

## PERSONAL PROFILE/OBJECTIVE

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I am an exceptional undergraduate mathematics student seeking a one year industrial placement in the fields of mathematics and computer science.

During my first undergraduate year, I was awarded a mathematics scholarship and prize, invited to present my work at an international conference and selected from 160 of my peers to undertake a research internship during the summer break.

## EXPERIENCE

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| SUMMER<br>2014             | <b>Research Internship, Cardiff University School of Mathematics</b><br>Employed for the Summer to lead a project developing Game Theoretic algorithms within the open source mathematics package, Sage. Areas of Game Theory included: Normal Form Games, Co-operative Games and Matching Games and the code produced is available at <a href="https://github.com/theref/sage-game-theory">https://github.com/theref/sage-game-theory</a>           |
| SPRING SEMESTER<br>2014    | <b>Development of a Django Web Application</b><br>During an 11 week assessed activity of my Computing for Mathematics module, I developed a dynamic web application using the Django framework. The application can be viewed at <a href="http://thefightclub.herokuapp.com">http://thefightclub.herokuapp.com</a> and the code is available at <a href="https://github.com/Fight-Club/fightclub">https://github.com/Fight-Club/fightclub</a>        |
| SEPT. 2010 -<br>SEPT. 2013 | <b>Referee with the Rugby Football Union</b><br>I began refereeing rugby union at the age of 15. Within 3 years, I had been promoted from level 15 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>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 PRIZES

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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 for the highest mark in Computing for Mathematics module.  |
| JAN. 2014  | Django Weekend Conference - On achieving the highest mark for an individual research project, I was invited to present my work at the UK's first ever Django conference: <a href="https://djangoworkshop.org/event/pythons-ladders/">https://djangoworkshop.org/event/pythons-ladders/</a> |

## 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, Ruby, Git, Trac and well evidenced ability to gain proficiency in new languages quickly.

For an overview of my programming portfolio please see my github page: <https://github.com/theref>.

## ACHIEVMENTS AND INTERESTS

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I have been involved in Scouting from the age of 8, playing a leading 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 forced my retirement. This gave me a lot of experience of working within a team, both as a captain and a member.

At University, I took up the sport of ultimate frisbee. I have been promoted to the second team, represented my university at several tournaments and elected to serve as treasurer for the next academic year.

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.

## REFEREES

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## 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     | 72   |
| Analysis II                      | 10     | 71   |
| Elementry Differential Equations | 10     | 79   |
| Statistical Inference            | 10     | 58   |
| Elementry Number Theory          | 10     | 72   |
| Computing for Mathematics        | 20     | 96   |
| AVERAGE                          |        | 76.3 |