

Shashank Gupta

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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, Computer Science and Engineering, June 2015 - Present

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'19, ML4H@NIPS'18, ICON'18, DTMBIO@CIKM'18, ML4H@NIPS'17, learn-IR @WSDM'18, Drug Safety Journal, Transactions of Data Science, afriCHI

External Reviewer: TKDE 2017, CIKM 2017, ICON 2017

PC Member: 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

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**

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, Raghuv eer 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/2zya7CF>

Semi-supervised Recurrent Neural Network for Adverse Drug Reaction Mention Extraction from Twitter, Presented at CIKM Conference, Singapore, 2017 <http://bit.ly/2AHby5Y>

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