Ian Osband

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Education

2012–2016 (expected) **Ph.D. Candidate**, *Stanford University*, *4.0/4.0 GPA*.
Department of Mangagement Science & Engineering
Awarded one of 300 Stanford graduate fellowships for interdisciplinary research.
Thesis: *Efficient Reinforcement Learning*
Advisor: Benjamin Van Roy

2010–2011 **Masters of Mathematics**, *Oxford University*, *First class*.
Graduated 1^{st} of over 200 students in final examinations. Winner of the Gibbs prize.
The only student (in any discipline) to be commended every single term by the Warden.

2007–2010 **BA Hons Mathematics**, *Oxford University*, *First class*.
Graduated 1^{st} of over 200 students in Applied Mathematics in final examinations.
University scholar and winner of the Junior Mathematical, IMA and Jane Thornton prizes.

Research interests

Sequential decision making under uncertainty and statistical machine learning, approximate dynamic programming, multi-armed bandits, online optimization and applications including advertising, healthcare, agriculture, and finance.

Publications

- **Near-Optimal Reinforcement Learning in Factored MDPs** *with B. Van Roy*.
  - Spotlight presentation at NIPS 2014 (~5% acceptance)
  - Invited talk at INFORMS 2014
- **Model-Based Reinforcement Learning and the Eluder Dimension** *with B. Van Roy*.
  - Poster presentation at NIPS 2014 (~20% acceptance)
- **(More) Efficient Reinforcement Learning via Posterior Sampling** *with D. Russo and B. Van Roy*
  - Poster presentation at NIPS 2013 (~20% acceptance)
  - Poster presentation at RLDM 2013

In progress

- **Universal Reinforcement Learning via Posterior Sampling** *with B. Van Roy*.
- **Learning to Play Tetris From Scratch via RLSVI** *with B. Van Roy*.

Teaching experience

Winter 2015 **MS&E 338 Reinforcement Learning**, *Course assistant*.
Covered lectures and assisted in research projects for an advanced Ph.D. course.

Fall 2014 **MS&E 145 Introductory Financial Analysis**, *Full instructor*.
Sole instructor for 81 Stanford engineering undergraduates in a required course for major.
Introduced core mathematical finance, working with data and the dangers of bad models.

Professional experience

Jun–Sep 2014 **Google Ads Metrics**, *Data Scientist*.
Investigated targeted shopping ads and their effects on user experience and revenue.
Examined exploration/exploitation tradeoffs and user learning effects on ads blindness.

Apr–Jun 2014 **Credit Sesame**, *Data Science Consultant*.
Modelled economic and statistical problems of credit recommendation with Ken Singleton.
Implemented a large-scale learning algorithm for efficient product recommendations.

2010–2012 **J.P. Morgan Chase**, *Credit Strategist*.
Devised strategies for systematic rich cheap/analysis across EM credit markets.
Developed methods for optimal hedging and execution in illiquid CDS portfolios.

Jun–Sep 2010 **MVision Private Equity Advisers**, *Summer Intern*.
Analysed promising private equity opportunities in the Pacific Rim.

Technical skills

Coursework Probability, optimization, statistics, stochastic processes, machine learning, mathematical finance and differential equations.

Computing

Proficient Python, R, MATLAB, SQL, LaTeX, Git, Bash, MS Office, VBA.

Basic C, C++, Java, Hadoop.

Leadership positions

2014–Present **Reinforcement Learning Forum**, *Stanford University*.
Created new forum with speakers from academia and industry with interest in RL.

2014–Present **Community Assistant**, *Stanford University*.
Foster graduate student community through community events and pastoral care.

2014–2015 **Captain of Graduate Rugby**, *Stanford University*.
Organize training, fixtures and tours for the largest MBA team. Olympic club squad.

2010–2011 **Blues President**, *Oxford University*.
Head of university club and varsity sport. Introduced new online account management system.

2009–2010 **Captain of Varsity Swimming**, *Oxford University*.
Full blue 2008, 2009 and 2010. Broke three university records. National men's champions.

June 2004 **Cross-Chanel Relay Swim**, *Eton College*.
Youngest swimmer in winning team (aged 14) and subject of BBC documentary.

Other

Citizenship Dual USA/UK passports

References A full list of references is available upon request.