Chenhao Li

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Education

Carnegie Mellon University, MS in Mechanical Engineering   Aug 2024 – Jun 2026
- **Related Courses:** Modern Control Theory, Robot Learning, Robotic Dynamic and Analysis, Computer Vision, Machine Learning

Worcester Polytechnic Institute, BS in Mechanical Engineering   Aug 2021 – Jun 2024
- **Related Courses:** Control Engineering, Kinematic Analysis, Mechanical Design, Embedded Systems

Skills

- **Programming**: Python, C++, Matlab, Git, PyTorch, TensorFlow, Scikit-learn
- **Technical Skills**: IsaacSim, IsaacLab, PID, LQR, Imitation Learning, Reinforcement Learning, Mujoco, PyBullet, Webots, ROS1/2, openCV, OpenAI Gym, Stable-Baselines3
- **Hardware**: SolidWorks, Onshape, Creo, CAD, FEA, ANSYS, 3D Printing, Arduino, STM32, Raspberry Pi, Serial/I2C/CAN, CNC, GD&T

Work Experience

Automation Engineer Intern   May 2024 – Aug 2024
Cheguangjiao (Shanghai) Information Technology Co., Ltd.
- Developed a 6-DOF robotic arm for automated lubricant oil changing on targeted vehicle models. Integrated computer vision (OpenCV) for component identification and localization, improving operation precision by 20%.
- Implemented joint-space control by solving inverse kinematics for target poses, generating smooth joint trajectories via interpolation, and sending real-time commands to each actuator with position feedback, enabling precise motion execution.
- Collaborated with mechanical and electrical teams to integrate force-torque sensors, position feedback, and IMU, improving system adaptability to enhancing operational stability and precision.

Experience

Human2Locoman   Dec 2024 – April 2025
- Collected and processed data to train MXT with Human Pretraining + Imitation Learning (IL), ensuring high-quality, task-specific training without reliance on public datasets.
- Evaluated MXT's performance against HIT baselines, designing a benchmarking framework to assess model generalization, robustness, and human-likeness across multiple robotic embodiments.

Autonomous Measurement and Straightening of Endoscopes   Aug 2023 – May 2024
Sponsored by Henke Sass Wolf of America
- Developed an algorithm in OpenCV to analyze endoscopes, reducing processing time by 80% (from 49 seconds to under 2 seconds) and increasing bend detection accuracy by 35%.
- Designed endoscope straighten system with roller mechanism which could straighten over 80% of bendness.
- Designed custom components with SolidWorks and assembled prototypes with 3D printed parts, which improved the stability of the measurement setup, reduced vibrations, and enhanced overall precision by 30%.

Publications

Human2LocoMan: Learning Versatile Quadrupedal Manipulation with Human Pre-Training - RSS 2025   April 2025