NY* Sup 2021 - Dec 2021

Course project

- Built a physical simulator with C++ and OpenGL
- Trained a group of soft robots walking in the simulator with Machine Learning methods

Chinese Chess robot, *Wuhan, CN* Dec 2020

Course project

- Designed and built a delta manipulator with a sucking disk hand
- Wrote the control code (inverse kinematic, motors control, vision, and chess algorithms)
- Wrote the AI chess playing algorithm (alpha-beta pruning)

China Railway 12th Bureau Group, *Haifeng, CN* Nov 2020

- Designed a new automatic binding robot for precast box beams' rebar binding work

EXTRACURRICULAR ACTIVITIES

Zhou Pei yuan Mechanics Competition, Excellence Award 2019

HUST robotics team (Robocon), Member 2019

National Industrial and Information Technology Talent Assessment, Member 2018

China Physical Olympiad, Second Prize (Hubei Province) High School

SKILLS & INTERESTS

CS: C++, OpenGL, Python, Database, Machine Learning (with PyTorch), ROS, and Linux

ME: Solidworks, Ansys, Blender, MATLAB and Simulink, Basic Manufacture (with 3d-printing, acrylic, aluminum profile)