

Prachi Jain

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PhD Student

Indian Institute of Technology, Delhi

RESEARCH INTERESTS

Inference in Knowledge Bases: I am keen to build neural models to infer novel facts in a Knowledge Base. I am presently working on following projects:

Neural Models for Inference in Knowledge Base: We work to build deep learning models to make high precision inference on large Knowledge Bases. (IJCAI 2018, ACL 2018, EMNLP 2020).

Non-Neural: Building High precision Inference rule corpus: We are working on algorithms that use linguistic insights to build high precision inference rule corpus. (NAACL HLT 2016)

EDUCATION

Ph.D. (Computer Science and Engineering) July 2014 – Present
Area: Natural Language Processing, Deep Learning
Advisor: Dr Mausam, Professor IIT Delhi
Dr Soumen Chakrabarti, Professor IIT Bombay
Indian Institute of Technology, Delhi
CGPA : 8.7/10

M.Tech. (Computer Science and Engineering) August 2011 - December 2013
Specialization: Information Security
Advisor: Dr Ponnurangam Kumaraguru, Assistant Professor IIIT Delhi
Indraprastha Institute of Information Technology, Delhi
CGPA : 9.75/10

B.Tech (Hons.) (Computer Science and Engineering) July 2007 - August 2011
Maharashi Dayanand University, Haryana
Cumulative Aggregate : 80.1%

EXPERIENCE

Facebook, London: Research Intern August 2018 – October 2018

- Guide: Dr Daniel Bennett.
- Internationalized models for malicious account detection.

Alcatel-Lucent (Bell Labs), Dublin: Research Intern June 2013 – July 2013

- Guide: Dr Alessandra Sala, Research Scientist Alcatel-Lucent Dublin.
- Handling and Analyzing huge Hive datasets from a leading Telecom Provider.

University Of Southern California, Los Angeles: Research Intern May 2012 – July 2012

- Guide: Dr Kristina Lerman, Project Leader ISI USC.

IIT Delhi: Research Associate January 2014 – April 2014

- Guide: Prof Mausam, Associate Professor IIT Delhi.

IIIT Delhi: Research Assistant January 2013 – May 2013

- Guide: Dr Ponnurangam Kumaraguru, Assistant Professor IIIT Delhi.

Teaching Assistant August 2011 – present

- IIT Delhi: Machine Learning, Artificial Intelligence, Learning Probabilistic Graphical Model, Natural Language Processing (basic and advanced level)
- IIIT Delhi: Mobile Computing, Computer Networks, Digital Electronics.

PreCog Group at IIIT Delhi: Student Researcher January 2012 – December 2013

PUBLICATIONS

- Harkanwar Singh, Soumen Chakrabarti, Prachi Jain, Sharod Roy Choudhury, Mausam. Multilingual Knowledge Graph Completion With Joint Relation and Entity Alignment. Automated Knowledge Base Construction (AKBC). Online. October 2021.
- Prachi Jain, Sushant Rathi, Mausam, Soumen Chakrabarti. Knowledge Base Completion: Baseline strikes back (Again). Under submission (2020).
- Prachi Jain, Sushant Rathi, Mausam, Soumen Chakrabarti. Temporal Knowledge Base Completion: New Algorithms and Evaluation Protocols. Proceedings of EMNLP 2020.(Acceptance Rate – 24%)
- Prachi Jain, Pankaj Kumar, Mausam, Soumen Chakrabarti. Type-Sensitive Knowledge Base Inference Without Explicit Type Supervision. Proceedings of ACL. 2018. (Acceptance Rate – 24%)
- Prachi Jain, Shikhar Murty, Mausam, Soumen Chakrabarti. Mitigating the Effect of Out-of-Vocabulary Entity Pairs in Matrix Factorization for KB Inference. Proceedings of IJCAI. 2018. (Acceptance Rate: 20%)
- Prachi Jain, Mausam. Knowledge Guided Linguistic Rewrites for Inference Rule Verification. Proceedings of NAACL-HLT. 2016. (Acceptance rate – 29%)
- Prachi Jain. Call Me MayBe: Understanding Nature and Risks of Sharing Mobile Numbers on Online Social Networks. IIIT Delhi Master’s thesis, 2013.
- Prachi Jain, Paridhi Jain, Ponnurangam Kumaraguru. Call Me MayBe: Understanding Nature and Risks of Sharing Mobile Numbers on Online Social Networks. Proceedings of the first ACM conference on Online social networks. ACM, 2013.(Acceptance rate – 15.9%)
- Kristina Lerman, Prachi Jain, Rumi Ghosh, Jeon-Hyung Kang, Ponnurangam Kumaraguru. Limited Attention and Centrality in Social Networks. Social Intelligence and Technology (SOCIETY), 2013 International Conference on. IEEE, 2013.

COMMUNITY SERVICE

- Reviewer EMNLP (2018-2021), ACL 2021, NeurIPS (2019, 2021), AAAI (2019-2021), IJCAI 2020, AKBC (2020-2021), ICML 2020, ICLR 2021.

AWARDS

- Received SAP Grant for attending the 7th Heidelberg Laureate Forum (2019), Heidelberg, Germany.
- Received student travel grant for attending the Deep Learning and Reinforcement Learning School (2019), Edmonton, Canada.
- Received Google Research travel grant and ACL Student travel grant for attending ACL 2018, Melbourne, Australia.
- Received Microsoft Research travel grant and IJCAI Student travel grant for attending IJCAI 2018, Sweden.
- Received Microsoft Research travel grant and Xerox Research travel grant for attending NAACL 2016, San Diego.
- Awarded Tata Consultancy Services PhD Fellowship for duration of 4 years from 2016.
- Received Google grant for attending the Lisbon Machine Learning School (LxMLS 2015), Portugal.

- Received *best project award* in Graduate course on Natural Language Processing (NLP) at IIT Delhi. Project name – TweetIE: Extracting Relations from Twitter.
- Received ACM COSN Student travel grant to attend COSN 2013, Boston.
- Selected for Lisbon Machine Learning School (LxMLS 2015), Portugal.
- Selected for IBM Winter School 2013.
- Selected for the prestigious Viterbi India Research program 2012, to do funded research internship at USC, Los Angeles, CA.
- Full tuition fee waiver for Masters studies at IIIT Delhi (2011)
- Scholarship for securing 3rd position in B.Tech program.

TECHNICAL SKILLS

Languages & Tools: Python, machine learning tools (pytorch, scikit-learn), Git

RELEVANT COURSE WORK

- Advance Natural Language Processing (*IIT Delhi*)
- Natural Language Processing (*IIT Delhi*)
- Probabilistic Graphical Models (*IIT Delhi*)
- Special Topics in Numerical Algorithm (*IIT Delhi*)
- Machine Learning (*IIT Delhi*)
- Information Retrieval (*IIIT Delhi*)

REFERENCES

- Prof. Mausam, (*IIT Delhi*)
- Prof. Soumen Chakrabarti (*IIT Bombay*)
- Prof. Ponnurangam Kumaraguru (*IIIT Hyderabad*)