

## Shashank Gupta

**E-mail:** shashank.gupta@research.iiit.ac.in

**Google Scholar Profile:** <https://bit.ly/2E6bw7W>

**Github:** <https://github.com/shashankg7>

**Blog:** <http://shashank-gupta.com/blog/>

**Web-Page:** <http://shashank-gupta.com/>

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### RESEARCH INTERESTS

Information Retrieval, Machine Learning, Recommendation Systems, Natural Language Processing and Deep Computer Vision

### EDUCATION

**International Institute of Information Technology**, Hyderabad

*Master of Science By Research*, Computer Science and Engineering, June 2015 - June'18

*Advisors:* Dr. Vasudeva Varma, Dean R&D, IIIT-Hyderabad

Dr. Manish Gupta, Principal Applied Scientist, Microsoft, Hyderabad

*Research Group:* **Search and Information Extraction Laboratory (SIEL)**

**Birla Institute of Technology and Science**, Pilani

*Master of Engineering*, Software Systems, June 2014 - June 2015

**Birla Institute of Technology**, Mesra, India

*Bachelor Of Technology*, Computer Science and Engineering, June 2010 - June 2014

### PROFESSIONAL ACTIVITIES

**Reviewer:** ECIR'20, SUM@WSDM'20, EMNLP'20, IJCNLP'20, Information Retrieval Journal (IRJ), PLOS ONE (Journal), ECIR'19, ML4H@NIPS'18, ICON'18, DTMBIO@CIKM'18, ML4H@NIPS'17, learn-IR @WSDM'18, Transactions of Data Science

**External Reviewer:** TKDE 2017, CIKM 2017, ICON 2017

**PC Member:** EMNLP'20, ECIR'20, ECIR'19, ML4H@NIPS'18, ICON'18, DTMBIO@CIKM'2018, NIPS 17 ML4H, WSDM-18 learn-IR, afriCHI

**Teaching Assistant:** **Information Retrieval and Extraction, IIIT-H** (under Prof. Vasudeva Varma), **Machine Learning, IIIT-Hyderabad** (under Prof. C.V. Jawahar), **Machine Learning, BITS-Pilani** (under Prof. Navneet Goyal)

### RELEVANT EXPERIENCE

**Flipkart, Bangalore, India**

*Data Scientist, Search Ranking Team*, July 2018 - Current

*Mentor:* Mohit Kumar

Working on Personalized Search and Query Understanding for Flipkart.

**Conduent Labs (erstwhile Xerox Research (XRCI))**, Bangalore, India

*Research Internship*, Jan 2018 - May 2018

*Mentors:* Manjira Sinha & Sandya Mannarswamy

Worked on the problem of Fake News Detection. Proposed a novel Coupled Matrix-Tensor Factorization based solution for the problem. Research paper as a result of the work accepted at ASONAM 2018.

**Tata Research, Design and Development Center**, Pune, India

*Research Internship*, May 2017 - July 2017

*Mentors:* Girish Palshikar, Sachin Pawar & Nitin Ramrakhiyani

Worked on semi-supervised learning based methods for Adverse Drug Reaction (ADR) mention extraction from social media posts. Work led to publications at CIKM'17, NIPS'17 and ECIR'18.

**ParallelDots**, New Delhi, India

*Research Internship*, May 2016 - July 2016

*Mentor:* Muktabh Mayank

Developed an ensemble based deep neural network model for the task of Sentiment Analysis from twitter. Also worked on a content based recommendation system using deep graph embeddings (Under review at a conference).

- JOURNAL PUBLICATIONS** **Semi-Supervised Recurrent Neural Network for Adverse Drug Reaction Mention Extraction**  
Shashank Gupta, Sachin Pawar, Nitin Ramrakhiyani, Girish Keshav Palshikar, Vasudeva Varma  
 BMC Bioinformatics Special Issue (Presented at CIKM 2017)
- CONFERENCE PUBLICATIONS** **Predicting Session Length for Product Search on E-commerce Platform**  
Shashank Gupta, Subhadeep Maji  
 SIGIR 2020, Short Paper.
- On Application of Bayesian Parametric and Non-parametric Models for User Cohorting in Product Search**  
 Shashank Gupta  
 ECNLP@ACL'20
- RARE : A Recurrent Attentive Recommendation Engine for News Aggregators**  
 Vaibhav Kumar, Dhruv Khattar, Shashank Gupta, Manish Gupta, and Vasudeva Varma  
 CIKM 2018, Workshop on News Recommendation and Analytics (INRA 2018)
- A Comparative Study of Embeddings Methods for Hate Speech Detection from Tweets**  
Shashank Gupta, Zeerak Waseem  
 EMNLP 2018 Workshop on Noisy User Generated Text (Accepted as a poster)
- CIMTDetect: A Community Infused Matrix-Tensor Coupled Factorization Based Method for Fake News Detection**  
Shashank Gupta, Raghuveer Thirukovalluru, Manjira Sinha and Sandya Mannarswamy.  
 ASONAM 2018 (Short Paper)
- Multi-Task Learning for Extraction of Adverse Drug Reaction Mentions from Tweets**  
Shashank Gupta, Manish Gupta, Vasudeva Varma, Sachin Pawar, Nitin Ramrakhiyani, Girish Keshav Palshikar  
 ECIR 2018 (Full Paper).
- Multi-Task Learning for Extraction of Adverse Drug Reaction Mentions from Tweets**  
Shashank Gupta, Manish Gupta, Vasudeva Varma, Sachin Pawar, Nitin Ramrakhiyani, Girish Keshav Palshikar  
 NIPS 2017 (Machine Learning for Health Workshop)
- A Co-training Based Method for Extraction of Adverse Drug Reaction Mentions from Tweets**  
Shashank Gupta, Manish Gupta, Vasudeva Varma, Sachin Pawar, Nitin Ramrakhiyani, Girish Keshav Palshikar  
 ECIR 2018 (Short Paper).
- A Co-training Based Method for Extraction of Adverse Drug Reaction Mentions from Tweets**  
Shashank Gupta, Manish Gupta, Vasudeva Varma, Sachin Pawar, Nitin Ramrakhiyani, Girish Keshav Palshikar  
 NIPS 2017 (Machine Learning for Health Workshop).
- TCS Research at TAC 2017: Joint Extraction of Entities and Relations from Drug Labels using an Ensemble of Neural Networks**  
 Sachin Pawar, Nitin Ramrakhiyani, Girish Keshav Palshikar, Shashank Gupta, Vasudeva Varma

