Aimilios Christou

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Work Experience

09/21 – Now **ENTRUST Corp. - Data Protection Solutions Engineering, Cambridge, UK**

My current position as an Electrical Engineer II, which amounts to the tasks of a hardware design engineer within the company, alongside firmware and software development duties.

Software developer role (Jun – Aug 2023)

- I set up the infrastructure, compilation, and linking environment for the Cortex M microcontrollers in the controller module. (GCC, CMake)
- I developed the prototype firmware in C for the microcontrollers, allowing the validation of the design.

Additional Duties for Hardware Engineering

- Created Python scripts to automate the lab infrastructure using MQTT with Raspberry Pi clients.
- Automated Jira ticket creation through the Python Jira API to streamline the hardware development cadence.
- Improved data collection and validation of the InfluxDB database used to monitor equipment.

Hardware Engineering

- Developed three iterations of a controller module for a 1U rack server using ARM Cortex M microcontrollers, as well as iterations of smaller PCBs for the server.
- Designed a PCB and wrote the firmware for an RP2040-based power monitoring interposer on a PCIe interface – Used for automation and data collection.
- Created resources in the office to use a 3D printer, and I personally handle printing requested designs.

07/20 – 08/20 **CRYSTALVISION LTD, Whittlesford, Cambridgeshire, UK**

A two-month internship on a video and audio encoding solution for parallel streaming involving hands-on experience with custom FPGA transceivers reaching capabilities of 400Gb/s.

- Designed VHDL tests to produce eye-diagrams for three different FPGA chips.
- Optimised existing VHDL codebase by updating their low-level routines.

07/19 – 08/19 **SWINDON SILICON SYSTEMS - SENSATA, Swindon, UK**

A two-month internship at the company, in which I was part of a project involving the development of a custom ASIC solution for a pressure-controlled haptic feedback device.

- Programmed an FPGA with Vivado to interface with Python via a Jupiter Notebook.
- Incorporated simulation tests previously running on a PC in order to increase the portability of the overall design.

Education

2017 – 2021 **Gonville & Caius College, University of Cambridge**
MEng Electrical and Electronic Engineering, 2:1, Cambridge MA

Master's Course Summary:

- Sensors and Instrumentation, with Embedded Systems for the Internet of Things
- Radio Frequency and Integrated Digital Electronics
- Data Transmission, Information Theory, and Coding
- Computer Systems, Software Engineering and Design
- Accounting and Finance, Modelling Risk

Master's Thesis

"Optical digital coherent transceivers have the capability of achieving 1 Tbit/s links in the core networks and 100 Gbit/s links in access networks".

I developed algorithms in MATLAB for the simulation of transceivers, mainly those required for synchronisation and equalisation (both linear and nonlinear), as well as modulation techniques such as probabilistic shaping.

Accomplishments

12/2021 Internal company hackathon participation and winner of the entertaining and creative award for a sweater with a scrolling LED display.

07/2020 Electronics Projects Creator for Hercules Cambridge, a platform for people to learn practical work skills like CAD, hardware, and software design through hands-on projects. I was responsible for creating electronics projects to teach useful applications of hardware in real-life situations.

06/15 – 01/17 18-month Military Service in the Cypriot Army (Artillery), achieving rank of Second Lieutenant. As such, I oversaw a squad of 20 private soldiers. The experience has led to the improvement of my communication and leadership skills.

2015 First place award for the highest combined mark in the Pancyprian examination in Mathematics, Physics Chemistry, and the highest single mark in Greek. English IELTS with mark 8/9 (July-2012).

Activities and Interests

Learning software technologies	3D Printing	Puzzles/Logic Games	Basketball