Lam Yin Shan Zoe

Email : u3606808@connect.hku.hk, zoelam1215@outlook.com
Mobile/WhatsApp : +852 9716 4122
GitHub: https://github.com/zl0618

Education

- **The University of Hong Kong**
  Bachelor of Science (BSc), Majors: Physics, Computer Science *Sept. 2023 – Aug. 2027*
  - Relevant Courses: COMP1117-Computer Programming, COMP2121-Discrete Mathematics

Skills

- **Programming Languages/ Format:**

  Python, C++, Bash, MATLAB, LaTeX

- **Programming Frameworks:**

  Arduino, ESP-IDF, ROS, Tensorflow, Matplotlib

- **Additional Skills:**

  PCB design, CAD with Fusion360

- **Languages:**

  Cantonese (Native), English (Highly Proficient; IELTS overall: 7.5, with 8.5 in reading and listening), Mandarin (Proficient), German (A2)

Experience

- **Alpha Business Compliance Limited** Hong Kong
  AI Development Intern *Jun - Aug 2024*
  - **Description**: As an AI Development Intern at Alpha Business Compliance Limited, I developed and implemented AI solutions, focusing on the agricultural sector. I collaborated with a multidisciplinary team to build an AI farming agent using Langfow (LLM) for communication and a deep learning model (1D CNN, LSTM) to analyze time-dependent data, correlating harvest dates with environmental factors.
- **Generative Artificial Intelligence Hackathon for Sustainable Development Goals** Hong Kong
  Organisers: HKU, HKUST, HKBU, CityUHK *Oct 2024*
  - **Description**: In this competition, our team developed a comprehensive one-stop AI agent capable of predictive analysis, IoT automation, and customer communication. My specific responsibility in this project is to train a deep learning model to predict the time required for harvesting Butter Lettuce.

Projects

- **Harvest Date Prediction**: A prediction model on the time needed for lettuce harvest.
  The model I developed for the hackathon is designed to predict the optimal harvest date for lettuce based on three key factors: air temperature, humidity, and luminosity. By analyzing how these elements influence growth rates, we can estimate the time required for butter lettuce to reach maturity, ultimately reducing food waste associated with the disposal of non-fresh produce.
  GitHub Link

- **C_T_R_L Macropad**: A simple macropad with shortcut keys to access different applications.
  In this project, I have designed a macropad from scratch using Cherry MX 1.00u keyboard switches and a XIAO ESP32-C6 board for the control of the keys. I have successfully made a PCB for this design and to open the applications automatically after install and run the python automation script. I have also written a script to control the keys by the XIAO ESP32-C6.

  GitHub Link

- **IMU Visualiser**: A real-time 3D visualization tool for inertial measurement unit data analysis.
  In this project, I developed a system that interfaces with IMU sensors to capture and visualize orientation data in real-time using Python with Streamlit and Plotly. I implemented serial communication protocols to connect with ESP32-based IMU modules, processing sensor data with filtering algorithms for smooth 3D visualization of roll, pitch, and yaw movements.
  GitHub Link

- **MS200 LIDAR Visualizer**: A real-time LIDAR visualization system for the MS200 sensor without requiring ROS.
  In this project, I developed a plug-and-play system that automatically decodes MS200 protocol packets and provides real-time polar visualization with distance filtering and intensity thresholding. I implemented high-performance data processing with 50ms update intervals using Python, pyserial, and matplotlib, creating a clean dark theme interface with range circles for robotics projects and mapping applications.
  GitHub Link