Jingyi Liang(Serena)

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EDUCATION

Imperial College London Sep 2019 - Jun 2023

Electrical and Electronic Engineering Master London

On track to graduate with first class honours

Modules: Communication system, Signals and systems, Digital signal processing, Analysis and design of circuits, Analogue circuit and system, Programming, Digital and computer architecture, Control system, Electromagnetism, Power electronics and power system, Mathematics

Roedean School Sep 2016 - Jun 2019

Mathmatics A*, Further Mathmatics A*, Physics A*

SKILLS

- **Languages:** C++, Verilog
- **Platforms:** Matlab, LTspice, Quartus, Unity, Arduino
- **Extra skills:** Proficient with office software, proficient with measurement devices for circuit

PROJECTS

Mars Rover May 2021 - Jun 2021

Integration London

- Wrote Arduino code to control the movement of the rover and used optical sensor to track its coordinate.
- Created a web to control the movement rover remotely and received information from energy subsystem and drive subsystem.
- Developed the central processor of the rover ensuring correct functionality of all the subsystems together.
- Awarded the Runner up prize for this project.

Analogue Music Synthesiser Jun 2020 - Jul 2020

Team Leader London

- Designed a circuit for an analogue music synthesiser that can generate audio frequency tones for the 7 notes in the C major, and simulated it using LTSpice
- Breaked down the sythesiser into 6 main blocks (eg. VCO, VCF, ADSR), and designed each block completely from scratch
- Wrote a formal report for the project, and recorded a video to explain how it works

Echo Synthesizer Oct 2020 - Dec 2020

- Designed different types of counters and timers
- Designed finite state machines
- Evaluated the performance of analogue to digital and digital to analogue conversion circuits
- Used the DE10-Lite FPGA Board to perform simple audio signal processing

MU0 microprocessor Jan 2019 - Apr 2019

- Designed the control path of the MU0 microprocessor on Quartus
- Implemented different blocks in the control path (eg. IR, PC, Memory unit)
- Designed the data path of the MU0 microprocessor and improved the performance of data path by adding some arm instructions

LEADERSHIP EXPERIENCE

School Electric Car Design Sep 2017 - Jun 2019

- Learned and used CAD to create a 3D solid modeling for electric car bearing
- Soldered the components onto the PCB
- Tested the rotating speed of the car wheels

Young Enterprise Aug 2017 - Aug 2019

Financial Manager

- Controlled over income expenses, cash flow and expenditure
- Took research into pricing, and calculated the net profit
- Gave final presentation about our company

National Citizen Service Jun 2018 - Jul 2018

- Investigated the social issues, made a plan, and executed the plan
- Raised awareness for homeless people, and provided physical help for them