TAC 2017 ADR Track

**Semi-Supervised Recurrent Neural Network for Adverse Drug Reaction Mention Extraction**

Shashank Gupta, Sachin Pawar, Nitin Ramrakhiyani, Girish Keshav Palshikar, Vasudeva Varma

CIKM 2017 (11th Workshop on Data and Text Mining in Biomedical informatics)

**Enhancing Categorization of Computer Science Research Papers using Knowledge Bases,**

Shashank Gupta, Priya Radhakrishnan, Manish Gupta, Vasudeva Varma

SIGIR 2017 (Works. on Knowledge Graphs & Semantics for Text Retrieval & Analysis)

**Deep Neural Architectures for News Recommendation,**

Vaibhav Kumar, Dhruv Khattar, Shashank Gupta, Manish Gupta, Vasudeva Varma

Conference and Labs of the Evaluation Forum (CLEF) 2017.

**Simultaneous Inference of User Representations and Trust,**

Shashank Gupta, Pulkit Parikh, Manish Gupta, Vasudeva Varma

Inter. Conf. on Advances in Social Networks Analysis and Mining (ASONAM) 2017

**Deep Learning for Hate Speech Detection in Tweets**

Pinkesh Badjatiya\*, Shashank Gupta\*, Manish Gupta, Vasudeva Varma (**\*Equal Contribution**)(**Best Poster Award**)

Intern. Conf. on World Wide Web Companion (WWW) 2017 (Poster Track)

**Scientific Article Recommendation by using Distributed Representations of Text and Graph**

Shashank Gupta, Vasudeva Varma

Intern. Conf. on World Wide Web Companion (WWW) 2017 (Workshop Track)

**User Profiling based Deep Neural Network for Temporal News Recommendation**

Vaibhav Kumar, Dhruv Khattar, Shashank Gupta, Manish Gupta, and Vasudeva Varma

ICDM 2017 (Workshop Track)

**Word Semantics based 3D Convolutional Neural Networks for News Recommendation**

Vaibhav Kumar, Dhruv Khattar, Shashank Gupta and Vasudeva Varma

ICDM 2017 (Workshop Track)

**UNDER  
REVIEW**

**Pharmacovigilance from Social Media using Limited Labeled Data**

Shashank Gupta (MSc. Thesis Proposal)

**Hybrid Neural Model for News Recommendation**

Vaibhav Kumar, Dhruv Khattar, Shashank Gupta, Manish Gupta, and Vasudeva Varma

**SKILLS  
& TOOLS**

Theano, Tensorflow, PyTorch, Keras, Scikit-Learn

Lucene, ElasticSearch

Python, MATLAB, C, C++, Java

**SELECTED  
PROJECTS**

**Trust-Prediction in Social Network using Optimization based algorithms and Auto-encoders, April 2016 - July 2016**

Worked on the problem of Trust-Prediction amongst users in a social network using linear and Neural-Network based Matrix Factorization methods.

**Sandhan, Cross Lingual Information Access System, Jan 2017 - June 2017**

A multi-institutional project funded by Department of Defence (Govt. of India) where my responsibilities were to contribute to the query processing pipeline which involves development of query translation and transliteration engine to enable cross language search in 9 different Indian Languages.

## AWARD AND ACHIEVE- MENTS

Travel Grant to attend NIPS 2017.  
TCS Research Travel Grant for attending CIKM'17.  
Selected to attend IISC's Winter School on Machine Learning 2015.

Received the **Best Poster Paper Award** at International World Wide Web Conference (**WWW**) **2017**.

Work on Hate Speech Detection got covered in The Hindu, Indian Express and few other leading news outlets. <http://bit.ly/2k9FnFi>

## RELEVANT COURSEWORK

Machine Learning  
Information Retrieval and Extraction  
Topics in Information Retrieval  
Topics in Natural Language Processing  
Digital Image Processing

## TALKS

*Scientific Article Recommendation using Deep Embeddings*, Presented at World Wide Web Conference, Perth, 2017 <http://bit.ly/2nfmhi3>  
*Trust Prediction in Social Network using Deep Neural Networks*, Presented at ASONAM conference, Sydney, 2017 <http://bit.ly/2zzya7CF>  
*Semi-supervised Recurrent Neural Network for Adverse Drug Reaction Mention Extraction from Twitter*, Presented at CIKM Conference, Singapore, 2017 <http://bit.ly/2AHby5Y>  
*Pharmacovigilance from Social Media using Multi-task and Semi-Supervised Learning*, Presented at ECIR Conference, Grenoble, 2018

## INVITED TALKS

*Machine Learning Methods for Mining Adverse Drug Reactions from Social Media*, Presented at DUKE-NUS Medical School, Singapore, 2017  
*Deep Learning Methods for Recommendation Systems*, Presented at Thiagarajar College of Engineering, Madurai  
*Information Retrieval from Social Media*, Presented at Alumni Research Talk (ART), BITS Pilani, Pilani.