# Xi Lin

Email: xilin03@outlook.com
Tel.: +86-18009692456
Web: https://xilin03.github.io/

## EDUCATION

**Dalian University of Technology** Sept. 2021–Jun. 2025
♦ Major: Mechanical Engineering (Joint Program with UC Irvine) | Minor: Automation
♦ Main Course: Automatic Control (88), Robot Dynamics (93), Robotics Perception (94) | GPA: 86.7/100
**Johns Hopkins University** Sept. 2021–Jun. 2025
♦ Program: M.S.E. in Robotics

## Publication

**Essay**
1. **Xi Lin,** Yuge Chen, Donglai Liu**,** Research on Object Detection of Robotic based on Convolutional Neural Network, accepted by the 2023 3rd International Conference on Image Processing and Intelligent Control.

**Patents**
1. 1st Author: A new conveyor based on spiral closed anti-blocking | A type of grinding device
2. 2nd Author: A robotic arm | An automatic cutting robot

## INTERNSHIP

**Tsinghua University | Embodied AI Research Intern** Jan. 2025–Present
*Project: Vision Perception and Locomotion Control of Biped Robots for Complex Terrain* *With Prof. Wenchao Ding*
♦ **Simulation-to-Reality Validation:** Achieved motion control transfer from Isaac Gym simulation to physical LIMX bipedal robot through parameter optimization, enabling stable walking.
♦ **Terrain System Development:** Designed a terrain generation module to enhance adaptability in complex terrains.
♦ **Gait Algorithm Optimization:** Improved motion stability by refining gait generation via adversarial imitation learning.

**Johns Hopkins University | Research Intern** Jul. 2024–Dec. 2024
*Project: The Modeling and Experiments of Obstacle Traversal of Legged Robots* *With Associate Prof. Chen Li*
♦ **LSTM motion modeling:** Build a time series prediction model with a Spearman correlation coefficient of 0.87 ($p<0.01$)
♦ **Data generation system:** Design a random training data generation pipeline based on GMM and expand the size by300%.
♦ **Motion constraint modeling:** Establish a non-complete constraint equation to verify the nonlinear relationship between angular velocity and posture error

## RESEARCH

**Robotics: Design, Control and Deep Learning** Jun. 2023–Aug. 2023
*North Carolina State University | Summer Research Program | 1 Poster* *With Associate Prof. Su Hao*
♦ **Knowledge Expansion**: Systematically learn the principles of quadruped robots and reinforcement learning.
♦**Robotic arm control:** Build a robotic arm reinforcement learning environment in Isaac Gym and complete the grasping task with a success rate of 92%.

**Research on Object Detection of Robotic based on Convolutional Neural Networks** Oct. 2022–Jun. 2023
*Dalian University of Technology | 1 EI Essay* *With Prof. Yan Zhuang*
♦ **Algorithm Optimization:** Adjusted anchor boxes, implemented multi-scale training, and added adaptive convolution layers to improve detection on VOC2012 dataset.
♦ **Task Integration**: Contributed to integrating YOLOv5 with VINS-FUSION for real-time UAV navigation and object detection, laying the foundation for future work.