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Personal Statement

There has never been any doubt as to what I will do with my life, I have always wanted to become an engineer. My last two school years have been spent studying STEM subjects predominantly. I assimilate knowledge most effectively when involved in a 'hands on' way because of my proclivity for building integrated systems (see below). I hope it is self evident as to why this opportunity would be ideal for me. The theoretical knowledge I have gained from my studies at school, combined with my instinct to self teach and create amateur engineering projects at home is what drives me to become a professional.

Programming and Problem Solving Skills

Programming: I am proficient in C# and PHP. Experienced in Java, Python, Arduino and Swift (iOS programming). I have programmed an online shop, made programs to calculate mathematical sequences, etc.

I have developed skills in Cybersecurity through two consecutive years at the residential GCHQ (NCSC) CyberFirst courses in 2018 and 2019.

My course tutor at Cyberfirst rated me 'Strong' in Creative, Project and Problem Solving Skills and 'Outstanding' in 'Use of Equipment' in performance evaluation feedback.

Academic Achievements

Eight A grades in my National Five examinations. Five Highers at AABBB in Maths, Music, Engineering Science, Physics and Computing Science respectively, although it was a disappointment to miss an A grade by two marks both in Engineering and Physics. 2 advanced highers, an A in music and a B in computing science.

Top of the school year (2017) in the UK Maths Challenge (UKMT), gaining a Gold Award

Merit in Grade 8 Piano (2019).

Recent Projects

As a builder of high speed drones, I have soldered imported components to create ever improving iterations of my designs and also used my own 3D printed prototype ABS propellers that I designed, reaching speeds of over 100mph.

I have been building an offroad buggy - I have used CAD to design the frame, welded and cut steel tubing to create the frame, sourced some additional components and fully rebuilt a honda engine.

I have built a Mini Bike from scratch by welding a frame and mounted an engine, the vehicle is now semi operational. I have completed various Lego Mindstorms, Arduino and Raspberry Pi projects.

Team Work, Responsibilities and Helping Others

My course tutor at Cyberfirst rated me as 'Outstanding' in 'Social Skills' in performance evaluation feedback during the residential course in 2019.

At school each week I voluntarily mentor Higher Maths students and assist the teacher in class. I am delegated to and responsible for helping others with their work.

Outside school I teach piano to three local children on a weekly basis to help pay for my driving lessons.

Education

High School of Dundee (2007 - present)

SQA National Five Examinations (August 2018):

Maths - A

English - A

Computing Science - A

Physics - A

Engineering Science - A

Music - A

English - A

French - A

SQA Highers Examinations (August 2019):

Maths - A

Music - A

Physics - B (2 marks from A)

Engineering Science - B (2 marks from A)

Computing Science - B

SQA Advanced Highers (August 2020):

Computing Science - B

Music - A

Other Interests

I attend Krav Maga, a self defence class every week which I hugely enjoy. It helps me to keep fit and I am Practitioner Level 1, which from there I hope to progress further.

References:

Dr Paul Smith (psmith@highschoolofdundee.org.uk)

Mr Andrew Downie (asdownie@highschoolofdundee.org.uk)