JACOB BUSFIELD

MEng Electronic Engineering Student

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Summary

A highly motivated graduate achieving first class honours with distinction in MEng Electronic Engineering. Genuine passion for software development, interface design and technological problem solving with proven successful research experience.

Key Skills

Held a number of key roles within academic study groups including QA Director for a mock company launch. Excellent 360 degree feedback has been received commenting on perceived excellence in stakeholder management, *AGILE* project management as well as personal traits such as approachability and reliability. As well as strong interpersonal skills, have the capability to be highly self-reliant and highly task focused. Comfortable presenting in various media and addressed audiences up to 300 people.

Technically versatile, with experience in many different levels of software development. These include:

- Client-server video streaming application with GUI (Java) and formal development (AGILE, unit testing).
- Bio-inspired traffic controller on visual, agent-based simulation (C++) with statistical analysis (*MATLAB*).
- Embedded OS with priority scheduling, inter-task communication, mutual exclusion, memory pools (C).

Languages: *C, C++, C#, Java, JavaScript, Assembly, VHDL, SQL, HTML, Latex, (Git).*
IDEs: *Eclipse, Visual Studio, Code::Blocks, MATLAB, Keil, Xilinx.*

I feel I present a rounded skill set of business acumen, technical capability and interpersonal skills that would suit a wide range of career applications.

Employment

Research Assistant, Intelligent Systems Group, University of York, UK. **June 2015 – Sept. 2015**

Successful fixed-term project researching adaptive, fault-tolerant, multi-sensor data fusion techniques. Independently designed and developed a new, innovative communication system based on protein diffusion between biological cells that allows modules spatial awareness. Development of novel, bio-inspired techniques led to increased scalability, security and efficiency without calibration. Significant work interfacing micro-controller with XBee radio communication and digital sensing. Other tasks included use of EAGLE PCB design software to develop micro-controller shields for housing IR communication and visual displays.

This funded research role was conducted during summer recess following penultimate degree year.

Education

MEng Electronic Engineering, The University of York, UK. **Sept. 2012 – June 2016**
First Class Honours with Distinction

Year One (81%)

Module	Grade
Intro. to Electronic Hardware	73
Maths & Programming	97
Intro. to Electronic Systems	76
Analogue Electronics	83
Digital Electronics	82
Principles of Flight	77

Year Two (86%)

Module	Grade
Signals & Systems	95
Data Structs. Algs. & Num. Meths.	95
High Speed Electronics	80
Further Digital Electronics	81
Computer Architectures	83
Control Engineering	83

Year Three (82%)

Module	Grade
Electromagnetic Fields & Waves	85
Distributed Circuits	82
Modern & Digital Control	55
Project Management	77
Design & Construction	90
Software Engineering Project	80
Analogue & Digital Electronics	91
Distributed Computer Systems	75
Flight Control	98

Year Four (80%)

Module	Grade
Project Literature & Preparation	82
Automatic Flight Control Systems	73
Biologically Inspired Computation	88
Systems Programming for ARM	78
Network Security	65
Embedded Systems for FPGA	74
MEng Individual Project	83

Advanced Levels, York College, UK. **Sept. 2009 – June 2012**
Maths - A, Further Maths - B, Physics - C, and English Language - C.
Extended Project Qualification: Astrophysics - A.

GCSEs, York High School, UK. **Sept. 2004 – June 2009**
12 Various – A* or A.

Interests

Keeping Active. When I am not sat I want to be moving and regularly play basketball and complete endurance charity bike rides such as the 'Great Yorkshire Bike Ride'.

Game Design. I thoroughly enjoy designing and programming simple games indulging in creative innovation, technical problem solving and artistic design. I have competed in Game Jams over the last two years and was runner-up in best programming this year locally at the Global Game Jam (using JavaScript).

Societies. I am an active member of both ShockSoc, the electronics society, and JuggleSoc participating in many events from sponsored competitions to open mic nights.

Achievements. I was active in junior powerboating representing Yorkshire and Humberside in the RYA Honda Junior RIB national championships, at the Southampton boat show, in both 2007 & 2008. I also competed in the UKMT maths challenge throughout school and college regularly receiving the gold award.