Haotao Lai

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Education

Guangzhou University **S**ept.2012 - Now

Major: Mechanical Automation Engineering (BSc. expected in June 2016)

Overall GPA: 79%

IELTS: 6.5 (no band below 6)

Academic Projects

Internet express system Sept.2014 - Now

- Created intelligence-based interactive system using Java for android
- Implemented communication between android and STM32 as the control unit
- Received 10,000 RMB funding and a patent authorization

Obstacle avoidance remote control robot March - June 2015

- Created using Arduino and Visual Basic
- Independently wrote the libraries using Arduino
- Used three casters for implementing the Omni's moving direction; RS485 communication protocol to organize the sensor network; Visual Basic for master computer's UI and controller; and a wireless video transmit module with the controller

Obstacle avoidance / remote control car Sept. 2014 - Jan. 2015

- Team leader for creating system using AVR resources (including IO operation, interrupt, timer, UART, SPI)
- Integrated system with several sensors (ultrasonic, infrared, and Bluetooth) and two DC motors
- Algorithms applied for obstacle avoidance

Special design projects for blind and disabled people March - June 2014

- Projects funded by Guangzhou Education Bureau

Entertainment based system (dancing mat) for blind children

- Developed (as 2nd author) using STM32, SD card, I^2C communication protocol and DMA
- Through investigative research done at the Guangzhou Blind Children School to better learn how to design communication for children's needs

Search tool for blind children

- Developed (as 2nd author) using Arduino and NRF24L01

Disability assistant page reader

- Applied mechanical engineering design as 1st author for the linkage, and fabrication of the synchronous belt pulley and the motor

Forklift truck system Sept. 2013 - Jan. 2014

- Developed (as 1st author) using Arduino, Bluetooth, android, and 3D printer
- Received a 2nd place in school project competition and a patent authorization

School and Volunteer Activities

- Committee Member and Director in the Student Union
- Volunteer in different capacities at several Canton Fairs
- Student tutor, assisting students to pass math and physics exams

Awards

- Outstanding Student Award (2012)
- University's Science and Technology Innovation Contest (2nd place in 2013)
- Guangzhou University Lab Competitions (1st and 2nd place in 2013 and 2014)

Relevant Computer Skills

Programming Languages: C and Java National Computer Rank Examination Level 2

Computer Aided Design: Solidworks AutoCAD Altium Designer

Stimulation Software: Proteus

Microcontroller Development: Arduino 80C51 AVR Stm32