Han Li

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EDUCATION

University of Edinburgh 01/2022 - 01/2023

MSc by Research Informatics: IPAB: Robotics - 1 Year | MScR. (Merit)

Research interests: Companion Robot; Reinforcement Learning; Intrinsic Motivation; Human-Robot Interaction; Empowerment.

University of York 09/2020 - 09/2021

Intelligent Robotics | MSc. Award Mark:78（Distinction)

Curriculum: Swarm Robotics; C Programming for MSc; Control Systems Engineering for Robotics; Practice Robotics; Critical Evaluation of Intelligent Robotic Systems; Neural networks& Neural Computing; Group Robotics Project.

China University of Mining and Technology (CUMT) 09/2016 - 06/2020

Mechanical Engineering | BA. Curriculum Award Mark: 84/100 (equivalent to 2:1)

Main Curriculum: Engineering Mathematics; Engineering Mechanics; Theory of Mechanisms and Machines; Electronic Technique; Innovative Design for Machinery; Design and Application of Robotic systems; Robot Dynamics and Control.

University of Nottingham: one-semester exchange program 09/2018 - 02/2019

WORK EXPERIENCE

Research Assistant 01/2023 - 05/2023

The University of Edinburgh, School of Engineering & School of Informatics

- Writing the review of an interdisciplinary study of granular materials and robotics.
- Identifying potential research directions with proposals.
- Facilitate coordination among disciplines through regular group discussions for adjustments.
- Completing the first draft of a review paper with ideas and opinions from collaborators.

SELECTED PROJECT EXPERIENCE

Cooperative Autonomous Robots for Search and Rescue Mission 06/2021 - 09/2021

Postgraduate graduation group project

- The team uses a drone to search and determine the general position, and an original wheeled robot with a robotic arm to grab the target and return to the target position.
- Responsible for the design task of the original wheeled robot with a robotic arm and mechanical gripper.
- Responsible for modeling, simulation, and testing work for the wheeled robot.
- Responsible for the code development work related to visual recognition, grasping action and robot arm kinematics.
- Responsible for the main writing and coordinating work of the group report.

Design of Articulated Crawler Robot 12/2019 - 06/2020

Excellent undergraduate graduation project design award

- A kind of innovative double joint crawler frame is designed in this project with the matching thrust wheel and box.
- Robust walking mechanism driven by four different motors with their matching reducer.
- Produce high-quality assembly drawings and simulations (by AutoCAD) to test the safety factor of key components.
- Build a three-dimensional model and carry out various obstacle surmounting tests (by SolidWorks) in the simulation environment.

Design of Ferrographic Ink Particle Microscope Automatic Analysis System for Wear Conditions 04/2018 - 04/2019

Team member of university innovation project

- This project develops a simple and friendly human-computer interaction interface that improves the automation level of Ferrography analysis, reduces the workload of the experimenters, and improves efficiency and accuracy.
- Mainly involved in code development and report writing tasks.

SKILLS

- Hardware experience (Arduino, Raspberry Pi)
- Software for modeling/math/simulation: AutoCAD; SolidWorks; Autodesk Inventor; MATLAB; V-REP(CoppeliaSim).
- Programing language: python; Lua(basic); C; C++
- ML/RL frame experience(basic): Pytorch; PaddlePaddle/PARL; Gym.
- Edit and record: Jupyter notebook; Latex; Notion

OTHER AWARDS & HONORS

- The Scholarship of Excellent Leader (For the work as counselor assistant in University) 11/2017
- Graduation Certificate of the Class monitor Seminar of Youth College of Excellence 07/2017
- Champion of men's high jump in the 58th track and field sports meet of CUMT (University level)
- Marathon experience and Top three awards in various events of college sports meetings
- Special Contribution Award of College welcomes party (piano accompaniment)