What do you see as your own strengths and weaknesses? What have you done to build on your strengths and develop areas of weakness?

A weakness is my lack of mathematical qualifications such as A-levels. This is due to my decision to enter employment immediately after leaving high school and take a career path relating to my hobby. To counteract this I have undertaken projects at university which involve intermediate mathematics or physics such as the development of a wearable crash sensor involving three dimensional trigonometry.

I posess a strong attention to detail. I can easily identify details in my work or life which, though small, when addressed or carried out correctly can make a large overall difference. For example when I write code for a piece of software I ensure each algorithm or statement is as clean and efficient as possible. This leads to more readable code and sometimes efficient solutions to problems.

Another weakness is that I put pressure on myself to succeed which can lead to some stress. I aim to achieve high standards in my work which can lead to feeling snowed under with work. To combat this I strive to be organised and know exactly what I have to do in projects so I can complete smaller parts step by step.

Another strengh is my ability to communicate my ideas clearly. When working on projects in teams I can voice my ideas so they can be understood by all members and also easily discuss other views and opinions. This has allowed me to easily acquire leadership and instructors qualifications for mountain biking and complete successful projects at university.

Describe a time when you persevered with a task at university or work despite a setback. What were the issues and how did you

overcome them?

I completed a summer internship between third and fourth year of university with a global EDA software company. My task was to re-engineer a performance testing suite which runs nightly on new builds of the software product.

The company uses a Linux environment 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. Initially I found my tasks difficult to complete and was unsure of what to do in many cases.

To overcome my lack of knowledge I made sure that I took notes on any guidance people gave and anything I discovered for myself. I asked other developers in the team questions when I was unsure about tasks or any intricies. 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 also now use Linux as my main operating system at home after becoming comfortable with how to use it and have written some Python scripts to automate some tasks.

Outline a major piece of work or project that you have been responsible for? What did you do to try and ensure success?

During third year of university I enrolled on the sensing systems for mobile applications module which involved creating systems using Arduino microcontrollers and Android smartphones. I chose this module due to a personal interest and success with a similar project in second year.

The only specification for the coursework was that it must involve an embedded device and Android application, what they did was left up to the student. I made the decision to create a wearable crash sensor for use when mountain biking which could detect circumstances which indicate a crash and cause the smartphone to send an SMS message to a predetermined emergency contact. Although I had created a similar Android application in the past, I was unsure how to create the device and program it.

To ensure the success of the project I used of various software management techniques so that the work was well planned and documented which allowed me to keep track of what stage the project was at and whether I could meet the deadline. I used MoSCoW deliverables for the features the system would include which let me prioritise the important features over desireable ones and for the same reason the development work was completed using agile sprints.

The project was successful achieving 95% overall. The device worked as intended though did not end up in the final intended state with a housing. This feature was low priority and ommited due to lack of time though this indicates that the management techniques worked.

Please describe when you were part of a team working on a project at University or in work. What was your part in the team? Identify anything you did to help the team work effectively.

During my summer internship I became part of a well establised development team. I undertook this internship to gain experience of working in industry before graduating, it proved extremely useful and was a valuable learning experience.

My task for the three month period was to re-engineer and improve a performance testing utility which the team used to execute and provide

reporting on nightly performance tests. As well as this I analysed daily performance reports, notified developers if their tests were failing, and assisted the developers in debugging and adapting failing tests.

By the end of the internship I had greatly improved the structure and functionality of the utility, adding functions to provide developers with more pertinent data and reduce the time taken to identify test fails. This includes automated plotting of test history, identification of the build where the test began failing, and automatic targeted emails to the owners of failed tests.

All the engineers in the team were extremely greatful for my work as I had made an otherwise tedious and time consuming job much easier and faster. This allowed them to concentrate on more important work. Since I left the company and due to delocalisation work I carried out on the utility, it has now been used by teams in 4 different countries for their own performance testing purposes.