

# Vivek Gupta

Machine Learning & Natural Language Processing

CONTACT INFORMATION	University of Utah 543 South 900 East, Aprt. C6, Salt Lake City Utah, United States	<a href="http://vgupta123.github.io">http://vgupta123.github.io</a> keviv9@gmail.com +1-801-558-7272
RESEARCH INTERESTS	Representation Learning, Structured Prediction, Extreme Classification, Resource Constraint Machine Learning, Semi Supervised Learning and Anomaly detection, Ethics in Machine Learning	
CURRENT POSITION	<b>School of Computing, University of Utah</b> <i>Graduate Research Assistant</i>	(Aug 2018 - Present) Advisor: Prof. Vivek Srikumar
EDUCATION	<b>University of Utah</b> PhD, Computer Science, School of Computing Advisor: Prof. Vivek Srikumar CGPA: 3.67/4	(Aug 2018 - Present)
	<b>Indian Institute of Technology Kanpur</b> M. Tech with Honors in Computer Science and Engineering Advisor: Prof. Harish Karnick CGPA: 9.3/10	(July 2015 - May 2016)
	<b>Indian Institute of Technology Kanpur</b> B. Tech with Honors in Computer Science and Engineering CGPA: 7.5/10	(July 2011 - July 2015)
	<b>Microsoft Research Lab, India</b> <i>Research Fellow, Machine Learning and Natural Language Application</i> Natarajan, Dr. Praneeth Netrapalli & Dr. Prateek Jain	(Oct 2016 - Aug 2018) Advisors: Dr. Nagarajan
SCHOLASTIC ACHIEVEMENTS	Selected among the top 7 finalist in <b>Ericson's Innovation Awards, India</b> in 2016 Secured <b>All India Rank 183</b> in <b>IIT-JEE 2011</b> amongst more than 500,000 candidates Qualified for <b>Kishore Vaigyanik Protsahan Yojana (KVPY) scholarship, 2011</b> Selected among top 1% of students in India, <b>Indian National Physics Olympiads, 2011</b> Selected among top 1% of students in India, <b>Indian National Chemistry Olympiads, 2011</b>	
PUBLICATIONS	<b>Gupta, V.</b> , Wadbude, R., Natarajan, N., Karnick, H., Jain, P., Rai, P., " <i>Distributional Semantics meet Multi-Label Learning</i> ", <b>AAAI 2019</b> [PrePrint] Dohare, S., <b>Gupta, V.</b> , Karnick, H. " <i>Unsupervised Semantic Abstractive Summarization</i> ", <b>ACL-SRW 2018</b> (Workshop) [Paper][Poster] Mekala, D., <b>Gupta, V.</b> , Paranjape, B., Karnick, H. " <i>Sparse Composite Document Vectors using soft clustering over distributional representations</i> ", <b>EMNLP 2017</b> (Long Oral) [Paper] [PPT] <b>Gupta, V.</b> , Karnick, H., Bansal, A., Jhala, P. " <i>Product Classification in E-Commerce using Distributional Semantics</i> ", <b>COLING 2016</b> (Long Poster) [Paper][Poster] Wadbude, R., <b>Gupta, V.</b> , Mekala, D., Karnick, H., " <i>User Bias Removal in Review Score Prediction</i> ", Accepted in <b>CODS-COMAD 2018</b> (Long Oral) & <b>DAB 2017</b> (Workshop) [Paper][Poster] <b>Gupta, V.</b> , Mittal, S., Bhaumik, S., Roy, R. " <i>Assisting Humans to Achieve Optimal Sleep by Changing Ambient Temperature</i> ", <b>BIBM 2016</b> , <b>BHI 2016</b> & <b>HI-DS 2016</b> (Oral) [Paper] [PPT]	

MASTER  
THESIS

**Product Categorization in E-Commerce using Distributional Semantics**

*Advisors: Prof. Harish Karnick (IIT Kanpur) & Pradhuman Jhala (Flipkart.com)* [Thesis][PPT]

- 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  
INTERNSHIP

**Microsoft Research India, Bangalore**

(May 2016 - Jul 2016)

Estimation of generalization error for ensembles

*Dr. Sundararajan Sellamanickam (Principal*

*Applied Scientist)*

- Worked on efficient estimation of generalization error for ensembles using normality assumption on classification scores
- Worked on efficient prediction of ensemble parameters, bias and variance of generalization errors using minimal number of ensembles

**Flipkart Internet Pvt. Ltd., Bangalore**

(May 2015 - July 2015)

Web Scale Product Classification

*Pradhuman Jhala (Principal Architect)*

- Developed a model for deep hierarchical classification using multilevel classifiers and ensemble methods
- Model outperformed existing classifier in precision@1, precision@5 and prediction time.

**Samsung R&D Institute, Bangalore**

(May 2014 - July 2014)

Mobile and Healthcare Solution Y2014 *Sandip Bhaumik (Group Manager) & Raj Roy (Manager)*

- An innovation in S-Health Wearable technology on sleep applications by automatically changing ambient temperature using recurrent feedback signal from S-Watch

PROFESSIONAL  
SERVICE

**Program Committee:** ACL 2018 Student Research Workshop (SRW), ACL 2019 Student Research Workshop (SRW).

**Reviewer:** Served as a reviewer for long papers of NAACL 2019 conference.

**Meta Reviewer:** Served as a reviewer for long and short papers of EMNLP 2017 conference.

**Coordinator:** Initiated and managed Special Interest Group in Machine Learning at Computer Science and Engineering Department, IIT Kanpur. Organized regular meetups for discussions and talks on topics in Machine Learning and related fields.

**Teaching Assistant:** for MLT 2016 - Machine Learning Tool and Technique: Mentored a group of 30 M-Tech students part of an introductory course on Machine Learning. Set up a labeling software for project work, resulting in a new dataset.

**Student Secretary & Student Mentor:** in Promotion of Work Experience and Research PoWER & Alumni Contact Program (ACA) under Office of Dean of Research and Development IIT Kanpur

**Student Volunteer:** for mentoring and teaching underprivileged students of primary classes from nearby village(Nankari) at Prayas, IIT Kanpur.

TALKS &  
SEMINARS

I had the opportunity to present my work at various places which I thoroughly enjoyed.

[Talks]

STUDENT  
MENTORSHIP

I have been extremely lucky to mentor some amazing students.

[Students Mentored]

TRAVEL  
GRANTS &  
SCHOLARSHIP

I have been fortunate to receive scholarships/grants at several occasions to support my education and research.

[Travel Grants]