David Vadas

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Profile

I'm a programmer with more than 5 years experience working at high-frequency trading companies. I was first employed at Optiver, before being recruited to join the Statistical Arbitrage team at Susquehanna. On this very selective team, I contributed at first by working on connectivity and data processing, and later by building my own strategies. Our key advantage on the team was a technique for building high-frequency trading strategies that required no trader supervision. These statistically optimised strategies were very profitable, and allowed us time for continual improvement and to develop new ideas. While at Susquehanna, I developed a brand new strategy using machine learning techniques, which was profitable in our backtest environment.

I have a strong background in machine learning, with a PhD in Computational Linguistics and practical experience applying these methods at Susquehanna. I'm also a capable programmer, I've been writing code since I was a kid, and I'm well-practiced at working in modern programming environments. This is a rare combination of skills, which I'm currently applying on a contract assignment at Google.

Employment History

Adecco, on assignment at Google **Jan 2015 – Present**

- Working in the Text-To-Speech team, developing a major new voice to be used in Google's products.

Susquehanna **Sep 2011 – Oct 2014**

- Built a brand new trading strategy using machine learning techniques. Performed analysis and optimisation using a large-scale cluster, achieving profitability in a backtest environment.
- Implemented core parts of the real-time trading and backtesting system.
- Wrote networking code for market connectivity.

University of Sydney and Capital Markets CRC **Nov 2010 – Aug 2011**

- Worked on automatically generating content pages from newspaper articles.
- Designed and implemented the database linking articles to people and places. Facilitated its use in back-end processing and for front-end display.
- Lectured a Natural Language Processing course and supervised students.

Optiver **Apr 2008 – Nov 2010**

- Designed and built trade analysis tool for measuring speed and success.
- Managed a data capture system distributed across multiple geographic locations that generated huge volumes of data.
- Wrote code for a specialised high-frequency trading strategy.

University of Sydney **2003 – 2006**

- Tutoring for many programming courses, from high school students through to honours and masters students.

Education

The University of Sydney

PhD in Natural Language Processing **Mar 2005 – Apr 2008**

Thesis: *Statistical Parsing of Noun Phrase Structure*

Bachelor of Information Technology (Honours) **Mar 2001 – Nov 2004**

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

Technical Skills

- Languages: C++ (expert), Python (expert), C (proficient).
- Extensive practical experience working with large-scale data, including applying machine learning techniques, analysis with numpy and scipy, and writing code to run on distributed systems.
- Proficient in writing low-level and highly optimised code, as well as designing high-level architechture for complex systems.
- Able to design database schemas and write complex SQL queries.
- Considerable practice at using Linux utilities, e.g. awk, to speed prototyping work.
- Domain-specific experience in high frequency trading and natural language processing.
- Excellent communication skills from lecturing, writing technical papers and working with teammates.