Yiyuan Lu

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I am an undergraduate student of the class of 2021. I have graduated from Ocean University of China and obtained a bachelor's degree in engineering from Ocean University of China and a second class (Upper) degree in BEng Robotics from Heriot-Watt University in the UK. I have also received an offer for a master's degree in advanced computer science from the University of Manchester. The technology stack I am best at is native iOS development, and I can skillfully use frameworks such as SwiftUI, Moya, and SwiftyJSON; I have also participated in the development of some Android and Web projects, and can use languages such as Java and Python for development. In addition, I have a certain understanding of machine learning and computer vision, and can use OpenCV and deep learning frameworks for image processing and model training.

Education

2021.09 - 2024.06	**Ocean University of China** · School of Computer Science · Computer Science and Technology
2024.09 - 2025.06	**Heriot-Watt University** · School of Mathematical and Computer Sciences · BEng Robotics
2025.09 - 2026.09	**The University of Manchester** · MSc Advanced Computer Science

Skills

Operating System	Linux, MacOS, Windows
Programming Language	Swift, Python, C, Java, ARM Assembly
Proficient Framework	SwiftUI, FastAPI, Flask, MySQL, Linux
Knowledgeable	OpenCV, Machine Learning
English	IELTS 6.0 (Listening 6.0, Speaking 5.5, Reading 7.5, Writting 6.0)

Awards

Challenger Cup 2023	**National Third Prize**	December 2023
MCM 2024	**S Prize**	May 2024
OUC Bursary 2023	**Innovation Bursay**	October 2023

Projects

Ocean BB Lite **Personal Project** December 2023 - Present

iOS, SwiftUI, FastAPI, MySQL

Designed for undergraduates of Ocean University of China, it connects to the university's Blackboard platform and provides functions such as assignment query, to-do list and assignment submission.

- Encapsulation of the Blackboard API using Moya and SwiftyJSON, enabling access to the school's Blackboard platform.
- Use SwiftUI to build interface.
- Use FastAPI to build back-end with MySQL to realize job reminder function.
- From the front and back end implementation to filing and listing on the App Store, it is completely completed by individuals.

Robot Car Based on RPi 4B **Course Project** September 2023 - January 2024

Python, Linux, OpenCV, GPIO

The robot car based on Raspberry Pi 4B realizes automatic tracking, obstacle avoidance, remote control and other functions.

- Using OpenCV for image processing, automatic tracking function is realized.
- Use Python to control GPIO and the connected sensor and motor to achieve obstacle avoidance.
- The remote control function is realized by connecting the DualShock 4 controller with the PyGame library using Bluetooth.

Machine Arm Based on Jetson **Course Project** February 2024 - June 2024

Python, Linux, YoloV5, Dji-RoboMaster

The robotic arm based on Jetson Nano realizes functions such as automatic grasp and recognition of cans of different colors.

- The YoloV5 model was trained with its own data set to recognize cans of different colors
- Use Python to control the robot arm, and realize the function of automatically grasping and placing in different positions
- Use Python to control Dji-RoboMaster and realize the function of fixed point movement

Experiences

iOS Club Technical Director September 2022 - Present

With no teacher to teach related knowledge, I taught myself iOS development and SwiftUI, and organized many online activities to help students learn iOS development. Helped the community build the iOS knowledge system, and produced the first project for the newly established iOS Club.

Class Monitor September 2022 - Present

As a class monitor, I have been responsible for the daily management of the class, and have been praised by the teachers and students for my work. I have also been responsible for the organization of class activities and the maintenance of class discipline.