Bertie Wheen

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I'm an undergraduate with a long-standing interest in Maths, passionate about Computer Science. My interests range from programming language theory to game development.

Known Languages

- Experienced in Haskell and Java.
- Intermediate proficiency with Agda, Python, C++, OCaml, C# and others.

Education

2011-2013 *International Baccalaureate at Colchester Sixth Form College*

Computer Science Higher	7	Economics Higher	5
Physics Higher	6	English Standard	5
Mathematics Higher	5	Spanish Ab Initio	6

2013-2016 *BSc at University of Birmingham*

Computer Science 1st (expected*)

*following an average of 89.4% across first year CS modules

Awards

Mathematics *Jack Petchey Foundation*

2008 Outstanding Achievement

Junior Maths Challenge *United Kingdom Mathematics Trust*

2008 Gold

2008 Best in School

Intermediate Maths Challenge *United Kingdom Mathematics Trust*

2009 Silver

2010 Gold

2010 Best in School

Music *ABRSM*

November 2008 Grade 5 Music Theory

December 2010 Grade 6 Music Practical (Piano)

March 2012 Grade 6 Music Practical (Alto Saxophone)

IB *Colchester Sixth Form College*

December 2013 Overall Achievement

BrumHack '14 *Bloomberg*

October 2014 Best use of the Bloomberg API

Relevant Experience

June 2010 (2 weeks) *Work Experience with G&T Office Equipment*

October 2013 – November 2013 *Business Challenge, run by IBM*

September 2013 – Present *Peer tutoring, supported by University of Birmingham*

Throughout my degree, I have been tutoring fellow students in my year. This has been both on a one-to-one basis, and in group sessions held weekly. Though it is completely voluntary, the university has been very supportive, providing rooms for (and advertising) the sessions.

June 2014 – September/October 2014 *Research Internship with University of Birmingham*

Over summer I worked with Dr. Dan Ghica on research projects. I was offered the internship post-completion of the Foundations of Computer Science module, which Dan lectures. I worked closely with a PhD student on creating "Floskel" – a call-by-value language, syntactically similar to Haskell, which makes writing distributed programs significantly quicker. This project resulted in a paper that I presented at IFL '14 – a conference held in Boston, MA for those involved in the implementation of functional languages – and is currently awaiting publication in the post-proceedings. The language was implemented using Haskell and C.

September/October 2014 – Present *Research Internship with University of Birmingham*

I also began work on co-authoring a paper that attempts to formalize memory (de)allocation. Whilst working on this project, the summer came to a close. However, I have continued the work unpaid. My work is primarily proving the paper's lemmas in Agda.

October 2014 – Present *Student Demonstrator with University of Birmingham*

I'm working as a demonstrator for the Foundations of Computer Science first-year module. This has involved developing a framework for automated testing of the students' OCaml programs and helping teach the students. The testing framework is written in a mix of OCaml, Python, Haskell, and shell scripts.

Interests

Snowboarding

Originally a skier, I made the switch to snowboarding as a teenager. Since then, I've progressed fairly quickly, and found my second-most prominent passion (after computer science). I go at least once a year, and love it without fail.

Sailing

I grew up on and around the water. I enjoy sailing our ketch *Peter Duck*, dinghy sailing (and – at times – racing), and kayaking. Whether messing around in a dinghy on the River Deben or sailing the yacht across to Europe, I'm always happy on the water.

Computer Science

As well as studying the subject at university, a lot of my free time is spent either teaching myself new things or working on personal programming projects. I learnt to program through making games, which showed me that CS can actually be fun rather than just something you do for a pay check. More and more I find the subject interesting for its own sake, not just for the end-products (games, apps, compilers, etc.). I constantly strive to write better, more idiomatic code, and to widen my skillset.

Teaching

The fourth (equally prominent) love of my life is teaching. In college I would lead sessions with my peers, going over the material covered in lessons. At university, my ongoing peer tutoring (discussed above) brings me a lot of satisfaction. Paid or unpaid, in the computer labs or in the local, there's little I enjoy more than sharing my love for my subject.