

## **Why do you want to work at Mercedes AMG HPP**

I have been interested in cars and motor sport for a long time and as one of the leaders in the industry I believe that this is the perfect place for me to begin my career in automotive systems. I am fascinated by engines, the amazing amount of parts that are brought together by computers and electronic systems to function as a working machine is incredible. Along with new technologies being developed, such as K.E.R.S. and hybrid systems, I saw that this was a perfect time to join the forefront of this new wave of motor sport; to do this with Mercedes AMG HPP would be a great opportunity.

## **What relevant skills and experience could you bring to the specific role you are applying for?**

During my time at university I have collected a range of programming skills including knowledge of C++, Java, Python, and POSIX some of which utilising Object Oriented techniques such as inheritance, polymorphism, and encapsulation. During 3<sup>rd</sup> year of university I was part of the Napier Formula Student team in the electronics subdivision. We were tasked with stripping the wiring loom from a Honda CBR600RR engine and rebuilding it for our application. During my time as a bicycle mechanic before returning to education I learnt essential problem solving and time management skills. Occasionally the workshop would take in obscure customer fixes which would require me to come up with creative solutions using the tools at my disposal. These complex jobs would need to be completed around normal shop work which would require efficient time management and planning to ensure everything was completed on time.

## **Why did you choose your degree subject?**

I chose my degree because it is one that gives me the best start on my chosen career path. I am interested in computer systems and after deciding a career in mountain bike leadership was not what I wanted to pursue I looked to this degree as the ability to begin in another subject area. In most aspects of modern day life, computers play a big part and with technology being adopted or vastly refined in more and more areas I saw this as an opportunity to be part of a large change. The degree will also provide me with many transferable skills and experiences that I can take on into later life.

## **What are your technical strengths and what evidence do you have to support this?**

I have completed multiple projects relating to embedded and real time systems utilising mobile technology. These projects include creation of a data logging device for mountain bike suspension which uses data analysis algorithms to suggest improvements to the suspension setup and a helmet mounted crash sensor using 3D trigonometry to calculate the user's orientation sense of accident. Both of these projects use the Arduino microcontroller platform with software written in C++ and various sensors along with applications made for the Android mobile framework written in Java. The crash sensor received 95% overall and the data logger received 76% for the device and 88% for the app. I also possess extensive computer literacy which was put into practice during a summer internship working on performance tests for a global EDA company's software suite. During the internship I utilised the Python programming language, Linux, and various debugging and analysis tools.

## **What are your own work values and how will these make you an effective employee at Mercedes AMG HPP?**

I strive to have all work completed to the best of my ability and on time. I always make sure the fine details are attended to as well as the overall problem. Whenever I encounter a problem I tackle it methodically and will make sure every possible outcome is considered before an idea is put into effect. I enjoy working in a team as more ideas are able to be put forward and feedback can be given, this will make me effective because most projects are carried out in teams. I can also provide clear communication which helps when working with others. I believe in being presentable when dealing with customers at work as I am a representative of the company. I also like to be organised in my work so that it is easier for myself and any others to understand.