

Steven R. Wilson

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EDUCATION

University of Michigan, Ann Arbor, Michigan

Ph.D., Computer Science & Engineering

Jan 2019

- Thesis Title: Natural Language Processing for Personal Values and Human Activities
- Advisor: Rada Mihalcea

M.S., Computer Science & Engineering

Apr 2015

Taylor University, Upland, Indiana

B.S., Computer Science/Systems

May 2013

- Summa cum laude
- Minor in psychology
- Concentration in Intelligent Systems

RESEARCH EXPERIENCE

Institute for Language, Cognition, and Computation, University of Edinburgh

Postdoctoral Research Associate, SMASH Lab

Sep 2019 – Present

- Supervisor: Walid Magdy
- Research areas: Natural language processing, Computational Social Science

Artificial Intelligence Lab, University of Michigan

Postdoctoral Research Fellow, LIT Lab

Feb 2019 – Jul 2019

- Supervisor: Rada Mihalcea
- Research areas: Natural language processing, Computational Social Science

Graduate Student Research Assistant, LIT Lab

Jan 2014 – Jan 2019

- Supervisor: Rada Mihalcea
- Research areas: Natural language processing, Computational Social Science

Automated Imagery Analysis Group, SPAWAR Systems Center Pacific

Research Intern

Jun 2013 – Aug 2013

- Project: Automated detection of oil spills from Synthetic Aperture Radar imagery
- Supervisor: Bryan Bagnall
- Research areas: Computer Vision, Machine Learning

Advanced Concepts Lab, Lockheed-Martin Advanced Technology Labs

College Student Technical Specialist

Jun 2012 – Aug 2012

- Project: Proprietary research
- Supervisor: Ricardo Correa
- Research areas: Cybersecurity, Mobile Devices, Malware

Taylor University Research, Taylor University

Research Intern, Department of Computer Science & Engineering

May 2011 – Jan 2012

- Project: Proprietary research for Lockheed Martin
- Supervisors: Stefan Brandle, Arthur White
- Research areas: Cybersecurity, Operating Systems

PUBLICATIONS

PEER-REVIEWED

- 1) Wilson, S. R., Magdy, W., McGillivray, B., & Tyson, G. Analyzing Temporal Relationships between Trending Terms on Twitter and Urban Dictionary Activity. *In Proceedings of the Web Science Conference*. Southampton, UK, Jul 2020.
- 2) Bahgat, M., Wilson, S. R., & Magdy, W. Towards Using Word Embedding Vector Space for Better Cohort Analysis. *In Proceedings of the International Conference on Web and Social Media*. Atlanta, USA, Jun 2020.
- 3) Wilson, S. R., Magdy, W., McGillivray, B., Garimella, K., & Tyson, G. Urban Dictionary Embeddings for Slang NLP Applications. *In Proceedings of the Language Resources and Evaluation Conference*. Marseille, France, May 2020.
- 4) Rechkemmer, A., Wilson, S. R., & Mihalcea, R. Small Town or Metropolis? Analyzing the Relationship between Population Size and Language. *In Proceedings of the Language Resources and Evaluation Conference*. Marseille, France, May 2020.

