Helen Christine Harman

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Profile

I am an enthusiastic and determined person, currently studying MEng Software Engineering at Aberystwyth University. I am a finial year student on track for a first. Throughout university I have gained a wide range of knowledge, and I am now looking to gain more experience through a graduate job.

Key Achievements and Skills

- While at CERN I worked on the testing and quality assurance of control system software. I ran graphical user interface testing nightly. I developed a automated static code analysis tool and a unit testing framework. For these I used Python, JAVA and proprietary programming language called CTRL.

- I have good organisational and leadership skills gained through starting up and running the Aberystwyth University BCS Student Chapter and Computer Science Society. I am also a member of the BCS Mid-Wales committee. Through these I organise events and encourage other students to get involved in computer science outside of their course.

- I have recently completed my dissertation which was entitled Artificial Immune System (AIS) for Detecting and Tracking objects in Real-Time. This involved research into AI and vision techniques in order to apply the AIS to the tracking of objects. I am currently expanding on this work to write a paper.

- I work well as part of a team and have shown this by being part of the robotics society and working alongside other students to come up with new ideas. In first year a team of us won 100 Amazon voucher through getting a Roomba and quadrocopter to be controlled through different devices including an Android phone.

- During college I was the student council president and a governor. I helped to organise charity events, listened to what different students wanted and communicated these to the appropriate staff. This helped to develop my organisational skills and my communication skills. I also received the Outstanding Contribution to the College/Community Award 2011.

- I have good verbal communications skills through working in a shop for 2 years and talking to many customers I have developed these skills. I have improved these skills through work experience and university work by being a part of meetings and giving presentations.

- I have experience in a wide range of programming languages and development techniques. This includes knowledge of : Java, C++, C, Python, Scala, ASP.NET, PHP, Ruby on Rails, Perl, Haskell and Delphi Pascal. I commonly use development tools, for example : Git, SVN, Jira, Hudson and ConQAT.

- Through Java programming I have gain knowledge of object-oriented design. During my first year, at university, I completed two Java programming modules and achieved 77% for both of these. Within these modules I created several programs and completed a group programming project.

- I gained knowledge of programming in C during a C and UNIX programming module, in which I achieved 96%. I have further developed my skills through C, C++ and Java Programming Paradigms module. I built on my knowledge of Java and C by being a demonstrator for these modules.

- I have developed my knowledge of data storage and querying in a Modelling Persistent Data module, which I achieved 98% in. I was able to use this knowledge in my work at CERN, as I used SQL, XML and XSL. I then built on this knowledge by creating an APEX application.

Education

(2011 - 2016) Aberystwyth University:

MEng Software Engineering: On track for a 1st.

(2009 - 2011) Birkenhead 6th form College:

A-Levels: Double Award ICT: BB, Computing: B, AS-Levels: Physics: D

(2004 - 2009) South Wirral High School:

GCSE: 10(A-C). Mathematics: A, Science: AB, Double Award ICT: Distinction
Free Standing Mathematical Qualification (FSMQ): Additional Mathematics: D(worth 10 UCAS points)

Employment

(10/2012 - 06/2013) and (09/2014 - present) Aberystwyth University : Advisor, Demonstrator and Ambassador (Part-time)

I help students with their coding skills by explaining aspects they do not understand and help them to debug there code. As an Advisor students may ask me any technical questions related to their course. During demonstrating I check and sign off the worksheets that they complete. While doing this I have to think quickly when solving coding problems and be able to explain different aspects of software development at the correct level of understanding. I have demonstrated in the following areas : Arduino, C, Haskell and Java. As an ambassador I show prospective students around and tell them about the University.

(07/2015 - 09/2015) Johannes Gutenberg University Mainz : Summer Intern

I created a Java interface for Scavenger, a tool for computing sub-algorithms in parallel and sharing the results with dependent sub-algorithms. I built a package for Weka, that allows Weka's cross fold validation to make use of Scavenger. I also wrote a generic hierarchical clustering algorithm to show the befits of using Scavenger.

(07/2013 - 06/2014) CERN : Technical Student

I worked in the EN-ICE-SCD section. This section provides software and a support service to the experiments for some of the control systems being used. I worked on the testing and quality assurance of this software. I developed testing and static code analysis software. I reviewed C++ code, CTRL code and graphical user interfaces.

04/2009 - 09/2011) Village Newsagent and Off Licence : Shop Assistant (part time)

Within this job I handled money, served customers, helped sort the newspaper deliveries and printed lottery tickets. I handled customer telephone enquiries and I helped to organise the newspaper returns. Through this job I gained skills of communicating to many different people and gain confidence in doing this.

Interests

I enjoy going on short hikes. I have recently visited Oberstdorf, the Matterhorn and the Swiss Alps. While living in France I often went on bike rides and walks around Mont Jura. While at Aberystwyth I have walked up many of the local hills.

During my first year at University I was involved in setting up a robotics society. We worked on creating an autonomous sailing boat and turning remote controlled car into one controlled by different devices. Last year I set up the Aberystwyth BCS Student chapter and Computer Science Society.

References

References available on request.