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Experience

COMPUTER PROGRAMMER, MICROCOSM   AUGUST 2014 - PRESENT

- ⬦ Helped to develop SmartSign, a two-factor authentication system for web developers, working on all aspects of the front end and back end.

- ⬦ Ported the API from PHP to ASP.NET.

SUMMER INTERN, SURREY SPACE CENTRE, UNIVERSITY OF SURREY   SUMMER 2013

- ⬦ Designed and built a Cherenkov radiation detector.

- ⬦ Learnt how to prototype electronic circuits, using integrated circuits, oscilloscopes, signal generators etc.

- ⬦ Provided valuable experience of working in a research environment, e.g. how to acquire materials, liaise with senior members of staff.

- ⬦ Developed MATLAB scripts for processing data from geostationary satellites on high energy electrons in the radiation belts.

SUMMER INTERN, EARTH SCIENCES DEPARTMENT, UNIVERSITY OF BRISTOL   SUMMER 2012

- ⬦ Studied exploration geophysics, specialising in gravity surveys.

- ⬦ Analysed data from geophysical surveys of Lamb Leer cave, Somerset, using MATLAB.

- ⬦ Gained hands-on experience with data collection in the field, as part of a team.

Education

MSCI PHYSICS, UNIVERSITY OF BRISTOL   2010-2014

- ⬦ *Grades*: Awarded first-class honours with an average mark of 78%.

- ⬦ *Final year project*: "Knots in geometrically-confined polymers: nanochannels and other geometries". Developed polymer model in C. Involved extensive numerical modelling and use of the university Linux supercluster.

- ⬦ *Laboratory*: Extensive laboratory experience, including atomic resolution imaging of graphite through scanning tunnelling microscopy.

- ⬦ *Group work*: Led group of 7 to write a 10,000 word review article on nuclear power.

- ⬦ *Awards*: On the highly-commended list of applicants to the Undergraduate Awards in 2014, for my final year project. Received commendations for first year exam results and final year project, the first prize award in the final year poster session for external moderators and the Bristol PLuS Award for employability skills.

THERFIELD SCHOOL   2003-2010

- ⬦ A Levels: Maths (A*), Physics (A*), Chemistry (A)

- ⬦ Completed Open University 10cp short course: "Planets: An Introduction".

Other skills

- ⬦ *Computing*: Experienced with Windows and Mac and familiar with Linux/UNIX. Confident with C, MATLAB and Processing. Some experience with Python and BASH scripting, JavaScript, CSS and HTML. Regular user of the UNIX command line and also the LaTeX typesetting system.

- ⬦ *Electronics*: Enjoy building circuits and programming for Arduino and Raspberry Pi.

Interests & responsibilities

◇ Helped with developing a high altitude balloon, with a significant contribution to the launch logistics. Successfully launched in June 2014 to an altitude of 31.7 km.

◇ Member of Robogals, 2013-14, for promoting STEM subjects in schools. Volunteered for sessions to teach kids robotics.

◇ Secretary for student film club in Bristol, 2012-13, with administrative and organisational duties.

◇ Keen reader of science, philosophy, economics, science fiction and American literature.

◇ Playing the piano, passed Grade 8 with distinction.