Andrew Hughes

Ahughes6@sheffield.ac.uk
07708 287835

Education

The University of Sheffield:

BEng Computer Systems Engineering (Year in Industry) – Achieved 71% average in my first year. IET accredited.

Year 1 modules
Systems engineering and software, Mathematics, modelling, analysis and control, physical systems, digital and embedded systems, introduction to electric and electronic circuits.

Year 2 modules – Currently studying
Control systems design and analysis, mechatronics, systems engineering and object oriented programming, signals, systems and communications, Mathematics and data modelling, computer problem solving and object oriented design.

My course so far has taught me a variety of skills in software engineering including object oriented programming, algorithmic design and embedded systems engineering, whilst maintaining a focus on control and systems engineering with concepts such as system modelling and design.

Queen Elizabeth's Grammar School, Faversham, Kent

A levels: Mathematics - B, Computer Science - B, ICT – B
Extended Project: Retro arcade machine - B

GCSE: 12 grades at A-C (including Maths and English)

Technical Skills

Programming languages and software: C, C++, Python, Git, SQL, LabVIEW, MATLAB, Simulink

Projects

Autonomous Robot Project **March 2018 – April 2018**
In this individual project I had to program a robot to follow track and perform certain manoeuvres. To do this I programmed a microcontroller using C and programmed a proportional controller that would use an input from a line sensor attached to the robot to determine its position on the track. This project introduced me to new concepts such as the I2C serial bus and how to implement a proportional controller which I had only been taught about theoretically before.

Global Engineering Challenge **January 2018**
In this week-long project, me and five other students from across the engineering faculty were tasked with creating a retinal scanner to diagnose medical issues in a Kenyan slum. The project also allowed us to investigate the social, environmental and ethical impacts of our solution which taught me the wider impact of engineering. I also developed my team work skills and presenting skills, as we had to propose our solution to a group of academics, students and alumni.

Robot Design and Build Project **October 2017 – February 2018**
In this project I worked collaboratively with two others to design create and program an obstacle avoidance robot. Firstly, we designed a circuit board based around an 8-bit PIC microcontroller then soldered the components to a strip board. We then programmed the microcontroller using C.

The project helped me to develop my programming abilities and gave me a lot of experience of working with embedded systems

Retro arcade machine **September 2016 – April 2017**

For my extended project qualification, I created a retro arcade machine using a Raspberry Pi and joysticks and button controllers. I created the machine by wiring each individual controller to the GPIO pins on the Raspberry Pi and then configuring the function of the pins with UNIX shell commands. I also learned how to use SSH to communicate with the Raspberry Pi from a different computer to properly configure it.

Employment History

Whitstable Oyster Company – Chef

February 2017 – September 2018

At the Whitstable oyster company restaurant, I worked as a chef in several different sections. I was responsible for my station and had to work in a small team of other chefs in a fast-paced busy environment. Through this job I learned how to work effectively under pressure and enhanced my team working abilities by efficiently communicating with other members of the kitchen during busy periods.

Deeson, Canterbury – Software development work experience

February 2017

I spent a week at Deeson in Canterbury on a work experience placement. During this week I worked on Raspberry Pi and created a Slack doorbell by using a display and camera that plugged into the board via the GPIO pins. I had to create a Python script that used the Slack API to post to the company's Slack page when a user would press the button on the doorbell. This placement helped introduce me to how API's work and give me an idea of what to expect at a small software development office.

East Quay Venue, Whitstable – Kitchen porter / Chef

March 2015 – February 2017

At the East Quay Venue, I started out as a kitchen porter before rapidly progressing to be a chef in a fast-paced kitchen. After a year of working there I was responsible for cleaning down the kitchen by myself and training new members of staff and creating new dishes on behalf of the restaurant managers request.

Interests

Outside of my academic studies I enjoy creating a range of programs such as games (in Python) such as a networked space invaders style game. I have also completed my bronze and silver Duke of Edinburgh awards which has helped me refine my teamwork abilities and leadership skills. I also enjoy creating small scale projects involving the Raspberry Pi and Arduino. One of my favourite pastimes is improving my culinary skills and I regularly enjoy making food creations such as classical French desserts.

References

Dr G. Konstantopoulos
Dept of Automatic Control and Systems Engineering
University of Sheffield
Sheffield
S1 3JD
Tel: (+44) (0)114 222 5637
Email: g.konstantopoulos@sheffield.ac.uk

Angharad Green
General manager
The Whitstable Oyster Company Limited
The Royal Native Oyster Stores
Whitstable
Kent
CT5 1BU
Email: bookings@whitstableoystercompany.com