

Zihao (Harry) Liu

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Personal webpage: <https://harryrrah76.github.io/>

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%).