Yipeng Pan

Pan.yp@hotmail.com (+86)151-6211-9250
China University of Mining and Technology Xuzhou, China
https://tz-bubble.github.io

Education

China University of Mining and Technology (211) Sep 2015 – Jul 2019
Xuzhou, China

- B.Eng in Electronic Information Engineering
- **GPA**: 85/100
- **Major courses**: Visual C++ Programming (96), Circuit Theory (90), Engineering Mathematics (96), Linear Algebra (98), Principle of Automatic Control (89), Information Theory (98), Image processing (89), Engineering Graphics (92), Digital Electronics Technology (89), General Physics (89), Microcomputer Principle & Application (95), Integrated Design of Electronic Technology (95), Embedded System Principle & Application (83), Network Programming (90), etc.
- **Language**: Mandarin, English
- **Programming Languages**: C, Java, Python, Verilog HDL, LaTex
- **Software**: Keil MDK, MATLAB, Linux (CentOS, Ubuntu), VMware, Quartus II, Proteus, AutoCAD, Origin, Dreamweaver, Altium Designer, Android Studio, Photoshop

HONORS & AWARDS

- 2nd Prize, Preliminary Competition of China Postgraduate Electronic Design Competition 2019
- School Excellent Graduation Design, CUMT 2019
- 1st Prize, School Electronic Design Competition, CUMT 2019
- 2nd Prize, TI Cup Provincial College Students Electronic Design Competition 2018
- Honorable Mentions, Mathematical Contest in Modeling 2018
- **National Encouragement Scholarship**, CUMT 2018
- 1st Prize, TI Cup Provincial College Students Electronic Design Competition 2017
- 2nd Prize, Renesas Cup National College Students Electronic Design Competition 2017
- Second Class Scholarship, CUMT 2017

RESEARCH EXPERIENCE

Selected research projects and designs (my Portfolio and Video Presentation—http://pyp1024.tk)

- **Tracking Four-Rotor Aircraft**
  Functions: The aircraft can take off, hover and land automatically, and follow the remote control car automatically when flying (it can learn to follow differently colored targets).
  Details:
  - Flight control module adopts **APM Flight Controller** (Ardupilot Mega).
  - The **OV7725 camera** is used to collect real-time visual data. The frame number is about 20 per second.
  - The **Dual-loop PID control algorithm** and the **color standard conversion** are used.
- **Raspberry Pi Monitoring Vehicle**
  Functions: The keyboard and the mouse can control the movement of vehicle and the orientation of camera respectively. The real-time images captured by the moving camera on the camera

platform will be uploaded to the host computer through WLAN.
Details:

- The vehicle is based on **Raspberry Pie**, and another **Arduino Uno board** is used to control motor movement. The communication between them is based on **Serial Communications**.
- The code of client and server is written in **Python** and runs in **Linux** environment. The control code of the camera platform is implemented by **pygame module**.
- The information transmission adopts the socket protocol. The image transmission rate is 25 frames per second, and the image resolution is 320*240. The code of transmission is implemented by **cv module**, **Image module**, **StringIO module** and **socket module** of python.

- **Smart Portable IoT Medicine Box (Device + Server + APP)**
  Functions: The design realizes the visual tracking of GPS positioning of the box; the curve display of real-time temperature; the display of the medicine status and the monitoring of the lid.
  Details:

- On the platform of STM32 and with incremental PID arithmetic, adjustable constant temperature storage of medicines is realized. Then an incubator system is constructed.
- The server is deployed in **Windows Server 2012** and the host computer is based on **Android OS**. The related programs are written in **Java** language.
- The acquisition and communication system adopts **multiple sensor modules** to collect the environment and state data of the box and upload them to the server through the **GPRS communication module**. Both acquisition and transmission delays are within one second.
- 18650 lithium batteries and switched-mode power supply are both adopted in the hardware power supply system.

EXTRACURRICULAR ACTIVITIES

Minister of Publicity Department, School DJI Club Jun 2016 – Jul 2017

- Responsible for the production of publicity materials.
- Assisted in the recruitment of team members.

Office Director, School Electronics Association Jun 2017 – Jul 2018

- Leaded and trained for school electronic design competition.
- Authorized to prepare and host the School Electronic Design Competition.
- Awarded the honor of ‘Excellent Cadre’; and nominated and selected as the Top-10 associations.

Lab Manager, Electronics Design Laboratory Jun 2018 – Jul 2019

- Appointed to manage all routine work of the Lab.