

Shashank Srivastava

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Interests

ML from Language Interactions, Learning with Limited Data, NLP

Education

PhD, Machine Learning Department, Carnegie Mellon University June 2018 (expected)
GPA: 4.11/4.00
Advisor: Tom Mitchell

MS, Language Technology Institute, Carnegie Mellon University July 2014
Advisor: Eduard Hovy

BTech-MTech Dual degree, Computer Science and Engineering July 2011
Indian Institute of Technology Kanpur, India

Employment

Graduate Research Assistant August 2012-present
School of Computer Science, Carnegie Mellon University

Research Internship May 2016- July 2016
Microsoft Research, Redmond. Mentor: Nebojsa Jojic

High Frequency Trading July 2010 - June 2012
Tower Research Capital LLC (www.tower-research.com)

Research Internship May 2009- July 2009
Max Planck Institute Tubingen. Mentors: Bernhard Scholkopf, Jan Peters

Teaching Assistant

- Convex Optimization, CMU, Ryan Tibshirani Fall, 2015
- Statistical Machine Learning, CMU, Larry Wasserman & Ryan Tibshirani Spring, 2015
- Machine Learning, IIT Kanpur, Harish Karnick Fall, 2010
- Data Structures and Algorithms, IIT Kanpur, SK Mehta Spring, 2009

Publications

Work in progress:

- Learning Concept Classifiers from Declarative Language. (In preparation)
- ‘Sequential Counting Grids for Extracting Temporal Structures in texts’. (In preparation)

Conferences:

1. S Srivastava, I Labutov, T Mitchell. ‘Joint Semantic Parsing and Concept Learning from Natural Language Explanations’. Conference on Empirical Methods in Natural Language Processing (EMNLP) 2017
2. S Srivastava, A Azaria, T Mitchell. ‘Parsing Natural Language Conversations using Contextual Cues’. International Joint Conference on Artificial Intelligence (IJCAI) 2017
3. S Srivastava, S Chaturvedi, T Mitchell. ‘Inferring interpersonal relationships in narrative text’. AAAI Conference on Artificial Intelligence (AAAI) 2016.¹
4. S Chaturvedi, S Srivastava, H Daumé and C Dyer. ‘Modeling Evolving Relationships Between Characters in Literary Novels’. AAAI Conference on Artificial Intelligence (AAAI) 2016.

¹Media coverage in the New Scientist (Dec 2015))

5. B Yang, N Nakashole, B Kisiel, EA Platanios, A Saparov, S Srivastava, D Wijaya, T Mitchell, ‘CMUML Micro-Reader System for KBP 2016 Cold Start Slot Filling, Event Nugget Detection, and Event Argument Linking’, Text Analysis Conference (TAC) 2016
6. B Kisiel, B McDowell, M Gardner, N Nakashole, EA Platanios, A Saparov, S Srivastava, D Wijaya, T Mitchell, ‘CMUML system for KBP 2015 Cold Start Slot Filling’, Text Analysis Conference (TAC) 2015
7. S Srivastava, E Hovy. ‘Vector Space Semantics with Frequency-driven motifs’. Association for Computational Linguistics (ACL) 2014.
8. M Sachan, A Dubey, S Srivastava, E P Xing and E Hovy. ‘Spatial Compactness meets Topical Consistency: Jointly modeling Links and Content for Community Detection’. International Conference on Web Search and Data Mining (WSDM) 2014
9. S Srivastava, D Hovy, E Hovy. ‘A Walk-based Semantically Enriched Tree Kernel Over Distributed Word Representations’. Conference on Empirical Methods in Natural Language Processing (EMNLP) 2013.
10. K Goyal*, SK Jauhar*, H Li*, M Sachan*, S Srivastava* and E Hovy. ‘A Structured Distributional Semantic Model for Event Coreference’. Association for Computational Linguistics (ACL) 2013 (**Equally contributing*)

Workshop papers, posters and Technical Reports:

