

# JAMES CAMPBELL

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## PERSONAL PROFILE/OBJECTIVE

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I am an undergraduate with a mature outlook seeking a year long industrial placement aiming to put my advanced knowledge of mathematics and computer science in practice. I have a logical mind and demonstrated my ability to understand complex ideas quickly whilst working on a research project at Cardiff University when I was chosen out of 160 of my peers to undertake a research internship (Summer 2013-2014). I am an excellent communicator and am comfortable speaking in front of large groups, which I showed when I presented my work at an International Conference (March 2013-2014).

## EXPERIENCE

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| SUMMER<br>2014          | <b>Building Game Theoretical Software in a Research Environment</b><br>I was employed by Cardiff University Department of Mathematics, working for Dr. Vincent Knight to lead the department's contribution to the open source mathematics package, Sage. I was responsible for the implementation of a variety of Game Theoretic algorithms that will be included in a future release of Sage (an open source Mathematics software package). Areas of Game Theory handled included: Normal Form Games, Co-operative Games and Matching Games. This employment developed my teamwork and communication skills by providing experience of working within a research environment. |
| SEPT 2010 -<br>PRESENT  | <b>Referee with the Rugby Football Union</b><br>Whilst most teenagers might have a Saturday job, I began refereeing rugby union at the age of 15. New referees start at level 15 and within 3 years, I had been promoted to level 6 - the highest regional level and only one below the point where I could referee national level games. The experience of taking charge of 30 men (often twice my age) in an aggressive and physical sport has given me confidence in my ability to remain calm in stressful situations.  |
| SEPT 2009 -<br>JUL 2013 | <b>Young Leader at 1<sup>st</sup> Helsby Scouts</b><br>I developed communication skills whilst helping to supervise and teach children aged 6 - 10 years. I was regularly assigned to lead small group activities which improved my organisation and leadership skills.   |

## EDUCATION

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|--------------------------|---|
| CURRENT                  | <b>BSc Mathematics, Statistics and Operational Research</b><br>Cardiff University, Department of Mathematics<br>Expected May 2017   |
| SEPT 2011 -<br>JUNE 2013 | <b>St. Nicholas Catholic High School</b><br>A-Levels: Maths - A*, Further Maths - A, Physics - A<br>AS-Levels: Biology - B, Chemistry - B   |
| SEPT 2006 -<br>JUNE 2011 | <b>St. Nicholas Catholic High School</b><br>GCSEs: Maths - A*, Additional Maths - A*, Physics - A*, English Language - A*, English Literature - A*, Biology - A*, Chemistry - A*, French - A, History - A, RE - A, Art - B. |

## SCHOLARSHIPS AND CERTIFICATES

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|------------|--|
| SEPT. 2013 | Department of Mathematics Scholarship - awarded to the top 10 students who achieved the highest 'A' level grades of that year's intake.  |
| DEC. 2013  | Department of Mathematics Prize - awarded to highest mark in class test for Computing for Mathematics module.  |
| JAN. 2013  | Department of Mathematics Sponsored conference attendance - awarded for highest mark in individual research project during which I developed and implemented Markovian models. |

## PROGRAMMING SKILLS

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I am proficient in most aspects of computing:

- Operating Systems: Windows, MacOS, Linux (server and client);
- General software: Excel, Word Processing ( $\text{\LaTeX}$  Microsoft Word, Libre office), Presentation (Beamer, Microsoft Powerpoint);
- Programming: Python, Django, Sql, Ruby, C and well evidenced ability to gain proficiency in new languages quickly.

During my first year at University I gained proficiency in the web framework Django and developed a dynamic website: <http://thefightclub.herokuapp.com/>.

## ACHEIVMENTS AND INTERESTS

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I have been involved in Scouting from the age of 8, playing a large role in the organisation both as member and a leader. Recently, I was appointed a group-wide, adult leader position which will allow me to continue the work I have been doing whenever I am home from University.

I have played Rugby Union from the age of 5, reaching County standard and playing for the Welsh Exiles before injury prevented me from carrying on. This gave me a lot of experience at working within a team, both as a captain and a member.

On starting at Cardiff University, I decided to take up a new sport in order to maintain my level of fitness. I chose Ultimate Frisbee as it is a team sport, is physically demanding but is non-contact and so reduces the risk of injury which might compromise my rugby refereeing. During the course of the year, I've been promoted to the second team and have represented my university at several tournaments.

In my spare time I relax by playing the piano, having achieved Grade 5 some years ago. I hold a full, clean UK driving licence.

## FIRST YEAR

### Grades

EXAM	CREDIT	%
Analysis I	10	78
Dynamical Systems and Chaos	10	80
Calculus	10	71
Algebra I	10	62
Probability Theory	10	81
Algebra II	10	?
Analysis II	10	?
Elementary Differential Equations	10	?
Statistical Inference	10	?
Elementary Number Theory	10	?
Computing for Mathematics	20	95
AVERAGE		?