

Manaal Faruqui

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CONTACT INFORMATION Google
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RESEARCH INTERESTS Representation learning, distributional semantics, multilingual learning, morphology, natural language processing, deep learning and machine learning.

EXPERIENCE Senior Research Scientist, Google Assistant Oct 2018 – current
Research Scientist, Google AI Aug 2016 – Sep 2018

EDUCATION **Carnegie Mellon University**, Pittsburgh, PA, USA
Ph.D., Language and Information Technology, 2016

- Research area: Representation learning, distributional semantics, multilingual learning.
- Advisor: Prof. Chris Dyer

Indian Institute of Technology, Kharagpur, India

B.Tech. (Hons.), Computer Science, May, 2012
M.Tech., Computer Science, May, 2012

HONORS AND AWARDS

- Best Student Paper Award at NAACL 2015
- Selected to attend Heidelberg Laureate Forum 2015
- Best Reviewer Award at NAACL 2015
- Best Presentation Award at LTI Students' Research Symposium 2012
- Microsoft Research India Travel Grant to attend ACL-2011
- DAAD Working Internship in Science & Engineering scholarship 2010
- MITACS Globalink Research Internship Grant 2009

INTERNSHIPS **Google Research**, London, UK **May – Aug, 2015**
Supervisor: Dr. Ryan McDonald
Multilingual Morpho-Syntactic Lexicon Generation

Google Research, New York, USA **June – Aug, 2014**
Supervisor: Dr. Shankar Kumar
Multilingual Relation Extraction

Yahoo! labs, Bangalore, India **May – July, 2011**
Supervisor: Dr. Narayan Bhamidipati
Personalized Advertisement Search

University of Stuttgart, Stuttgart, Germany **May – July, 2010**
Supervisor: Prof. Sebastian Padó
German Named Entity Recognition, Textual Entailment

Simon Fraser University, Vancouver, Canada **May – July, 2009**
Supervisor: Prof. Anoop Sarkar
Model Adaptation in Statistical Machine Translation

JOURNAL
PUBLICATIONS

Morpho-syntactic Lexicon Generation Using Graph-based Semi-supervised Learning.
Manaal Faruqui, Ryan McDonald, and Radu Soricut.
Transactions of the ACL (TACL) 2016.

CONFERENCE
PUBLICATIONS

WikiAtomicEdits: A Multilingual Corpus of Wikipedia Edits for Modeling Language and Discourse
Manaal Faruqui, Ellie Pavlick, Ian Tenney, and Dipanjan Das.
Proceedings of EMNLP 2018 (long).

Learning To Split and Rephrase From Wikipedia Edit History
Jan Botha, **Manaal Faruqui**, John Alex, Jason Baldridge, and Dipanjan Das.
Proceedings of EMNLP 2018 (short).

Identifying Well-formed Natural Language Questions
Manaal Faruqui and Dipanjan Das.
Proceedings of EMNLP 2018 (short).

(Almost) Zero-shot Cross-lingual Spoken Language Understanding
Shyam Upadhyay, **Manaal Faruqui**, Gokhan Tur, Dilek Hakkani-Tur, Larry Heck.
Proceedings of ICASSP 2018.

Morphological Inflection Generation Using Character Sequence to Sequence Learning.
Manaal Faruqui, Yulia Tsvetkov, Graham Neubig, and Chris Dyer.
Proceedings of NAACL 2016 (long).

Polyglot Neural Language Models: Case Study in Cross-Lingual Phonetic Representation Learning.
Tsvetkov, Sitaram, **Manaal Faruqui**, Lample, Littell, Mortensen, Black, Levin and Dyer.
Proceedings of NAACL 2016 (long).

Cross-lingual Models of Word Embeddings: An Empirical Comparison.
Shyam Upadhyay, **Manaal Faruqui**, Chris Dyer, and Dan Roth.
Proceedings of ACL 2016 (long).

Learning Curriculum with Bayesian Optimization for Task-Specific Word Representation Learning.
Yulia Tsvetkov, **Manaal Faruqui**, Wang Ling, Brian MacWhinney and Chris Dyer.
Proceedings of ACL 2016 (long).

