Fanzhe Lyu

Address: 301 10th St NW, 30318
Email: fanzhe@gatech.edu
Website: fanzhe.org
Phone: (404)-271-9792
LinkedIn: linkedin.com/in/fanzhelyu
GitHub: github.com/fanzhe98

EDUCATION

Georgia Institute of Technology, Atlanta, GA — Expected Graduate: May. 2020
Major: Electrical Engineering — **GPA: 4.0**

EXPERIENCE

ECE tutoring — **August 2017 –**
- Working as an IEEE tutor and Tutoring Intro to Digital Design in ECE department

IVA Lab
Undergraduate Researcher — **August 2017 –**
- Working at undergraduate researcher at Vision-based navigation team
- Researching extended-local vision-based navigation

ESTUN Robotics, Co, Ltd.
Application Software Engineering Intern — **May 2017 – July 2017**
- Designed alert system and archive system in a remote monitoring system for manufacturing robots and deployed devices used for internetworking in the system
- Designed a data manipulation software debugging tool for debugging data in PLC
- Prototyped future IOT device for robot cloud
- Tested robot cloud codes from outsourcing company
- Configured networking used for robot show
- Demonstrated basic usage of ROS and possibilities to migrate functions to ROS

PROJECTS

ModJbus (An Open Source Java Modbus-TCP Library) (On-Going)
- Designing a Modbus-TCP Library in Java
- Aiming at better performance than existing library
- Avoiding flaws of design which exists in existing library
- Adding more utilities and tools useful for data manipulation

ModbusPP (An Open Source C++ Modbus-TCP Library)
- Designed a Modbus-TCP Library in C++
- Inspired by lib-modbus but accommodated C++'s OO Design and stream programming
- Designed useful utilities for data manipulation and type conversion from Socket Stream
- Achieved Better Readability, lighter weight

V-Plate (A robot waiter)
- Made a Raspberry Pi based robot waiter and supporting voice recognizing Android App
- Developed server-side program on controller to listen data from phone and translate into GPIO digital signal to control the behavior of the robot

A Voice–Controlled Game
- Designed a Voice-Controlled Game using Python and Cocos2d
- Used the python library to analyze the volume of the microphone input and then change the graphic output of controlled figure

Adaptable Robotic Gripper
- Entered final round of the Hack-A-Thing Competition (2016)
- Built a robotic gripper that can adapt to most of objects, from hard to soft, and harsh to fragile
- Designed and built whole Electrical Part and Controlling Part of the robotic gripper

Smart Eco-Friendly Green House
- Built a IOT Solar-energy powered greenhouse in high school
- Designed a computer-based automatic control of Electricity, and circulation of air and water
- Promoted technology application on protecting environment in school

SKILLS/INTERESTS

- **Coding**: Python, MATLAB, Java, C++, C, Pascal, VB. NET, Arduino, mbed, Assembly
- **Framework**: Flask, ROS, OpenCV
- **Electrical**: Digital System Design, FPGA w/ VHDL, KiCAD
- **Language**: English, Mandarin, German
- **Hobbies**: Soccer, Guitar, Percussion, Piano, Bass, Rubik's Cube