- 5) Shen, Y.,* Wilson, S. R.,* & Mihalcea, R. Measuring Personal Values in Cross-Cultural User-Generated Content. *In Proceedings of the International Conference on Social Informatics*. Doha, Qatar, Nov 2019.
- 6) Wilson, S. R., & Mihalcea, R. Predicting Human Activities from User-Generated Content. *In Proceedings of the Annual Meeting of the Association of Computational Linguistics*. Florence, Italy, Jul 2019.
- 7) Zhang, L., Wilson, S. R., & Mihalcea, R. Multi-Label Transfer Learning for Multi-Relational Semantic Similarity. *In Proceedings of the Eighth Joint Conference on Lexical and Computational Semantics*. Minneapolis, USA, Jun 2019.
- 8) Wilson, S. R., Shen, Y., & Mihalcea, R. Building and Validating Hierarchical Lexicons with a Case Study on Personal Values.[†] *In Proceedings of the International Conference on Social Informatics*. St. Petersburg, Russia, Sep 2018.
- 9) Li, Y., Mihalcea, R., and Wilson, S. R.. Text-based Detection and Understanding of Changes in Mental Health. *In Proceedings of the International Conference on Social Informatics*. St. Petersburg, Russia, Sep 2018.
- 10) Wilson, S. R., & Mihalcea, R. Measuring Semantic Relations between Human Activities. *In Proceedings of the International Joint Conference on Natural Language Processing*. Taipei, Taiwan, Nov 2017.
- 11) Wilson, S. R., Mihalcea, R., Boyd, R.L., & Pennebaker, J. W. Disentangling Topic Models: A Cross-cultural Analysis of Personal Values through Words. *In the Workshop on Natural Language Processing and Computational Social Science at EMNLP*. Austin, TX, Nov 2016.
- 12) Ruan, X., Wilson, S. R., & Mihalcea, R. Finding Optimistic and Pessimistic Users on Twitter. *In Proceedings of the Annual Meeting of the Association of Computational Linguistics*. Berlin, Germany, Aug 2016.
- 13) Wilson, S. R., Mihalcea, R., Boyd, R.L., & Pennebaker, J. W. Cultural Influences on the Measurement of Personal Values through Words. *In Proceedings of the 2016 AAAI Spring Symposium Series*. Stanford, CA, Mar 2016.
- 14) Boyd, R. L.,* Wilson, S. R.,* Pennebaker, J. W., Kosinski, M., Stillwell, D., & Mihalcea, R. Values in Words: Using Language to Evaluate and Understand Personal Values. *In Proceedings of the Ninth AAAI International Conference on Web and Social Media*, Oxford, UK, May 2015.

E-PRINT/OTHER

- 1) Burdick, L., Wang, M., Ignat, O., Wilson, S. R., Zhang, Y., Wei, Y., Mihalcea, R., and Deng, J. Building a Flexible Knowledge Graph to Capture Real-World Events. *Text Analysis Conference*. Nov 2019.
- 2) Wendlandt, L., Wilson, S. R., Ignat, O., Welch, C., Zhang, L., Wang, M., Deng, J., and Mihalcea, R. Entity and Event Extraction from Scratch Using Minimal Training Data. *Text Analysis Conference*. Nov 2018.
- 3) Zhang, L., Wilson, S. R., and Mihalcea, R. Sequential Network Transfer: Adapting Sentence Embeddings to Human Activities and Beyond. *arXiv:1804.07835 [cs.CL]*. Apr 2018.
- 4) Pappas, K., Wilson, S. R., and Mihalcea, R. Stateology: State-Level Interactive Charting of Language, Feelings, and Values. *arXiv:1612.06685 [cs.CL]*. Dec 2016.
- 5) Radev, D., Zhang, R., Wilson, S. R., Van Assche, D., Gubert, H. S., Krivokapic, A., Dong, M., Wu, C., Bondera, S., Brandl, L., and Dohnmann, J. Cruficorn: Solving Crosswords with Natural Language Processing. *arXiv:1611.02360 [cs.CL]*. Nov 2016.

ACADEMIC HONORS & AWARDS

Michigan Artificial Intelligence Lab Symposium

2018

“Greatest Societal Impact”

Awarded for poster presentation: “Clustering Human Activity Expressions”

[†] Best Paper Award

* Equal Contributions

Best Paper Award	2018
International Conference on Social Informatics	
Awarded for the paper: "Building and Validating Hierarchical Lexicons with a Case Study on Personal Values"	
Rackham Graduate School Conference Travel Grant	2015 – 2018
University of Michigan, Ann Arbor, MI	
Provides monetary allowance for academic conference travel. Awarded Yearly.	
Michigan Institute for Data Science Annual Symposium	2016
"Most Likely Societal Impact"	
Awarded for poster presentation: "Disentangling Topic Models: A Cross-cultural Analysis of Personal Values through Words"	
Outstanding Computer Science Graduate	2013
Taylor University, Upland, IN	
Awarded to one student each year, selected by the faculty of Computer Science & Engineering.	
President Scholarship, Taylor University, Upland, IN	2009 – 2013
Highest tier of merit based academic scholarship awarded by the university.	
AP Scholar with Distinction	2009
The College Board	
For receiving an average score of at least 3.5 on all Advanced Placement exams taken, and scores of 3 or higher on five or more of these exams.	

