

# 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 conversational systems. My research interests include information retrieval and evaluation, machine learning, natural language processing, and conversational AI.

I received my PhD in 2016 from The Pennsylvania State University where I was advised by C. Lee Giles. My PhD research focused on similarity search and measuring user satisfaction in Information Retrieval. Before that I received a MS and BS from the University of Cape Town, South Africa, where my research focused on automatic handwriting recognition from extinct languages.

### 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 .
- **Digital Libraries Laboratory, Department of Computer Science, University of Cape Town (December 2009; May 2012 - August 2012)**  
**Position:** Research Assistant  
**Responsibilities:** Development, writing of articles, assisting honours students, assisting with day-to-day operations in the lab.

## 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, TPD, ASONAM, DL, DSAA, JCDL, 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
- 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 Khabza. 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 Khabza, 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