Sparse Overcomplete Word Vector Representations.
Manaal Faruqui, Yulia Tsvetkov, Dani Yogatama, Chris Dyer, and Noah Smith.
Proceedings of ACL 2015 (long).

Non-distributional Word Vector Representations.
Manaal Faruqui and Chris Dyer.
Proceedings of ACL 2015 (short).

Retrofitting Word Vectors to Semantic Lexicons.
Manaal Faruqui, Jesse Dodge, Sujay Jauhar, Chris Dyer, Ed Hovy and Noah Smith.
Proceedings of NAACL 2015 (long). **Best Student Paper Award.**

Multilingual Open Relation Extraction Using Cross-lingual Projection.
Manaal Faruqui and Shankar Kumar.
Proceedings of NAACL 2015 (short).

Learning Word Representations with Hierarchical Sparse Coding.
Dani Yogatama, **Manaal Faruqui**, Chris Dyer and Noah Smith.
Proceedings of ICML 2015 (long).

Evaluation of Word Vector Representations by Subspace Alignment.
Yulia Tsvetkov, **Manaal Faruqui**, Wang Ling, Guillaume Lample and Chris Dyer.
Proceedings of EMNLP 2015 (short).

Improving Vector Space Word Representations Using Multilingual Correlation.
Manaal Faruqui and Chris Dyer.
Proceedings of EACL 2014 (long).

Augmenting English Adjective Senses with Supersenses.
Yulia Tsvetkov, Nathan Schneider, Dirk Hovy, Archana Bhatia, **Manaal Faruqui** and Chris Dyer.
Proceedings of LREC 2014 (long).

An Information Theoretic Approach to Bilingual Word Clustering.
Manaal Faruqui and Chris Dyer.
Proceedings of ACL 2013 (short).

Towards a model of formal and informal address in English.
Manaal Faruqui and Sebastian Padó.
Proceedings of EACL 2012 (long).

Handling OOV words in Indian-language–English CLIR.
Parin Chheda, **Manaal Faruqui** and Pabitra Mitra.
Proceedings of ECIR 2012 (short).

“I thou thee, thou traitor”: Predicting Formal vs. Informal Address in English Literature.
Manaal Faruqui and Sebastian Padó.
Proceedings of ACL 2011 (short).

Acquiring Positive Entailment Pairs Across Languages & Domains: A data analysis.
Manaal Faruqui and Sebastian Padó.
Proceedings of IWCS 2011 (long).

Training and Evaluating a German Named Entity Recognizer with Semantic Generalization.
Manaal Faruqui and Sebastian Padó.
Proceedings KONVENS 2010 (short).

WORKSHOP
PUBLICATIONS

Problems With Evaluation of Word Embeddings Using Word Similarity Tasks.
Manaal Faruqui, Yulia Tsvetkov, Pushpendre Rastogi, Chris Dyer.
Proceedings of the Representation Evaluation Workshop at ACL 2016.

Correlation-based Intrinsic Evaluation of Word Vector Representations.
Yulia Tsvetkov, **Manaal Faruqui** and Chris Dyer.
Proceedings of the Representation Evaluation Workshop at ACL 2016.

Community Evaluation and Exchange of Word Vectors at wordvectors.org
Manaal Faruqui and Chris Dyer.
Proceedings of ACL Demo Session 2014 (short).

A Framework for (Under)specifying Dependency Syntax without Overloading Annotators.
Nathan Schneider, Brendan O'Connor, Naomi Saphra, David Bamman, **Manaal Faruqui**, Jason
Baldrige, Noah A. Smith and Chris Dyer.
Proceedings of the Linguistic Annotation Workshop at ACL 2013.

Identifying the L1 of non-native writers: the CMU-Haifa system.
Yulia Tsvetkov, Naama Twitto, Nathan Schneider, Noam Ordan, **Manaal Faruqui**, Victor Chahuneau,
Shuly Wintner and Chris Dyer.
Proceedings of the Workshop on NLP for Building Educational Applications at NAACL 2013.

