Vivek Kulkarni

Education

Jan 2019 - **Postdoctoral Scholar**, Stanford University, California.

Advised by Prof. Dan Jurafsky, and Prof. Daniel McFarland

July 2017 - Dec 2018 Postdoctoral Scholar, University of California, Santa Barbara.

Advised by Prof. William Yang Wang

August 2014-May 2017 PhD in Computer Science, Stony Brook University, New York.

Dissertation: Statistical Models for Linguistic Variation in Online Media

August 2012-May 2014 Master of Science in Computer Science, Stony Brook University,

New York.

Thesis: Multilingual Named Entity Recognition

August 2003-May 2007 Bachelor of Technology in Computer Science, National Institute of

Technology, Karnataka, India.

Awarded the gold medal for the highest GPA in the class of Computer Science.

Professional Experience

June 2016 - August 2016 Intern Research Scientist, Yahoo Labs, Yahoo, Sunnyvale, California.

June 2015 - August 2015 Software Engineering Intern, Social and Ranking, Google, Moun-

tain View, California.

June 2013 - August 2013 Software Engineering Intern, AI and Knowledge Team, Google,

Mountain View, California.

July 2009 - July 2012 Software Development Engineer, Juniper Networks, India, Bangalore.

May 2007 - June 2009 Software Design Engineer, Microsoft, India, Hyderabad.

Research Interests

My broad research interests are in the areas of natural language processing, machine learning and computational social science with a specific focus on robust and human-centric natural language processing.

Honors and Awards

Renaissance Technologies Fellowship Recipient of the Renaissance Technologies Fellowship awarded to an outstanding student each year, Department of Computer Science, Stony Brook University, 2014.

Publications

Journal Articles

Latent Human Traits in the Language of Social Media, <u>Vivek Kulkarni</u>, Margaret L. Kern, David Stillwell, Michal Kosinski, Sandra Matz, Lyle Ungar, Steven Skiena, H. Andrew Schwartz, PLOS One 2018.

A Paper Ceiling: Explaining the Persistent Underrepresentation of Females in Printed News Coverage, Eran Shor, Arnout van de Rijt, Alex Miltsov, <u>Vivek Kulkarni</u> and Steven Skiena, American Sociological Review 80.5 (2015): 960-984 also <u>Best</u> CITAMS Paper, 2017. Media Coverage: The Guardian.

Diversity Breeds Innovation With Discounted Impact and Recognition, Bas Hofstra, Sebastian Munoz-Najar Galvez, Bryan He, Vivek Kulkarni, Daniel A. McFarland, In submission (PNAS).

Conference Articles

DialectGram: Automatic Detection of Dialectal Variation at Multiple Geographic Resolutions, Hang Jiang, Haoshen Hong, Yuxing Chen, <u>Vivek Kulkarni</u>, Proceedings of the Society for Computation in Linguistics (SCiL) 2019.

What Should I Ask? Using Conversationally Informative Rewards for Goal-Oriented Visual Dialog, Pushkar Shukla, Carlos Elmadjian, Richika Sharan, <u>Vivek Kulkarni</u>, Matthew Turk, William Yang Wang, Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (ACL) 2019.

TWEETQA: A Social Media Focused Question Answering Dataset, Wenhan Xiong, Jiawei Wu, Hong Wang, Vivek Kulkarni, Mo Yu, Shiyu Chang, Xiaoxiao Guo, William Yang Wang, Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics (ACL) 2019.

Multi-view Models for Political Ideology Detection of News Articles, <u>Vivek Kulkarni</u>, Junting Ye, Steven Skiena, William Yang Wang, Proceedings of the 2018 Conference on Empirical Methods in Natural Language Processing (EMNLP) 2018.

Simple Models for Word Formation in English Slang, <u>Vivek Kulkarni</u>, William Yang Wang, Proceedings of NAACL-HLT 2018.

Simple Neologism Based Domain Independent Models to Predict Year of Authorship, <u>Vivek Kulkarni</u>, Yingtao Tian, Parth Dandiwala, Steven Skiena Proceedings of the 27th International Conference on Computational Linguistics (COLING) 2018.

Hate Lingo: A Target Based Linguistic Analysis of Hate Speech in Social Media, Mai El-Sherief, <u>Vivek Kulkarni</u>, Dana Nguen, William Yang Wang, Elizabeth Belding, Proceedings of the Twelfth International AAAI Conference on Web and Social Media (ICWSM) 2018.

