Stephen Merity

Harvard University (2013 – 2014)

Master of Science in Computational Science and Engineering

University of Sydney (2008 – 2011)

Bachelor of Information Technology (First Class Honours + University Medal)

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EXPERIENCE

MetaMind, Palo Alto

Senior Software Engineer   Oct 2015 – Present

Published results on a state of the art question-answering system with TensorFlow. The model involved implementing memory networks and attention mechanisms. Additionally trained and evaluated CNN based classifiers for client computer vision tasks.

Common Crawl, San Francisco

Principal Engineer   July 2014 – Oct 2015

As the only full time engineer, developed and maintained code and cluster infrastructure for running a monthly web crawl billions of pages in size using a modified Apache Nutch platform on Amazon Web Services. Each month involved processing and storing hundreds of terabytes of web archives onto Amazon S3 using Hadoop. The role also included performing large scale experiments on the resulting corpora and presenting the results at conferences across the globe to increase interest in open data.

Grok Learning, Sydney

Full Stack Engineer (First Employee)   Jan 2013 – Aug 2013

Developed backend code and infrastructure for the code execution and evaluation system used by over 50,000 high school students to learn computer science and programming.

Freelancer.com, Sydney

Team Lead - Data Analytics and Interaction Mechanics   Dec 2010 – Apr 2012

Application of advanced data mining methods, statistical testing and machine learning techniques to increase the overall customer satisfaction and revenue on *Freelancer.com*.

Google Sydney

Internship - Engineer at Google App Engine   Dec 2009 – Mar 2010

Helped triage and fix multiple bugs in live production code and implemented a feature to enable rapid querying of existing user data. Work was performed in three languages (Java, C++ and Python) with code reviews and unit tests required for each commit.

PUBLICATIONS

[Paper] *Dynamic Memory Networks for Visual and Textual Question Answering*   2016

Caiming Xiong*, **Stephen Merity***, and Richard Socher   (* equal contribution)

[Paper] *Frontier Pruning for Shift-Reduce* CCG *Parsing*   2011

Stephen Merity and James R. Curran

Proceedings of the Australasian Language Technology Association Workshop 2011

[Thesis] *Integrated Tagging and Pruning via Shift-Reduce* CCG *Parsing*   2011

Stephen Merity

Honours Thesis, The University of Sydney, Sydney, Australia

[Paper] *Accurate Argumentative Zoning with Maximum Entropy models*   2009

Stephen Merity, Tara Murphy and James R. Curran

Proceedings of the 2009 Workshop on Text and Citation Analysis for Scholarly Digital

Libraries, ACL-IJCNLP 2009, pages 19–26

ARTICLES

Question answering on the Facebook bAbi dataset using recurrent neural networks   2015

Why small files are a curse for big datasets   2015

How Google Sparsehash achieves two bits of overhead per entry using sparsetable   2015

Measuring the impact of Google Analytics   2013

TECHNICAL SKILLS

- Expertise in the field of machine learning, including the use of deep learning methods such as convolutional neural networks and recurrent neural networks for computer vision and natural language processing tasks.

- Experience in applying recent deep learning methods, such as neural attention mechanisms and memory networks, to improve accuracy on various machine learning tasks.

- Experience implementing models in high level (TensorFlow) and low level (TensorFlow) ML frameworks.

- Natively fluent in Python and on the command line. Conversationally fluent in C, Java, Go, and C++.

- Master level contributor on Kaggle (highest position: 808th)