PROFESSIONAL ACTIVITIES

SERVICE

Co-organizer/Co-founder	Mar 2020 – Present
University of Edinburgh Computational Social Science Reading Group	
Organizer	Sep 2015 – Jul 2019
University of Michigan Natural Language Processing Reading Group	
Program Committee Member	
NLP+CSS @ EMNLP 2020, CoNLL 2020, EMNLP 2020, W-NUT @ EMNLP 2020, GeBNLP 2020 @ COLING 2020, LREC 2020, AAAI 2020, CoNLL 2019, IJCNLP-EMNLP 2019, SocialNLP @ IJCAI 2019, ACL 2019, NLP+CSS @ NAACL 2019, NAACL 2019, AAAI 2019, EMNLP 2018, LREC 2018, EMNLP 2017, NLP+CSS @ ACL 2017, COLING 2016, WWW 2016, EMNLP 2015	
Invited Reviewer	
Frontiers in AI 2020, Information 2020, Applied Sciences 2019, Computer Speech and Language 2017, Psychological Methods 2017, JASIST 2017	
Volunteering	
Virtual conference volunteer at ACL 2020, Post-acceptance mentor for ACL Student Research Workshop 2020, Instructor at CS Kickstart 2017, Student Volunteer at EMNLP 2016, Session Facilitator at Girls Encoded 2016, Volunteer at Girls Encoded 2015, Session Facilitator at Xplore Engineering 2014 & 2015	
Secondary Reviewer	
CIKM 2020, ACM Hypertext 2020, JAIR 2016	

MEMBERSHIPS

The Association for Computational Linguistics	2015 – Present
The Association for the Advancement of Artificial Intelligence	2015 – 2018

CONFERENCES/WORKSHOPS ATTENDED

The Web Science Conference	2020
Annual Meeting of the Association for Computational Linguistics	2020
2nd HUMAINT Winter School on Fairness, Accountability, and Transparency in AI	2020
International Conference on Social Informatics	2019
EurNLP Summit	2019

Annual Meeting of the Association for Computational Linguistics	2019
Joint Conference on Lexical and Computational Semantics	2019
Annual Conference of the North American Chapter of the ACL	2019
• Workshop on Natural Language Processing and Computational Social Science	
Midwest Speech and Language Days	2019
International Conference on Social Informatics	2018
International Conference on Computational Social Science	2018
Midwest Speech and Language Days	2018
International Joint Conference in Natural Language Processing	2017
Midwest Speech and Language Days	2017
Conference on Empirical Methods in Natural Language Processing	2016
• Workshop on Natural Language Processing and Computational Social Science	
• Workshop on Natural Language Processing for Social Media	
International Conference on Computational Social Science	2016
Midwest Speech and Language Days	2016
AAAI Spring Symposium Series	2016
• Observational Studies in Social Media and Other Human Generated Content	
AAAI International Conference on Web and Social Media	2015
• Workshop on Standards and Practices in Large-Scale Social Media Research	
Midwest Speech and Language Days	2015
AAAI International Conference on Web and Social Media	2014

TEACHING ACTIVITIES

School of Informatics , University of Edinburgh	
Guest Lecturer	Nov 2019
INFR11145: Text Technologies for Data Science, <i>Lecture title: "Comparing Text Corpora"</i>	
Data Science Summer School , École Polytechnique and DATAIA Institute	
Tutorial Organizer	Jun 2019
Fundamentals of Text Analysis for User Generated Content	
Department of Electrical Engineering and Computer Science , University of Michigan	
Guest Lecturer	Winters, 2017 – 2019
EECS 486: Information Retrieval, <i>Lecture title: "Topic Modeling"</i>	
Graduate Student Instructor	Fall 2017
EECS 595: Natural Language Processing	
Graduate Student Instructor	Fall 2013
EECS 280: Programming and Introductory Data Structures	
The Center for Research in Teaching and Learning , University of Michigan	
Practice Teaching Facilitator	Winter 2016 – Fall 2017
Engineering Teaching Consultant	Fall 2015 – Winter 2017
Graduate Student Instructor Training - Workshop Facilitator	Fall 2015 – Winter 2017
Department of Computer Science & Engineering , Taylor University	
Laboratory Assistant	Spring 2012
COS 121: Foundations of Computer Science II	

STUDENT ADVISING

Felix Hennig , M.Sc. '20, University of Edinburgh	Mar 2020 – Present
Discovering Temporal Trends in Entity Representations from News Text	
Faisal Alothman , M.Sc. '20, University of Edinburgh	Mar 2020 – Present
Assessing Social Situations with NLP models	
Jinhang Li , M.Sc. '20, University of Edinburgh	Mar 2020 – Present
Analyzing the Relationship between Emoji Use and Self-Identity on Twitter	

