Vivek Gupta

Machine Learning & Natural Language Processing

CONTACT INFORMATION	The Preserve Apartment 543 South 900 East, Apt. C6, Salt Lake City, UT 84102 United States of America	vgupta123.github.io keviv9@gmail.com +1-801-558-7272 [Google Scholar]()

RESEARCH INTERESTS

Natural Language Inference, Representation Learning, Extreme Multi-Label Learning, Ethics in Artificial Intelligence

CURRENT POSITION

School of Computing, University of Utah   Aug 2018 - Present
Graduate Research Assistant   Advisor: Prof. Vivek Srikumar

EDUCATION

School of Computing, University of Utah   Aug 2018 - Present
PhD, Computer Science, School of Computing
Advisor: Prof. Vivek Srikumar (CGPA: 3.9/4)

Indian Institute of Technology, Kanpur   July 2015 - May 2016
M. Tech, Computer Science and Engineering
Advisor: Prof. Harish Karnick (CGPA: 9.3/10)

Indian Institute of Technology, Kanpur   July 2011 - July 2015
B. Tech, Computer Science and Engineering (CGPA: 7.5/10)

EMPLOYMENT

Microsoft Research Lab, India   Oct 2016 - Aug 2018
Research Fellow, Machine Learning and Natural Language Application   Dr. Nagarajan Natararjan,
Dr. Praneeth Netrapalli & Dr. Prateek Jain

SCHOLASTIC ACHIEVEMENTS

Selected among the top 7 finalist in Ericson's Innovation Awards, India in 2016

Secured **All India Rank 183** in **IIT-JEE 2011** amongst more than 500,000 candidates

Qualified for **Kishore Vaigyanik Protsahan Yojana (KVPY) scholarship, 2011**

Selected among top 1% of students, **Indian National Physics Olympiads, 2011**

Selected among top 1% of students, **Indian National Chemistry Olympiads, 2011**

PUBLICATIONS

Gupta, V., Mehta, M.,Nokhiz, P., Srikumar, V. *InfoTabS: Inference on Tables as Semi-structured Data*, ACL 2020   [PrePrint][Project Page]

Gupta, V., Saw A., Nokhiz, P., Gupta, H., Talukdar, P., *Improving Document Classification using Multi-Sense Embeddings*, ECAI 2020 (Oral)   [PrePrint][Blog]

Gupta, V., Kumar, A., Nokhiz, P., Netrapalli, P., Rai, , P., Talulkdar, *P-SIF: Document Embeddings using Partition Averaging*, AAAI 2020 (Oral)   [Paper][Appendix][PPT][Poster][Blog]

Gupta, V., Nokhiz, P., Dutta, C., Venkatasubramanian, S., *Equalizing Recourse Across Group*, under preparation for FAccT 2021   [PrePrint]

Uppal S., **Gupta, V.**, Swaminathan A.,Zhang H.,Mahata D.,Gosangi R., Shah. R., Stent A., *Two-Level Classification using Recasted Data for Low Resource Settings*, to appear at AACL-IJCNLP 2020

Raunak, V., Dalmia, S., **Gupta, V.**, Metze, F.,*On Long-Tailed Phenomena in Neural Machine Translation*, to appear in EMNLP 2020 (Findings)

Li, T., **Gupta, V.**, Mehta, M., Srikumar, V., *A logic-Driven Framework for Consistency of Neural Models*, EMNLP-IJCNLP 2019 & StarAI 2020   [Paper][Poster]

Gupta, V., Wadbude, R., Natarajan, N., Karnick, H., Jain, P., Rai, P., *Distributional Semantics meet Multi-Label Learning*, AAAI 2019 (Oral)   [Paper][Slides][Poster]

Gupta, V., Saw A., Gupta, H., Nokhiz, P., Talukdar, P., *Word Polysemy Aware Document Vector Estimation*, NAACL-SRW 2019 (non-archival) [PrePrint]

Raunak, V., **Gupta, V.**, Metze, F., *Effective Dimensionality Reduction for Word Embeddings*, RepL4NLP 2019 (Oral) [Paper][Poster]

Raunak, V., Kumar, V., **Gupta, V.**, Metze, F., *On Dimensional Linguistic Properties of the Word Embedding Space*, ACL-SRW 2019 (non-archival) RepL4NLP 2020 (Oral) [PrePrint]

Dohare, S., **Gupta, V.**, Karnick, H., *Unsupervised Semantic Abstractive Summarization*, ACL-SRW 2018 [Paper][Poster]

Mekala, D., **Gupta, V.**, Paranjape, B., Karnick, H. *Sparse Composite Document Vectors using soft clustering over distributional representations*, EMNLP 2017 (Oral) [Paper][Slides]

Gupta, V., Karnick, H.,Bansal, A., Jhala, P. *Product Classification in E-Commerce using Distributional Semantics*, COLING 2016 (Master Thesis Work) [Paper][Poster]

Wadbude, R., **Gupta, V.**, Mekala, D., Karnick, H., *User Bias Removal in Review Score Prediction*, CODS-COMAD 2018 & DAB 2017 (Oral) [Paper][Poster]

Gupta, V., Mittal, S., Bhaumik, S., Roy, R. *Assisting Humans to Achieve Optimal Sleep by Changing Ambient Temperature*, BIBM 2016, BHI 2016 & HI-DS 2016 (Oral) [Paper][Slides]

Mekala, Dheeraj., **Gupta, V.**, Kar, P., Karnick, H., *Bayes-optimal Hierarchical Classification over Asymmetric Tree-Distance Loss*, Tech Report [PrePrint]

Mahajan, D., **Gupta, V.**, Keerthi, S., Sundararjan, S., *Efficient Estimation of Generalization Error and Bias-Variance Components of Ensembles*, Tech Report [PrePrint]

MASTER THESIS
Product Categorization in E-Commerce using Distributional Semantics
Prof. Harish Karnick (IIT Kanpur) & Pradhuman Jhala (Flipkart.com) [Thesis][Slides]

- Proposed a novel distributional semantics representation for text documents.
- Proposed a two-level ensemble approach utilizing (with respect to the taxonomy tree) a path-wise, node-wise and depth-wise classifiers for product classification.

RESEARCH INTERNSHIPS

Facebook AI Research (Assistant), Seattle Sep 2020 - Dec 2020
Efficient and Effective Semantic Parsing *Dr. Denis Savenkov (Research Scientist)*

IBM Research, Thomas J. Watson Research Center May 2019 - Aug 2019
Contrastive Explanations for Natural Language Task *Dr. Kush R Varshney (Research Manager)*

Microsoft Research India, Bangalore May 2016 - Jul 2016
Estimation of Generalization Error for Ensembles *Dr. Sundararajan Sellamanickam (Principal Applied Scientist)*

Flipkart Internet Pvt. Ltd., Bangalore May 2015 - July 2015
Web Scale Product Classification *Pradhuman Jhala (Principal Architect)*

Samsung R&D Institute, Bangalore May 2014 - July 2014
Mobile and Healthcare Solution Y2014 *Sandip Bhaumik (Group Manager) & Raj Roy (Manager)*

MISCELLANEOUS [Professional Services], [Seminars Talks], [Research Grants], [Mentored Students]