Lizhong Zhang

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PROFILE

Participated in dozens of personal projects and competitions, including aerospace, robotics, programming, computer vision, embedded, and human-computer interaction and get multiple patents and awards, and projects were two times reported by media.

Due to the peculiarities of my personal experience, please visit my website to see my project
http://lizhongzhang.tech/

EDUCATION & QUALIFICATIONS

University of Bristol - BEng Mechanical and Electrical engineering   Year1 - Still attending

WORK EXPERIENCE

Researcher – University of Bristol   Apr 2023 to Jan 2024

Design Attend MagNet AI Global challenge. Co-host by IEEE, Google, Tesla, Princeton University

- 1st place in few-shot-learning, 5% accuracy ahead of the 2nd place.

- 3rd place in model overall performance.

- Lead 20 university in world including Tsinghua(清华).

- Our team's winning neural network model was written by me.

UAV Entrepreneurial attempt | Myself   Jun 2021 to Jul 2022

Design, and manufacture Tethered UAV

- Technical partner, Demonstrate, design, and build the first prototype on my own. Also responsible for some project management and engineering staff hiring.

Student tutor | DJI   Jul 2021 to Aug 2021

Robomaster competition: co-host by DJI (Drone) and IEEE (International Conference on Robotics and Automation)

- Invited as a student tutor for the Chinese Robomaster 2021 High school summer competition

- I served as an interviewer and participated in the development of questions for the students during the interview period, as a lecturer on mechanical design and control systems during the training period, and as a mentor for the students during the competition period, leading two groups of 12 team members.

Awarded as excellent student tutor

KEY SKILLS

- **Brief:** 3D modelling/ Embedded system/ Control system design/ Simulation (Structure, Control)/ Digital & Analog circuit design/ computer vision

- **Engineering tools:** Solidworks/Fusion360/ MATLAB/ Simulink/ Keil/ LCEDA (PCB design) /Visual Studio/ VS code/ Git/ STM32_CubeMX&CubeIDE

- **Other tools:** Word/ Excel/ PowerPoint/ Visio/ Adobe Premiere Pro

- **Programming Languages:** C/C++/Python/MATLAB/Simulink

- **Platforms:** OpenCV/ Arduino/ STM32/ FreeRTOS/ ROS/ ROS2/ Windows/ Linux(ubuntu)

REPRESENTATIVE

Reusable rocket Gen.1 (Individual project)   2021-2022

- Successfully design and run a 30m recovery experiment.

- Built a new flight control system and development toolchain by myself.

- This rocket is 2.1m high, contains 300+ parts, and 4500+ lines of code by 5 programming languages.

- Report by media with more than 60 million streams.

- 3 patents applied for this project

Laser Mosquito Defence System (Gen.1 and Gen.2) (Individual project)   2020-2021

- The machine uses a laser to kill mosquitoes automatically. This machine uses computer vision to detect and track mosquitoes (OpenCV) and shoot a laser to kill the mosquitos.

PUBLICATION

2 Patents authorized in China (3 in reviewing)   2022

- A design of aircraft fuel tank
  Patent number: CN218258747U

- A rolling Angle controller for aircraft and related aircraft design
  Patent number: CN218258710U

Media report: Reusable rocket (Individual project)   2022

- Reported by many Chinese mainstream media (Xinhua News Agency, People's Daily Online, Huanqiu.com and other media)

- Rank 28th in China's hottest searches.

- More than 60 million views in total.

Media report: Laser mosquito defence system (Individual project)   2022

- Project: LMDS Gen.1(Laser mosquito defence system) attend school science fairs and was reported by local media as the best project.

Awards

MagNet Challange

- 1st place in few-shot-learning, 5% accuracy ahead of the 2nd place.

- 3rd place in model overall performance.

- Lead 20 university in world including Tsinghua(清华).

DJI Chinese Robomaster 2020 High School Competition

- Champion

- Group leader

2018 Soong Ching Ling Juvenile Invention Award

- Bronze award

2018 Youth Science and Technology Innovation Competition

- Second class prize

INTERESTS

Badminton, hiking, boxing, guitar, basketball, DIY, and archery.