Giorgos Longinos , M.Sc. '20, University of Edinburgh Analyzing the Relationship between Emoji Use and Self-Identity on Twitter	Mar 2020 – Present
Chenxin Diao , B.Sc. '21, University of Edinburgh Rumor Verification on Social Media	Apr 2020 – Present
Yiting Shen , B.S.E. '18, M.S. '19, University of Michigan Evaluation and Weighting of a Values Lexicon	May 2017 – May 2019
Amy Rechkemmer , B.S.E. '18, University of Michigan Content Analysis of Urban and Rural Twitter Users	Dec 2017 – May 2019
Li Zhang , B.S.E. '18, University of Michigan Language Understanding and Semantic Similarity of Text	Sep 2017 – Dec 2018
Anamaria Cuza , B.S.E. '21, University of Michigan Exploration of Bias in NLP Data Annotation	Dec 2017 – Dec 2018
Zheng Wu , M.S. '17, University of Michigan Comparison of Topic Modeling Methods	Jan 2016 – May 2017
Renhan Zhang , M.S. '16, University of Michigan A System for the Collection of Psycholinguistic Social Media Data	Jun 2015 – Jan 2016
Xianzhi Ruan , B.S.E. '16, University of Michigan Finding and Predicting Optimistic and Pessimistic Users on Twitter	May 2015 – Jan 2016

NON-ARCHIVAL PRESENTATIONS

TALKS

Social Data Science Interest Group The Alan Turing Institute, London, UK “The Semantic Space of Human Activities”	Oct 2019
Information Retrieval Seminar University of Glasgow, Glasgow, UK “The Semantic Space of Human Activities”	Oct 2019
#UMTweetCon2019 Institute for Social Research , University of Michigan, Ann Arbor, MI “Predicting Human Activities from User-Generated Content”	May 2019
Artificial Intelligence Lab Honors Competition University of Michigan, Ann Arbor, MI “Measuring Semantic Relations between Human Activities”	Oct 2017
International Conference on Computational Social Science Northwestern University, Evanston, IL “Cultural Influences on the Measurement of Psychological Phenomena: Value-behavior Relationships in India and the United States”	Jun 2016
Midwest Speech and Language Days University of Indiana, Bloomington “Cultural Influences on the Measurement of Personal Values through Words”	May 2016
Artificial Intelligence Lab Mini-Symposium University of Michigan, Ann Arbor, MI “Values in Words: Using Language to Evaluate and Understand Personal Values”	May 2015
Midwest Speech and Language Days Toyota Institute of Technology, Chicago, IL “Values in Words: Using Language to Evaluate and Understand Personal Values”	May 2015
Michigan College of Engineering “Recruit at Home” Event College of Natural & Applied Science, Taylor University, Upland, IN “Navigating Graduate School” Sponsored by the University of Michigan College of Engineering	Oct 2014

POSTERS

Midwest Speech and Language Days Toyota Institute of Technology, Chicago, IL “Clustering and Predicting Human Activities”	May 2019
University of Michigan Artificial Intelligence Lab Symposium University of Michigan, Ann Arbor, MI “Clustering Human Activity Expressions”	Nov 2018
International Conference on Computational Social Science Northwestern University, Evanston, IL “Relating Human Activities with Phrasal Embeddings”	Jul 2018
International Conference on Computational Social Science Northwestern University, Evanston, IL “Crowd-Powered Concept Sorting for Lexicon Creation”	Jul 2018
Midwest Speech and Language Days Toyota Institute of Technology, Chicago, IL “Measuring Semantic Relations between Human Activities”	May 2017
University of Michigan Data Science Symposium University of Michigan, Ann Arbor, MI “Disentangling Topic Models: A Cross-cultural Analysis of Personal Values through Words”	Nov 2016
Society for Personality and Social Psychology Long Beach, CA “Language and values: Understanding human values with language and language categories.”	Feb 2015

SYSTEMS	Language and Information Technology research group , University of Michigan	
ADMINISTRATION	Systems Administrator for LIT Lab Network	Jun 2014 – Nov 2018
	Software Skills: <i>Ubuntu, NIS, Apache, mySQL</i>	

[CV Compiled on 2020-08-04]