Alex Dunnett - CV

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Profile

I am a recent graduate from the University of Sheffield's M.Eng mechanical engineering programme that included a year working for the aerospace company MBDA. I would describe myself as someone who is curious, ambitious and creative. I would not describe myself as someone easily satisfied unless challenged. In fact I find that the most rewarding problems are often also those that initially seem the most daunting.

My education in mechanical engineering has offered me much in the way of problem solving and critical thinking, as well as a certain amount of technical knowledge regarding a wide array of developing technologies. However, I have grown to realise that the development of specific technical knowledge is not nearly as valuable as gaining the ability to conduct and enjoy my own learning process, such that I can acquire any skills that I need or may desire in the future.

Education

University of Sheffield, M.Eng Mechanical Engineering, 2015 – 2020

- 2:1 M.Eng degree; 1st class final year average mark.
- Thesis: "Spherical Revolution: Development of an Open-Source and Arduino-Based Spherical Motor"
- Selection of relevant modules and corresponding grades attained.

MEC 307 Group Design Project	72	**MEC 316 Renewable Energy**	65
MEC 441 Sustainable Engineering Design	74	**MEC 313 Finite Element Techniques**	72
MEC 447 Automotive Powertrain	78	**MEC 304 Manufacturing Systems**	68
MEC 454 Additive Manufacturing	72	**MEC 464 Individual Project**	72

The Priory Academy LSST Sixth Form, Lincoln, 2013 - 2015

- 3 A's at A-level (Mathematics, Physics, Further Maths)

Experiences

Year in Industry at MBDA Missile Systems

For my year placement within industry I entered into the role of mechanical engineer at MBDA Missile Systems. During my time there I engaged with two distinct placements of work.

The first was within the seeker program, where I worked in a team helping to iron out the issues that arose during production of the initial batches of manufactured components and assemblies; dealing with production both internal and external. The experience highlighted the complexities of transforming a design concept into a commercially manufacturable product as well as the importance of constant stakeholder communication throughout.

In the second placement I worked within the Actuation Centre of Excellence with another placement student to develop a miniaturized missile prototype for the R&D group. We served as the hub for the project and stakeholders across the UK sites as well as sites in France and Germany.

Summarily, I found the year to be one of the most educational of my time at university. Some of this knowledge was technical, but the vast majority was understanding how a company operates, how teams work together (or don't) and how, though it might run counter to what we are taught, the ability to form effective relationships with colleagues and the capability to operate independently can sometimes be more useful in a team than raw engineering ability.

Formula Student-

During my four years at university I have been fortunate enough to be involved with the university's Formula Student team, in addition to my course. This was my first experience of a major team based engineering project and has proved an invaluable complement to the academic skills I developed during my course, as well as being both enjoyable and rewarding.

As part of formula student I have achieved or experienced the following:

- Design & manufacture of, and responsibility for, SFR -008's cooling system.
- Engine placement and tuning for SFR -009.
- Marketing team lead for SFR -009.
- CGI and media coordinator for SFR -011.
- A consistent involvement during the manufacturing and testing phases for SFR -007, 008, 009 and 011.
- At the annual Silverstone competition: 52nd in 2016, 20th in 2017, 5th in 2018 and I like to think a 1st in 2020, if circumstance had permitted.

Work Experience

- Placement as a Mechanical Engineer at MDBA Missile Systems, Stevenage, [2018-2019]
- Bartender at the Marquis of Granby, Wellingore, Lincolnshire, [2015]

Extra-Curricular Activities

Aside from my involvement with the Formula Student team I have also been involved in a number of extra-curricular, sporting and voluntary activities. These include:

- University of Sheffield Taekwondo Club from 2015 - 2018, where I competed in multiple competitions including the British Student Taekwondo Finals. I also held a committee position from 2016-2017.
- Sheffield University Orienteering and Fell Running from 2017 - 2020, where I competed in the Totley moor fell running series; placing 1st U23 during one race.
- University of Sheffield Gymnastics Club from 2019-2020, competing at intermediate level during the University Gymnastics Cup.
- Design and prototyping of an autonomous coil-gun with a Mechatronics housemate during "lockdown".

Interests, Hobbies & Charitable Endeavours

Aside from sports at university, I have been a keen recreational runner (until injury in 2018), placing 80th in the Lincoln 10k and running the Nottingham Marathon to raise money in memory of a close friend. After my running was curtailed I developed an interest in calisthenics and began training with help from the University Gymnastics club, competing in the University's Gymnastics Cup at Novice and Intermediate level. During the summer of 2020 I completed, with my mum, Land's End to John O'Groats on a bicycle in order to raise money for the British stroke association.

Additionally, as I have an interest in art and design, I have enjoyed making props, gadgets and costumes for parties and fun. As a means to marry the artistic and the technical interests that I have into one I have developed an interest in film-making and VFX/CGI. Through this hobby I have been attributed three IMDb credits through my involvement with several student films (Passing, Look Behind and Reconnection). I am also an active user of Hackaday, with a particular interest in Arduino and Raspberry Pi projects.

Additional Technical/Software Skills

MatLab ●●●●○	*Adobe C.C* ●●●●○	*Ansys Maxwell* ●●●○○
Python ●●●○○	*Blender* ●●●●○	*Solidworks* ●●●●○
Arduino/C ●●●●○	Latex ●●●○○	*Creo* ●●●○○

References available upon request