# **David Vadas**

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# Work Experience

Optiver Apr 2008 - Present

Development work on multiple components of a high-frequency trading system. This includes writing software for monitoring speed and success, interpreting market protocols and an auto-trading tool.

National Computer Science School, School of I.T.

Tutoring Python programming to high school students.

Teacher Training Python Workshop

Tutoring Python programming to high school teachers.

Academic Staff, School of I.T.

Tutoring a number of classes, with students from  $1^{st}$  and  $2^{nd}$  Year, through to honours and masters students.

# Education

#### The University of Sydney

# Doctorate of Philosophy in Science

Noun Phrase Structure for Statistical Parsing

Greater annotation and analysis of noun phrase structure allows for better performance in parsing and other Natural Language Processing systems.

#### Bachelor of Information Technology (Honours)

First Class Honours in Computer Science – Grade: 88/100 (WAM: 80%) Majors in Software Development, Principles of Computer Science, and Networks and Systems.

#### Honours Research Project

POS Tagging Unknown Words using an Unannotated Corpora and Maximum Entropy

This involved applying information from a very large corpora using real-valued features in a log-linear model.

### Technical Skills

- Programming languages: proficient with C++ and C, including use of Boost libraries. Also experienced with Python and database usage through SQL (on Microsoft SQL Server in particular).
- Development tools: Visual Studio, vim, Subversion, automated testing (using Boost Test), bjam, and assorted Linux utilities.
- Operating Systems: Linux/Unix and Windows.
- Expertise in the theory and practice of high frequency trading, machine learning, networking, and tasks from the computational linguistics field such as tagging and parsing.

Jan 2005 and 2006

Mar 2005 - Apr 2008

Mar 2001 - Nov 2004

2004

2003 - 2005

# **Publications**

#### David Vadas and James R. Curran

Parsing Noun Phrase Structure with CCG. In Proceedings of the 46th Annual Meeting of the Association of Computational Linguistics: Human Language Technologies (ACL-08: HLT). Columbus, OH, USA, June 15–20 2008.

#### David Vadas and James R. Curran

Parsing Internal Noun Phrase Structure with Collins' Models. In Proceedings of the Australasian Language Technology Workshop (ALTW-07), pages 109–116. Melbourne, Australia, December 10–11 2007.

#### David Vadas and James R. Curran

Large-Scale Supervised Models for Noun Phrase Bracketing. In Proceedings of the 10th Conference of the Pacific Association for Computational Linguistics (PACLING-2007), pages 104–112. Melbourne, Australia, September 19–21 2007.

#### David Vadas and James R. Curran

Adding Noun Phrase Structure to the Penn Treebank. In Proceedings of the 45th Annual Meeting of the Association for Computational Linguistics (ACL-07), pages 240–247. Prague, Czech Republic, June 23–30 2007.

#### James R. Curran, Stephen Clark, and David Vadas

Multi-Tagging for Lexicalized-Grammar Parsing. In Proceedings of the Joint Conference of the International Committee on Computational Linguistics and the Association for Computational Linguistics (COLING/ACL-06), pages 697–704. Sydney, Australia, July 17–21 2006.

#### David Vadas and James R. Curran

Tagging Unknown Words with Raw Text Features. In Proceedings of the Australasian Language Technology Workshop (ALTW-05), pages 32–39. Sydney, Australia, December 10–11 2005.

#### David Vadas and James R. Curran

Programming With Unrestricted Natural Language. In Proceedings of the Australasian Language Technology Workshop (ALTW-05), pages 191–199. Sydney, Australia, December 10–11 2005.

# Research Experience

### The University of Sydney

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Research Assistant, School of I.T.	Nov $2004 - Jan\ 2005$
Developed Intelligent Tutoring Systems (ITS)	
Vacation Scholar, School of I.T. (Information Visualisation Group)	Nov $2003 - Mar 2004$
Implemented process tree visualisation software	

# Awards & Achievements

Awarded William and Catherine McIlrath Scholarship	2007
Awarded Australian Bicentennial Scholarship	2007
Recipient of the Australian Postgraduate Award (APA)	2005 - 2008
Nominated for Soprano Prize (Best Honours Thesis)	2004
Recipient of Information Visualisation Group Vacation Scholarship, School of I.T.	2003
Placement on $3^{rd}$ Year Honour Roll, School of I.T.	2003
Placement on $2^{nd}$ Year High Honour Roll, School of I.T.	2002
Placement on $1^{st}$ Year Honour Roll, School of I.T.	2001