Provide an example of an activity you have organised or undertaken in your own time in order to further your own development.

During 3rd year of university I joined the Edinburgh Napier Formula Student team. The goal of formula student is to design, build, and test a Formula 3 equivalent race car including tasks such as applying for sponsors and arranging manufacturing of parts.

I was part of the electronics department who were tasked with planning and creating the safety systems for the vehicle. Throughout my time with the team we created a new wiring loom from an existing Honda motorbike engine, and ordered various switches to be included base on the race regulations. Due to delays with manufacturing of the chassis the Napier team entered the class 2 competition which does not require a physical car so towards the end of the project the electronics team compiled a document of plans for the electronic systems.

The Napier team attended the competition but did not win though work on the car is continuing. While I was part of the team I gained knowledge of automotive electronics systems which is a personal interest and gained extra experience in working with other people towards a common goal.

Provide an example of a time when you gained something because you persisted for a length of time and did not give up.

I recently completed a summer internship with an EDA company. My role was to manage performance tests and update and improve the testing suite which runs the tests.

The company uses a Linux and the testing suite was written in a mix of CSH and Python but needed to be converted entirely to Python. Before starting the job I had only limited exposure to Linux and scripting and had no knowledge of Python programming.

To overcome this I made sure that I took notes on any guidance people gave and anything I discovered for myself. I asked various people, questions when I was unsure about tasks or any intricies and I completed Python tutorials at home to gain extra experience so that I could complete my tasks effectively.

By the end I had completed more than my manager had thought I would be able to. I added extra functionality to the testing suite and was able to roll it out for more teams. I also now use Linux as my main operating system at home and have written some Python scripts to automate some tasks.

Provide an example of a problem you have encountered, and describe how you went about analysing the problem and devising a solution.

Before returing to education I was working towards a career as a mountain bike instructor and mechanic. I had started on this career path directly after finishing high school as mountain biking is my main hobby and I thought that I would like to incorporate it into my work. After five years of working in various shops and acquiring different instructors and guiding qualifications I had decided that it was not the career that I wanted and that I had stopped enjoying mountain biking in my own time.

To analyse the problem I looked at why I wasn’t happy with my career by taking note of my daily activites at work and home while thinking about activites I enjoyed and would

consider an option for a carrer. My solution was to try out the different options in my own time to find out which I could take into further education. This included trying electronics, programming, and various design projects.

The result of this was that I found I enjoyed computer programming and am now in my final year of a software engineering degree after being very successful in previous years and while working in the industry.

Provide an example of a time when you were given a task or project to complete without any structure. How did you go about organising your work and setting your priorities?

During 3rd year of university for the Sensing Systems in Mobile Applications module I was tasked with carrying out a project involving the Arduino microcontroller platform and Android mobile operating system. There was no further structure other than a mid point report and final deadline.

I chose to create a helmet mounted crash sensor using accelerometers which was controled by an Android application and could automatically send an SMS message on detection of certain situations. I organised writing work by sectioning off the documents by their headings and aiming to complete each section per week of the project with added time for proof reading. The development work was prioritiesed by the MoSCoW deliverable structure which allowed for the basic functionality to be completed and then further features added if there was time. The entire project was laid out using a Gantt chart.

The project was extremely successful and completed within scope with a week extra to tidy any sections and improve the stabilitiy of the application. I received the highest result for the coursework out of everyone enrolled on the module.