XINZHUO LI

+86 1836-1235-747
lixinzhuo323@outlook.com
github.com/jonathan90125

EDUCATION

Beijing Jiaotong University and Lancaster University Sep. 2018 – Sep. 2023
(China-Foreign Cooperation in Running Schools)

Major in Computer Science

- GPA 3.47/4
- Ranking 33/146 (top 30%)

WORK EXPERIENCE

CUHK(shenzhen) Robotics & AI Lab Feb. 2021 – Feb. 2022
Research intern during one-year gap from University Shenzhen, China

- Mastering operations on Linux and ROS, better understanding of firmware (STM32).
- Manipulation of various robots in the lab such as four-legged robot and quad-copter.
- Implementing SLAM system on mobile robot with stereo camera and LiDAR.
- Cooperate with Huawei Corp to develop an AGV.

RESEARCH PROJECT

Airsbot - mobile robot using SLAM with indoor and outdoor versions Sep 2021
CUHK(shenzhen) Robotics & AI Lab (Supervised by Hung-Chyun Chou)
MCU (STM32): control motors and other devices, read sensors' data to calculate odometry and communicate with host computer using RS232. Host computer: read data from stereo camera and LiDAR, based on ROS to implement mapping and navigation and communicate with remote application using ModbusTCP.

A Sequence-Based VPR Technique with Segmented Database and Compact Sequence List Dec 2019
CUHK(shenzhen) Robotics & AI Lab (Supervised by Hung-Chyun Chou)
VPR can be considered as an image retrieval problem which can help the loop closure step in SLAM. In this paper, I use CoHog as descriptors for images to calculate similarity to segment database and generate shorter query list to reduce searching time.

Design of Modular Self-reconfigurable Robots with a novel actuating mechanism Jan 2022
Beijing Jiaotong University (Supervised by Hang Zhou)
Design and implement a modular self-reconfigurable robot with novel actuating and docking system.

Utilizing PID algorithm to control a four-legged robot maintain balance on unstable platform May 2021
CUHK(shenzhen) Robotics & AI Lab (Supervised by Puyang Zhang)
Implement self-balancing code on Arduino for a four-legged robot on unstable platform using PID.

Using UDP protocol to control swarm of quad-copters Aug 2021
CUHK(shenzhen) Robotics & AI Lab (Supervised by Puyang Zhang)
Send separate command on a simple GUI to group of quad-copters simultaneously with the help of socket communication.

HONOR AND AWARD

College Students Innovation and Entrepreneurship Competition, Pronvince level project Fall 2020
Leader of the team. Awarded for the Self-reconfigurable Robot project.

SKILLS

Languages: English (IELTS 7.0), Chinese (Native)
Programming: Python (NumPy,Matplotlib,Pandas,tensorflow,pytorch), C & C++, Java
Robotics: Linux, ROS, MCU (STM32), 3D modeling (solidworks)
Other: Git, Latex, Markdown