

Cao Ruixiang

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Shanghai China

SUMMARY

Undergraduate students majoring in EE. Experienced embedded system development and hardware development.

EDUCATION

Shanghai University of Science and Technology Sep 2018 - Jun 2022
Electronic Information Engineering Bachelor School of Information Shanghai

Organization and community experience

Shanghaitech University MARS Lab Sep 2020 - Nov 2021
Hardware engineer Shanghai
Responsible for the design and manufacture of the experimental lighting devices

Sandbox Maker Space Nov 2018 - Nov 2021
Founder Shanghai
Founded the ShanghaiTech University Sandbox Maker Space, engaged in the development and design of creative electronic projects. 20+ projects has been finished in this maker space.

ShanghaiTech University LIMA Lab Sep 2021 - Nov 2021
Quadruped robot developer Shanghai
Development of quadruped robot based on MIT mini Cheetah. Researching on development better gaits for quadruped robot with deep learning

Major project experience

Filament LED Wall Oct 2020 - Nov 2021
Independent project Shanghai

Project Description:

- "FilaWall" is a portable art device that can capture the movement of your body and display it on a screen consists of hundreds of filament LEDs.

My Role:

- Circuit design & PCB design
- Programming using Python and C++
- Mechanical design

MARS Relighting System Apr 2021 - Nov 2021
Hardware designer Shanghai

Project Description:

- A system consists of hundreds of RGBW lights projecting predefined lights on objects to relight it in virtual environment

My Role:

- Circuit & PCB design

- Appearance & Mechanical design
- Programming using C

Light Field Stage

Sep 2020 - Mar 2021

Hardware designer

Shanghai

Project Discription:

- A high precision model reconstruct system consists of more than 100 LEDs and 23 cameras. Used to project predefined patterns on objects to reconstruct 3D models of it.

My Role:

- Hardware architecture design
- Programming using Python and C++ and
- Circuit design & PCB design using Kicad
- Mechanical design using Solidworks

The Last (Unity Game)

Apr 2021 - Jun 2021

Main programmer

Shanghai

Project Discription:

- An FPS game made with Unity.

My Role:

- Programming logics of the game with C# including player, enemy, interaction, sound effect and so on
- UI, map, environment design
- Player and enemy animation

SKILLS LIST

- Embedded system programming (stm32, esp32, Arduino)
- 3D modeling using Solidworks, Fusion360
- Circuit & PCB design using Kicad
- Game development on Unity using C#
- Programming with Python, C/C++
- 3D printing and CNC machining