

Curriculum Vitae

Kyle Williams

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Personal Profile

I am a Senior Scientist at Microsoft where my role primarily focuses on developing novel machine learning systems and supporting them from conception to deployment in a production environment. I have experience conducting research and developing production quality models in the fields of natural language processing, conversational AI, information retrieval, evaluation, metrics, and experimentation. I received my PhD in 2016 from The Pennsylvania State University and have co-authored over 40 peer reviewed research papers related to my work.

Relevant Employment History

- **Microsoft, Redmond, WA (August 29 2016 - Present)**
Position: Senior Applied Scientist
Responsibilities: Develop novel conversation systems; advance state of the art in NLP, dialog, and information retrieval through research and publications; develop and deploy machine learning models for production settings; analyze data and conduct experiments to measure product impact.
- **Microsoft, Redmond, WA (May 2015 - August 2015)**
Position: Research Intern
Research Project: Worked on identifying signals for detecting satisfaction in mobile search.
- **Oracle Labs, Burlington, MA (June 2014 - August 2014)**
Position: Research Intern
Research Project: Worked on relevance ranking and search result diversification for eCommerce search.
- **College of Information Sciences and Technology, Pennsylvania State University (August 2012 - August 2016)**
Position: Graduate Research Assistant and Teaching Assistant
Responsibilities: Research under the guidance of Prof. Lee Giles .

Education

- **The Pennsylvania State University (2012-2016)**
Ph.D. in Information Sciences and Technology, advised by Prof. Lee Giles.
- **University of Cape Town (2010-2012)**
Masters in Computer Science by Dissertation, advised by A/Prof. Hussein Suleman.
Degree awarded with distinction
- **University of Cape Town (2006-2009)**
Bachelor of Business Science in Management Studies in the field of Computer Science.
Degree awarded with second class division two honors

Research, Experience and Skills

- **Professional Activities.** *Reviewer:* IEEE Computer, South African Computer Journal (SACJ), iConference; WWW, TPDFL, ASONAM, DL, DSAA, JCDD, CIKM, WSDM, SIGIR.
- **Teaching:** Teaching assistant for 1st, 2nd and 4th year University courses; 5 years of extra-curricular music teaching at high school level,
- **Programming Languages.** *High Experience:* Java, Python; *Medium Experience:* PHP, JavaScript (incl. jQuery), Perl, C++, C#; *Low Experience:* XML + XSLT, SQL, Scala
- **Core Technologies:** Tensorflow, Solr, Lucene, scikit-learn.

Selected Publications

For a full list of publications see <http://www.kylewilliams.org/publication/>

- Kyle Williams, Seyyed Hadi Hashemi, and Imed Zitouni. Automatic task completion flows from web APIs. In *International Conference on Research and Development in Information Retrieval (SIGIR '19)*. ACM, July 2019
- Kyle Williams. Neural lexicons for slot tagging in spoken language understanding. In *2019 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL '19)*, June 2019
- Kunho Kim, Rahul Jha, Kyle Williams, Alex Marin, and Imed Zitouni. Slot tagging for task oriented spoken language understanding in human-to-human conversation scenarios. In *Proceedings of the 23rd Conference on Computational Natural Language Learning (CoNLL)*, pages 757–767. Association for Computational Linguistics, 2019
- Kyle Williams and Imed Zitouni. Does that mean you're happy? RNN-based modeling of user interaction sequences to detect good abandonment. In *Proceedings of the International Conference on Information and Knowledge Management (CIKM '17)*. ACM, November 2017
- Kyle Williams, Julia Kiselava, Aidan C. Crook, Imed Zitouni, Ahmed Hassan Awadallah, and Madian Khabsa. Detecting good abandonment in mobile search. In *International World Wide Web Conference (WWW '16)*. ACM, April 2016
- Jian Wu, Kyle Williams, Hung-Hsuan Chen, Cornelia Caragea, Madian Khabsa, Suppawong Tuarob, Alexander G. Ororbia, Douglas Jordan, Prasenjit Mitra, and C. Lee Giles. Citeseerx: Ai in a digital library search engine. *AI Magazine*, 36(3), January 2015