11. S Srivastava, I Labutov, T Mitchell. ‘Zero shot concept learning from Natural language Quantification’. NIPS Workshop on Learning from Limited Data, 2017
12. D Hovy, S Srivastava, S K Jauhar, M Sachan, K Goyal, H Li and E Hovy. ‘Identifying Metaphorical Word Use with Tree Kernels’. Proceedings of Meta4NLP Workshop, North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL-HLT) 2013
13. K Goyal*, S K Jauhar*, H Li*, M Sachan*, S Srivastava* and E Hovy. ‘A Structured distributional semantic model: Integrating structure with semantics’. Workshop on Continuous Vector Space Models and their Compositionality, Association for Computational Linguistics (ACL) 2013 (**Equally contributing*)
14. M Sachan and S Srivastava. ‘Collective Matrix Factorization for Co-clustering’. World Wide Web Consortium (WWW) 2013 (poster).
15. S Chaturvedi, H Daumé, T Moon, S Srivastava, ‘A Topical Graph Kernel for Link Prediction’, Workshop on Mining and Learning with Graphs (MLG), International Conference on Machine Learning (ICML) 2012
16. S Srivastava, ‘Evolution of Compositional Languages in Multiple Agent Social Communities’, MTech Thesis, IIT Kanpur, 2011
17. S Srivastava, M Hirsch, J Peters, B Scholkopf, ‘A Reinforcement learning based Autoguided for Astrophotography’, MPI Technical Report

Talks

1. ‘Learning Classifiers from Language’, Invited Talk at Computational Linguistics and Lunch Symposium, CIS, University of Pennsylvania, Nov 2017
2. ‘Jointly Learning Concepts and Language’, Invited Talk at Department of Computer Science and Engineering, IIT Kanpur, June 2017
3. ‘Learning to Interpret Language from Context’, Talk in Machine Learning Lunch Seminar, CMU, May 2017
4. ‘Learning from Natural Language Interactions’, CogComp Group, UIUC, Nov 2016
5. ‘Semantically enriched tree kernels’, LTI Student Research Symposium, August 2013
6. ‘A Practical Introduction to Machine Learning’, Invited talk at Geetanjali Institute of Technology and Science, Udaipur, 2010
7. ‘Algorithms for Graph clustering’, Special Interest Group in Machine Learning seminar, IIT Kanpur, Sep 2009
8. Conference Presentations at EMNLP 2017, AAI 2016, EMNLP 2013 and APBC 2010

Awards and Honors

- Supported by Yahoo CMU InMind Fellowship for 2016-17
- Selected to attend Heidelberg Laureate Forum 2016
- Highest GPA in the class of 2012 among all students at LTI, CMU
- Thrice awarded 'Academic Excellence award' by the Indian Institute of Technology Kanpur for distinctive academic performance (top 7% of class)
- Two Gold medals for highest Marks in India in the International Assessment for Schools by University of New South Wales, Australia (in both Maths and Science)
- Sponsored to attend 'Microsoft Winter School on Machine Learning and Computer Vision', IISc Bangalore, 2010
- Awarded National Talent Search (NTS) Scholarship by National Council of Educational Research and Training in 2002
- Top 0.1% in the Joint Entrance Exam of the IITs, 2005 (200,000 appearing students)

Service

- PhD Admissions Committee, Machine Learning Department, CMU (2016 and 2017)
- Organization committee, Mid-Atlantic Student Colloquium on Language and Learning (MASC-2013) and CMU Optimization Conference (COPTS-2015)
- Reviewer for ICML 2016, ACL 2017, AAAI 2016, NIPS 2017, AAAI 2017, NAACL 2017, ICML 2017, ConLL 2017
- Coordinator and Instructor, Summer school for Computer Literacy for rural children, 'Shiksha Sopan'(regional NGO) May-Jul 2008
- Senior Link Student, Counselling Service, IIT Kanpur 2007-08