

# Zihao (Harry) Liu

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## EDUCATION

### University of Edinburgh

*Master's Degree in High Performance Computing*

**Edinburgh, United Kingdom**

*Sep. 2023 – Sep. 2024*

### University of Bristol

*Bachelor's Degree in Electrical and Electronic Engineering*

**Bristol, United Kingdom**

*Sep. 2019 – Jun. 2023*

- **Grade:** Second Class Division (First Division) – 68%.

### Shenzhen College of International Education

**Shenzhen, China**

*GCE A-Level*

*Aug. 2017 – Jun. 2019*

- **Grade:** Computer Science (A\*), Mathematics (A\*), Physics (A\*). Economics (A).

## WORK EXPERIENCES

### Arm

**Manchester, United Kingdom**

*Hardware Engineering Intern*

*Jul. 2023 – Ongoing*

- Develop IP with design teams to deliver high quality, power efficient products.
- Analyse existing and trial new tool flows and propose improvements/automation.
- Verify IP using many methodologies – constrained random simulation using testbenches written in SystemVerilog, running real applications on emulation or FPGA platforms, and using formal methods.
- Implement Arm IP in silicon process nodes using design automation tools.
- Develop system solutions using ARM IP for different market domains including mobile, IoT, datacenters, etc.
- Write specifications for Arm's IP products and systems – analysing trade-offs between different options using software or hardware models.
- Verification and Implementation support for systems through the lifecycle of the design to the delivery to the customer.

### Huawei Technologies Research & Development (UK) Ltd

**Cambridge, United Kingdom**

*Research Intern*

*Feb. 2023 – Jun. 2023*

- Constructed automated Continuous Integration (CI) using Jenkins from zero to one for the CPU architecture team. Used Docker to tailor images based on different test needs. Utilized Kubernetes to connect machines into a cluster, and integrate it with Jenkins to enable efficient allocation of computational resources for testing.
- Developed CI job scripts for various scenarios, including merge request pipelines, nightly pipelines, and regression test report generation pipelines. Worked with various plugins in Jenkins to add additional features to pipeline that supports the work of other Developers.
- Used Pandas to generate aggregated test reports in the form of Excel files by processing and extracting meaningful results from raw log files. Used matplotlib for data visualization. Integrated the test report generation in all CI pipelines.
- Developed Shell scripts to configure proxy and set up Docker and Kubernetes services for newly installed machines.

### FixMyCrack

**Bristol, United Kingdom**

*Repair Technician*

*Aug. 2022 – Jan. 2023*

- Assessed and repaired various mobile phones (screen & battery replacement and refurbishment for iPhone 6 to 11).
- Worked in parallel with other technicians and assisted in market research for branches at Exeter and Southampton.

## PROJECT EXPERIENCES

### AHB Bridge Project (VHDL)

**University of Bristol**

*Group Leader*

*Sep. 2022 – Oct. 2022*

- Constructed a microprocessor-based System-on-Chip and replaced the Leon3 processor with the Arm Cortex-M0 in a System-on-Chip, designed and implemented a bridge between the Cortex-M0 and the rest of the SoC infrastructure to establish compatible communication.
- Worked with professionally written VHDL and Verilog code and used advanced concepts such as VHDL records and generate statements, and tested the implementation efficiency by co-simulating Verilog and VHDL using Xilinx ISE.
- Received high appraisal on the performance of our group's microprocessor design by **exceeding the best achievable clock frequency** stated by the professor in place & route.

## SKILLS & INTERESTS

**Skills:** English (Fluent), Chinese (Native), Python (Proficient), C (Intermediate), Linux/Unix, Shell Scripting, VHDL, SystemVerilog, Matlab, Object-Oriented Programming.

**Interests:** Piano, Sports – High School Team (football and volleyball), League of Legends (Europe West Top 0.193%).