Oliver Adams

1 Personal Information

Name: Oliver Patrick Adams
Nationality: Australian and British citizen
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2 Career Objective

I have a passion for engineering and solving problems. Having completed my PhD on speech recognition and machine translation for endangered language preservation, I will continue to investigate and solve problems that make a positive impact on the world. This work will be in the context of natural language processing and machine learning, or more broadly in computer science and software engineering.

3 Summary of Skills

- Strong research abilities developed from an academic background in natural language processing and machine learning, with publications in high quality venues (see Section 8).

- Skilled Python programmer, with experience in other imperative and object-oriented languages languages (Java, C, C++, Julia), functional languages (Haskell, Lisp), and with relevant tools such as version control (Git) and Unix-like systems.

- Experienced teacher and communicator of ideas: able to break down and explain complex concepts well.

4 Qualifications

May 2012 – December 2017
Doctor of Philosophy (Computer Science), the University of Melbourne under the supervision of Steven Bird, Trevor Cohn and, remotely, Graham Neubig. Thesis title:

Automatic Understanding of Unwritten Languages.

February 2008 – November 2011
Bachelor of Science, Honours (Computer Science), the University of Melbourne.

2007
Higher School Certificate at the Australian International School, Singapore.

5 Training and Work Experience

September 2019 – present
Senior Data Scientist at Miner & Kasch (a data science consultancy).

May 2018 – May 2019
Postdoctoral fellow at the Center for Language and Speech Processing, Johns Hopkins University. I Researched multilingual pretraining and adaptation of speech recognition models.

January 2018 – March 2018
Research assistant for the International Computer Science Institute (UC Berkeley).

July 2016 – October 2016: Intern at IBM Research Australia conducting natural language processing research.

February 2016 – May 2016: Intern at the Nara Institute of Science and Technology under the supervision of Graham Neubig as part of my PhD program.

October 2015 – January 2016: Intern at Xerox Research Center India conducting natural language processing research.

March 2015 – June 2015: *Knowledge Technologies* Tutor
Conducting tutorials in the postgraduate subject *Knowledge Technologies* at the University of Melbourne (https://handbook.unimelb.edu.au/view/2015/COMP90049).

February 2015
Attended the NICTA Machine Learning Summer School.

July 2014
Attended the 4th Lisbon Machine Learning Summer School.

June 2012 – June 2014: Software Engineer
Primary programmer for Aikuma, an Android natural language preservation app
(www.lp20.org/aikuma). In addition to programming, I contributed to higher-level de-

sign decisions relating to the user interface and intended functionality of the app.

March 2011 – November 2012: Informatics and Computer Science Tutor
Running tutorials in the subjects *Informatics 1*, *Informatics 2* and *Introduction to Computing* at the University of Melbourne. Through this I have strengthened my interpersonal skills, and ability to articulate complex concepts clearly and precisely.

October 2010 – January 2010: Mathematics Video Producer
Co-author of *Running the Streets*, an instructional video series on the Mathematics of Poker at *Deuces Cracked* (deucescracked.com).

June 2009 – August 2010: Mathematics Tutor
Taught high-school students privately in the VCE (Australian year 11 and 12) subjects *Mathematics Methods* and *Specialist Mathematics*, fostering my ability to explain and communicate ideas.

October 2008 – July 2010: Footbag Instructor and Performer
Instructed and performed footbag for thousands of students across Victoria, Australia as part of the *Footbag 4 Fun* program, gaining valuable communication and leadership skills.

6 Awards and Grants

Co-recipient of a Transdisciplinary Innovation Grant of 16,000 AUD for *Developing a web-based interface for Persephone, an automatic phoneme transcription tool, with Me'phaa Vátháá, Nafsan, Mori and Bininj Kunwok languages* in 2018.

EMNLP 2016 Best Short Paper Award for *Learning a Lexicon and Translation Model from Phoneme Lattices* for which I was the first author, with Graham Neubig, Trevor Cohn, Steven Bird, Quoc Do Truong and Satoshi Nakamura as co-authors.

Google Australia PhD Travel Scholarship of 1,900 AUD to attend EMNLP 2016.

Australian Postgraduate Award, a 25,849 AUD per annum scholarship for PhD candidature.

Lead programmer for team *Aikuma*, which won the 8,000 USD Grand Prize at the 2013 Open Source Software World Challenge.

Google grant of 750 Euros to attend the 4th Lisbon Machine Learning Summer School (2014).

7 Language Proficiency

English (Native), German (Intermediate).

8 Publications

O Adams, M Wiesner, S Watanabe, D Yarowsky (2019). Massively Multilingual Adversarial Speech Recognition In *Proc Annual Conference of the North American Chapter of the Association for Computational Linguistics*. To appear.

O Adams, T Cohn, G Neubig, H Cruz, S Bird, A Michaud (2018). Evaluating phonemic transcription of low-resource tonal languages for language documentation. In *11th edition of the Language Resources and Evaluation Conference, pp 3356–3365, Miyazaki, Japan.*

O Adams, A Makarucha, G Neubig, S Bird and T Cohn (2017). Cross-Lingual Word Embeddings for Low-Resource Language Modeling, To appear in *Proc 15th Conf of the European Chapter of the Assn for Computational Linguistics*, Barcelona, Spain.

O Adams, G Neubig, T Cohn, S Bird, Q T Do and S Nakamura (2016). Learning a lexicon and translation model from phoneme lattices, *Proc Conf on Empirical Methods in Natural Language Processing*, pp 2377–82, Austin, USA. **Best Short Paper Award**

O Adams, S Roy, R Krishnapuram (2016). Distributed vector representations for unsupervised automatic short answer grading, *Proc of the 3rd Workshop on Natural Language Processing Techniques for Educational Applications*, pp 32-41, Osaka, Japan.

O Adams, G Neubig, T Cohn and S Bird (2016). Learning a translation model from word lattices, *Proc Interspeech*, San Francisco, USA.

O Adams, G Neubig, T Cohn and S Bird (2015). Inducing bilingual lexicons from small quantities of sentence-aligned phonemic transcriptions, *Proc Intl Workshop on Spoken Language Translation*, pp 248–255, Na Dang, Vietnam.

S Bird, F Hanke, O Adams and H Lee (2014). Aikuma: A mobile app for collaborative language documentation, *Workshop on the Use of Computational Methods in the Study of Endangered Languages*, pp 1–5, Baltimore, USA.

M Lui, N Letcher, O Adams, L Duong, P Cook, T Baldwin, N Victoria (2014). Exploring methods and resources for discriminating similar languages, *Proc of the First Workshop on Applying NLP Tools to Similar Languages, Varieties and Dialects*, pp 129-138, Dublin, Ireland.

9 Program Committees

I have served on the program commitee as a reviewer for the following conferences:

- ACL 2019

- NAACL-HLT 2019

- The Use of Computational Methods in the Study of Endangered Languages (ComputEl) 2019

- EMNLP 2018

- NAACL-HLT 2018

- Workshop of the Australasian Language Technology Association (ALTA) 2017