Human Centered NLP with User Factor Adaptation, Veronica E Lynn, Youngseo Seon, <u>Vivek Kulkarni</u>, Niranjan Balasubramanian, H. Andrew Schwartz, Proceedings of the 2017 Conference on Empirical Methods in Natural Language Processing (EMNLP) 2017.

On the Distribution of Lexical Features at Multiple Levels of Analysis, Fatemeh Almodaresi, Lyle Ungar, Vivek Kulkarni, Mohsen Zakeri, Salvatore Giorgi, H Andrew Schwartz Proceedings of the 55th Annual Meeting of the Association for Computational Linquistics (ACL 2017).

Don't Walk, Skip! Online Learning of Multi-scale Network Embeddings, Bryan Perozzi, <u>Vivek Kulkarni</u>, Haochen Chen, Steven Skiena, Proceedings of the 2017 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2017).

Freshman or Fresher? Quantifying the Geographic Variation of Internet Language, <u>Vivek Kulkarni</u>, Bryan Perozzi, Steven Skiena, Proceedings of the Tenth International AAAI Conference on Web and Social Media (ICWSM 2016).

Statistically Significant Detection of Linguistic Change, <u>Vivek Kulkarni</u>, Rami Al-Rfou, Bryan Perozzi, Steven Skiena, Proceedings of the 24th International Conference on World Wide Web (WWW) 2015 **Media Coverage: MIT Tech Review, ACM Tech News**.

POLYGLOT-NER: Massive Multilingual Named Entity Recognition, Rami Al-Rfou, <u>Vivek Kulkarni</u>, Bryan Perozzi, Steven Skiena, Proceedings of the 2015 SIAM International Conference on Data Mining, SIAM (2015).

Inducing Language Networks over Continuous Space Word Representations, Bryan Perozzi, Rami Al Rfou, <u>Vivek Kulkarni</u>, Steven Skiena, Complex Networks V. 2014.

Sex Differences in the Human Connectome, <u>Vivek Kulkarni</u>, Jagat S. Pudipeddi, Leman Akoglu, Joshua T. Vogelstein, R. Jacob Vogelstein, Sephira Ryman, Rex E. Jung, International Conference on Brain and Health Informatics. Springer International Publishing, 2013.

Academic Service and Teaching Experience

Guest Lecturer *Machine Learning*, Instructor: William Yang Wang, Spring 2018.

Guest Lecturer Discrete Mathematics, Instructor: William Yang Wang, Fall 2017.

Guest Lecturer Foundations of Data Science, Instructor: Steven Skiena, Fall 2016.

Guest Lecturer Big Data Analytics, Instructor: H Andrew Schwartz, Fall 2016.

Teaching Assistant Machine Learning, Instructor: Prof. Leman Akoglu, Spring 2015.

Guided 5 teams on projects, designed home-work problems and graded exams for

a class of 45 students.

Teaching Assistant Computational Biology, Instructor: Prof. Rob Patro, Fall 2014.

Guided 2 teams on projects, and graded exams for a class of 60 students.

Teaching Assistant Database Systems, Instructor: Prof. Scott Smolka, Fall 2014.

Graded exams for a class of 100 students.

Area Chair COLING, 2018

Reviewer TKDE, EMNLP, NAACL, COLING, LREC, ICML, AAAI, W-NUT

Mentoring Graduate Student Mentoring, Fall 2014-Current.

Mentored several Masters Students for their Masters Projects.

- o Arun Babu
- Arvind Ram
- o Parth Dandiwala
- o Chani Jindal
- o Abhay Chennagiri
- o Vivek Pradhan
- o Hancheng Cao
- Hang Jiang
- o Haoyu Wang

Invited Talks

- Walmart Labs Talk on Towards Human Centered NLP via User Factor Adaptation at Walmart Labs, April 2019
 - Wyoming Talk on Focused Representation Learning for Social Media at University of Wyoming, March 2017
 - Yahoo Labs Talk on Focused Representation Learning for Social Media at Yahoo! Research, March 2017
 - UCSB Talk on Focused Representation Learning for Social Media at U C Santa Barbara, February 2017
 - IACS Talk on Statistical Models for Linguistic Variation in Online Media at the Institute of Advanced Computational Science, Stony Brook, October 2016
 - MASC-NLP Talk on Statistically Significant Detection of Linguistic Change at Student Colloquium on Natural Language Processing, University of Pennsylvania, April 2016
 - Yahoo Labs Talk on Statistically Significant Detection of Linguistic Change at Yahoo Labs, Sunnyvale, December 2014