Jinsong Li

Embedded Software Engineer

PROJECTS

QR Code Seeker Robot Based on ROS and SLAM

03/2019 - 12/2020
- Designed a vehicle equipped with a LIDAR, camera, Raspberry Pi and Arduino, running ROS
- Built a simulation and test environment in Gazebo
- Developed functions to explore the room, look for and locate QR codes

Autonomous Flight Control System for Quad-Rotor UAV

10/2018 - 06/2020
- Developed a quad-rotor UAV equipped with STM32, MPU6050, etc
- Developed navigation functions on a commercial flight control based on TM4C123G MCU with optical flow module and laser ranger
- Implemented Raspberry Pi with camera for human detection using Python, OpenCV, HOG approach

Monocular Rangefinder based on ARM11

03/2020 - 05/2020
- Compiled and implemented OpenCV to a minimal Linux system
- Developed C++ program to find distance between camera and object using Canny edge detector

Displays image and text by writing data to framebuffer device

IoT Project Series

04/2020 - 01/2021
- Developed heart rate monitor based on ESP32 and BLE ECG modules, the data are collected, processed by ESP32, and uploaded through u-blox cellular module
- STM32F4 controls MAX30102 module, filter the sensor data, and calculate the heart rate and SpO2, then send to the server through ESP8266
- Developed smart water meter with valve, thermometer, and fire alarm based on STM32, communicate with cloud server through NBIoT module
- Developed plant watering system based on Raspberry Pi, communicate with Alibaba Cloud through MQTT protocol

EDUCATION

MSc in Computer Science and Engineering

Technical University of Denmark

09/2020 - Ongoing   Lyngby, Denmark
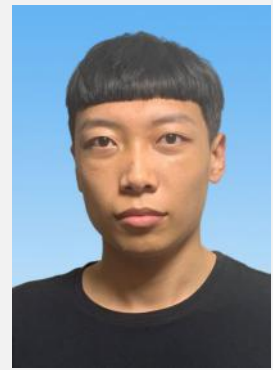
B.S. Electronic Information Science and Technology

Jiangxi University of Science and Technology

09/2016 - 06/2020   Ganzhou, China

CONTACT

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EXPERIENCE

Co-Founder & Maintenance Engineer

Ganzhou Yuyu Electronic Technology Co., Ltd

12/2016 - 06/2019   Ganzhou, China
- Responsible for PC Repair and Sales
- Mastered the Skill to Locate the Error in Complex System

ACHIEVEMENTS

1st prize of Provincial "Lan Qiao Cup" Collegiate Programming Contest (Embedded System Event)

2nd prize of Provincial "TI Cup" Electronic Design Contest (UAV Event)

2nd prize of Provincial "Jiechuang Cup" Electronic Design Contest

SKILLS

Embedded Linux		STM32
C/C++	Python	ROS
FPGA	MATLAB	

LANGUAGES

English

Chinese (Mandarin)