XINYANG HUANG

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EXPERIENCE

University College London   London, UK
Postgraduate Teaching Assistant for Master Module: Real-world Multi-agent Systems   Sep 2024 — Dec 2024

- Prepare and deliver Q&A and lab sessions, providing students comprehensive understanding of practical content.
- Iterate on course materials from previous years, fixing bugs and improving support on different operation systems.
- Give short lectures on basic concepts on version control, debugging, ROS and SLAM.

Direct Drive Technology   Guangdong, China
Research and Development Engineer Intern   Aug 2023 — Sep 2023 (On-site), Oct 2023 — Mar 2024 (Remote)

- Design and refine the generative models for UI systems on hardware interfaces, utilizing QT and Python.
- Build and evaluate prototype demos, detailing their underlying mechanisms with Fusion 360.
- Engage collaboratively in the full project lifecycle - from requirements gathering and system design to development, testing, and deployment.
- Monitor project timelines, addressing technical challenges as they arose to ensure adherence to deadlines.
- Author documentation on technical specifications & user guide to support project delivery and maintenance.

SIASUN Robot & Automation Co., Ltd   Jiangsu, China
Mobile Robot Project Assistant Intern   Jul 2023 — Aug 2023

- Spearhead the installation and calibration of robotic systems, significantly enhancing operational efficiency.
- Conduct data collection and analysis, contributing to the development of high-precision robotic functionalities.
- Contribute to the resolution of technical challenges, ensuring robots performed optimally for essential operations.

EDUCATION

University College London, London, UK   Sep 2024 — Sep 2025
Medical Robotics and Artificial Intelligence MSc

- **Major Courses:** Robotic Systems Engineering, Robot Vision and Navigation, Robotic Sensing Manipulation and Interaction, Medical Robotics and Devices, Artificial Intelligence for Surgery and Intervention, Surgical Data Science, Machine Learning in Medical Imaging, Research Software Engineering with Python, MSc Research Project

University College London, London, UK   Sep 2021 — Jun 2024
Mechanical Engineering BEng, Minor in Computer Science   **First-Class Honours**

- **Major Courses Studied:** Mathematical Modelling and Analysis, Control and Instrumentation, Programming (Python), Thermodynamics, Fluid Mechanics, Engineering Dynamics, Mechanics of Solid and Structures, Materials, Manufacturing and Designs (CAD Design)
- **Minor in Computer Science:** Programming (Python), Data Science (HTML, CSS, SQL, Flask, Plotly Dash), Applied Software Engineering
- **3rd Year Module:** Dynamics and Control, Advanced Thermodynamics and Fluid Mechanics, Elasticity and Plasticity, Undergraduate Individual Project, Project Management
- **3rd Year Individual Project:** *Enhanced Robotic Navigation Using Multi-sensor Fusion* (Currently working on the publication of it)
  Elevating indoor robot navigation by fusing LiDAR with camera technology, utilizing ROS2, SLAM, and OpenCV. Overcome 2D LiDAR's limitations in detecting close-to-floor obstacles. Programming language: C++ & Python

ACTIVITIES

UCL Mechathon Competition 2023   London, UK
Leader, CAD builder, Operator   Jan 2023
Sponsored by Autodesk and organized by UCL, the Competition brought together 16 teams to design and build a working robotic prototype of Hydraulic cranes within a 36-hour limit.

- Awarded Silver Medal among 16 competing teams
- Independently designed and built the CAD model using Fusion 360.

JP Morgan Chase & Co. Code for Good Hackathon 2022   London, UK
Front-end Engineer   Oct 2022
Build an NLP-powered search engine for animal testing alternatives using SpaCy and Facebook AI Similarity Search libraries in 48-hour limit.

- Implemented interactive features using Bootstrap 5, HTML5, JavaScript, and CSS3, ensuring a responsive and intuitive user experience.
- Contributed to the project's strategy by aligning the development goals with FRAME (an organization)'s mission.

SKILLS

Programming Languages: Python, C++, JavaScript, Matlab
Tools: ROS, PyTorch, Fusion 360, SolidWorks
Fields: Robotics, Deep Learning, Mechanical Engineering