Callum Muir

Work History

August 2013 - July 2015 **Advanced Systems Software Engineer**, *Boeing Defense UK*.
As Software engineer in the Advanced Systems group, I was responsible for developing custom software throughout its life cycle. This involoved working alongside Business Development at the inception of the project, through development, before finally working with the customer on the final requirements and in handover.

I worked as part of a small team, using Agile and Scrum methodologies, working on both internal and external projects. Our Quality Management System was audited to ISO 9000 standards.

Summer 2011 **Research Intern**, *LSCITS*.
I worked as part of a small, student lead team creating a datacentre model for use in reaearch simulations. Findings from this model led to the publication of an academic paper.

I was responsible for the systems for work allocation around the data centre. These systems were taken from relevant research papers, focusing on small world models of distribution.

2008-2009 **Database Engineer**, *Darchem Engineering*.
I maintained and developed a T-SQL database, in the switchover from a Unidata legacy system tied into the manufacturing process. I was responsible for creating an update system which transferred data twenty times faster, allowing for multiple updates a day, and improved stability of the data transfer.

Education

2009–2014 **MEng, Computer Science**, *University of Bristol*, 2:1.

Technical Experience

Languages, .
Javascript, HTML5/CSS, Java, Ruby, SQL, Python, C

Frameworks, .
AngularJS, ReactJS, Ruby on Rails, Bootstrap

Software, .
Git, NodeJS, Yeoman, Grunt, Bower, MongoDB, Jira/Stash/Crucible, Eclipse

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Projects

DefSym, BDUK.
Worked as part of a small team for an internal customer to build a purpose built system for use with an intelligence scenario. This application connected to a third party data source API and displayed the data on an open source mapping solution. The number of data points shown, and updated in real time were between 2-3000. The user interface was built using AngularJS for both a large wall mounted display, and a tablet used to control the wall display. This project had a 6 week time limit from inception to handover.

Praxeum, BDUK.
I worked in a team to construct control software for training solutions. The software was controlled through a web-interface, usable on both desktop and tablet interfaces. I helped build a custom user interface, including custom touch actions, over an open source map using AngularJS. Control data was created to a given specification to interface with the back-end simulation.

Caligula, BDUK.
The team built custom map based intelligence and analytic software, taking in third party data and displaying them in real-time on a map. This project comprised of two sections, the first with weekly sprints, and the second a week of daily sprints working co-located with the customer.

Blackbeard, BDUK.
I worked leading a small team of interns to produce a prototype free-text analytics engine and visualisation suite. This engine was built utilising the GATE engine to power analytics, AngularJS for the web based user interface and D3 for data visualisations.

Automated Plant Health Detection Computer Vision Dissertation, University of Bristol.
I utilised Image Processing and Machine Learning techniques to make a plant health classifier using images of the plant. This system was built to utilise pre-labelled training images to allow the sytem to be re-used for different types of plant. In the test example (Basil) the system had a correct classification over 92%.

Storm Re-Write Intership, BDUK.
This internship project was for a technical, internal customer to re-write a piece of proprietary message passing software so that it did not rely on any external software. We used ZMQ for sending data and MongoDB for data storage. This re-write has been used as a baseline for further iterations of the software, which has been used for both internal and external customers.

Experimental Computer Game, University of Bristol.
I was part of a team that created an experimental computer game. The game was made using the Unity engine, using Kinect for user input.

CReST Interactive Data Centre Model , LSCITS.
I worked as part of a team creating a model of a data centre. I was solely responsible for recreating PHD work on the system for distributing jobs to the different nodes in the data centre.