

# Matthew Hickford

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Location: Cambridge, UK

## Employment

### SunGard Adaptiv (September 2012 to date)

#### Featurespace Ltd (October 2011 to 2012)

- Analyst Developer at predictive analytics startup.
- Consulting work developing churn and cross-sell models for retailers.
- Designed, developed and documented software in C#.
- Learnt machine learning theory and implemented algorithms in code.
- Scrum master for team of five.

### Winton Capital Management (4 weeks in 2009 and 6 weeks in 2010)

- Internship and summer work at algorithmic hedge fund.
- Analysed historical time series of financial data, learning Winton's software.
- Investigation based on reading of macroeconomic theory, using statistics.
- Tested potential trading systems on past data.
- Described and evaluated each system for review by management.

### IBM Extreme Blue internship (12 weeks in 2009)

- Team of four students given project by two IBM mentors.
- Managed ourselves—set testable targets at weekly meetings to maintain accountability and review long and short-term progress.
- Met with clients to elicit their needs.
- Collaboratively wrote software in Java and documentation under version control.
- Negotiated with groups within IBM interesting in taking over our work after internship.
- Presented and demonstrated project at international exposition in Rotterdam.
- Recorded innovations in the design. In September 2010, IBM ultimately submitted a patent application to the United States.

### Health Protection Agency (11 weeks in 2008 and 6 weeks in 2007)

- Joined a small team during the design and prototype development of a probabilistic risk assessment tool.

- Developed components of the tool itself including GUI input and error checking, learning Visual Basic.
- Wrote a report reviewing the previous tools released by the department and advocating the new tool.

## Education

### Trinity College, Cambridge University (2007 to 2011)

- Mathematical Tripos Part III, MMath (2011)
- Mathematical Tripos Part II, class 2:1. Senior Scholar (2010)
- Mathematical Tripos Part IB, 1st class. Senior Scholar (2009)
- Mathematical Tripos Part IA, 1st class. Junior Scholar (2008)

### John Mason School, Abingdon (2000 to 2007)

- Four A-levels grade A in Maths, Further Maths, Physics and Chemistry (2007), and AS-level French grade C (2006)
- Two S (outstanding) grades in STEP (Sixth-Term Examination Paper) Mathematics II and III (2007)
- 12 GCSEs achieving 8 grade A\* and 4 grade A (2005)
- 11 gold certificates in UKMT (United Kingdom Mathematical Trust) Maths Challenges (2000-2007), competed in British Mathematical Olympiad
- Attended by invitation the UKMT National Mathematics Summer School at Queen's College, Edgbaston (2005)

## Skills

### Programming

- Competed in Google Code Jam—an international programming competition focusing on algorithms—in 2009, 2010 and 2011, most recently finishing in the top 10%.
- Experience developing in C#, Java and Visual Basic at Featurespace, IBM and Health Projection Agency.
- Computational mathematics projects in second and third year of degree in Python.
- Created desktop and web applications in Python and Ruby.
- Contributed solutions to the mathematical puzzle websites IBM Ponder This and Project Euler.

### **Teaching**

- Teaching assistant at a Cambridge secondary school (one afternoon per week, Lent term 2011) through Cambridge University's STIMULUS programme.
- Volunteered at Cambridge Maths Circle in January 2011, a hands-on maths event for children of all ages.
- Wrote lecture on combinatorial game theory and delivered it twice in 2011—as a midnight seminar and as a Part III seminar.

### **Duke of Edinburgh's awards**

- Gold (2008), Silver and Bronze. Expeditions in the Lake District and the Isle of Arran.