Soundex-based Translation Correction in Urdu–English CLIR.
Manaal Faruqui, Prasenjit Majumder and Sebastian Padó.
Proceedings of Workshop on Cross Lingual Information Access at IJCNLP 2011.

TEACHING
EXPERIENCE

Carnegie Mellon University
Teaching Assistant **Spring, 2016**
Instructors: Prof. Chris Dyer
Machine Translation 11-731, Graduate level course

Carnegie Mellon University
Teaching Assistant **Spring, 2014**
Instructors: Prof. Noah Smith & Prof. Chris Dyer
Natural Language Processing 11-411, Undergraduate level course

Carnegie Mellon University
Teaching Assistant **Fall, 2014**
Instructors: Prof. Noah Smith
Advanced Natural Language Processing Seminar 11-713, Graduate level course

SERVICE

Tutorial:
2017: Tutorial on Cross-lingual word representations at EMNLP

Workshop Organizer:
2018: Workshop on Subword and Character-level models in NLP at NAACL
2017: Workshop on Subword and Character-level models in NLP at EMNLP
2016: Workshop on Multilingual and Cross-lingual Methods in NLP at NAACL

Area Chair:
2017: Semantics, ACL

Session Chair:
2016: Word Embeddings, NAACL
2014: Semantics and Discourse, EACL

Journal Reviewing:
2018: Transactions of ACL, Computational Linguistics
2017: Transactions of ACL, Computational Linguistics
2016: Computational Linguistics, TALLIP

Conference reviewing:

2018: NAACL, EMNLP
2017: ACL, EMNLP
2016: NAACL, ACL, ICML, CoNLL, ICLR
2015: EMNLP, NAACL, *SEM
2014: ICML, ACL, EACL, CoNLL
2013: NAACL, CoNLL
2012: EACL

TALKS

Invited Talks:

09/18: Understanding Structure in Language through Wikipedia Edits. University of Helsinki.
08/16: Inducing Morpho-syntactic Lexicons & Morphological Inflections. Ohio State University.
07/16: Beyond the Distributional Hypothesis. University of Tokyo.
03/16: Beyond the Distributional Hypothesis. IBM Research, Yorktown Hts.
03/16: Beyond the Distributional Hypothesis. Bloomberg, New York City.
03/16: Beyond the Distributional Hypothesis. Google, New York City.
03/16: Beyond the Distributional Hypothesis. Microsoft Research, Seattle.
03/16: Beyond the Distributional Hypothesis. Allen Institute for AI, Seattle.
08/15: Improving and Better Understanding Word Vectors. University of Stuttgart.
08/15: Improving and Better Understanding Word Vectors. University College London.
07/15: Improving and Better Understanding Word Vectors. University of Edinburgh.
06/15: Improving and Better Understanding Word Vectors. University of Copenhagen.
06/15: Improving and Better Understanding Word Vectors. Cambridge University.
01/13: Machine Learning for NLP: An Introduction. VIT Chennai, India.

Conference Talks:

08/16: Generating Morpho-syntactic Lexicons. ACL in Berlin.
06/16: Morphological Inflection Generation. NAACL in San Diego.
07/15: Sparse Overcomplete Word Vector Representations. ACL in Beijing.
06/15: Retrofitting Word Vectors to Semantic Lexicons. NAACL in Denver.
04/14: Improving Word Vectors Using Multilingual Correlation. EACL in Gothenburg.
08/13: An Information Theoretic Approach to Bilingual Word clustering. ACL in Sofia.

At CMU:

10/15: Graph-based Models for Lexical Semantics. Machine Learning Lunch.
03/14: Lexical Semantics. A lecture in the undergraduate NLP course (11-411).
08/13: Multilinguality to the Rescue. LTI Students' Research Symposium.
08/12: Towards a model of formal and informal address in English. LTI Students' Research Symposium. Won the **Best Presentation Award**.

LANGUAGES

C++, Python, Native speaker of Hindi, Proficient in English.