Kolluru Sai Keshav

www.cse.iitd.ac.in/~kskeshav keshav.kolluru@gmail.com

Research Interests

Open Information Extraction, Multi-Hop Question Answering, Probing NLP Architecures

Education

2017 - Present	PhD in **Computer Science and Engineering.** **Indian Institute of Technology, Delhi.** Supervisors: Prof. Mausam (IIT Delhi), Prof. Soumen Chakrabarti (IIT Bombay) CGPA: **9.25/10**
2013 - 2017	Undergraduate Degree in **Computer Science and Engineering.** **Indian Institute of Technology, Bhubaneswar.** CGPA: **9.78/10**
2011 - 2013	Intermediate Education at Mahathi Junior College, Visakhapatnam. Board of Intemediate Education, Andhra Pradesh, India. Final Grade: **96.5%**

Publications

- **Keshav Kolluru**, Muqeeth Mohammed, Shubham Mittal, Mausam, Soumen Chakrabarti, *Consistent Crosslingual Data Transfer for Open Information Extraction*, Under Review
- **Keshav Kolluru**, Mayank Singh Chauhan, Yatin Nandwani, Parag Singla, Mausam, *CEAR: Cross-Entity Aware Reranker for Knowledge Base Completion*, Under Review
- **Keshav Kolluru**, Martin Rezk, Pat Verga, William Cohen, and Partha Talukdar, *Multilingual Fact Linking*, AKBC 2021.
- **Keshav Kolluru**, Vaibhav Adlakha, Samarth Aggarwal, Mausam, Soumen Chakrabarti, *OpenIE6: Iterative Grid Labeling and Coordination Analysis for Open Information Extraction*, EMNLP 2020
- **Keshav Kolluru**, Samarth Aggarwal, Vipul Rathore, Mausam, Soumen Chakrabarti, *IMOJIE: Iterative Memory-Based Joint Open Information Extraction*, ACL 2020
- Pratyush Maini, **Keshav Kolluru**, Danish Pruthi, Mausam, *Why and when should you pool? Analyzing Pooling in Recurrent Architectures*, Findings of EMNLP 2020
- S. Sukumaran, M. Satpathy, **Keshav Kolluru**, R.Mall, *Inferring State Models using Feedback Directed Random Testing*, Asia-Pacific Software Engineering Conference (APSEC) 2015
- **Keshav Kolluru**, Prasenjit Mukherjee, *Query Clustering using Segment Specific Context Embedding*, Preprint arXiv:1608.01247

Work Experience

Google AI Research Spring 2021

Visiting Student Researcher, Banaglore

Developed the first benchmark and models for linking multilingual text to the WikiData Knowledge Graph. With a particular focus on Indian languages, we released the *IndicLink* benchmark that contains annotated data over 6 Indian languages.

IBM Research Summer 2017

Research Intern, New Delhi

Worked on integrating concept flows in neural dialog systems - where a dialog can be seen as a linear flow of latent-concepts. Using graph clustering to identify the concepts, we trained

an end-to-end LSTM network to identify the concepts and predict the words in the concept given the concept-chain so far.

Microsoft (Bing) SUMMER 2016
Data Science Intern, Hyderabad
Worked on automatic discovery of important search-topics based on the queries received by Bing. Developed a scalable embedding method for search strings by extending Word2Vec for the retrieved snippets and perform search-query clustering.

PROJECTS

PHD

Evidence aggregation for Open-Domain Question Answering 2018
Devised a new pooling technique, AbsMaxPool, that can efficiently integrate knowledge retrieved from a large corpora for answering complex science questions

Question-Answering on Semi-Structured Context 2017
Developed Multi-Instance Learning techniques for predicting SQL-type logical forms for Question - Answering on WikiTableQuestions dataset

BTECH

Predicting the Effect of Forces in Images Prof. Chitta Baral, Arizona State University
Developed a novel model to predict the effect of forces on objects in 2D images by integrating classical physics equations into CNNs

A Scalable Architecture for Visual Question Answering (VQA)
Developed a VQA architecture consisting of a high-level interplay between the NLP and CV modules which won the *IBM-ICARE Watson Cognitive Challenge*

Verification of Synchronous Programs Dr. Partha Roop, University of Auckland
Developed a black-box method for verifying functional properties and timing constraints of synchronous programs

SCHOLASTIC ACHIEVEMENTS

Institute Rank (IR) and Departmental Rank (DR) 2 in the batch 2013-2017 of IIT Bhubaneswar.
Won the **best BTech thesis award** in Computer Science of IIT Bhubaneswar
Qualified among the top 0.5% of the students (about 15,00,000) appeared for JEE(2013)

TEACHING AND PROFESSIONAL SERVICES

Teaching Assistant for ML, AI, NLP (Best TA Award) courses at IIT Delhi
Reviewed submissions to EMNLP 2021
Co-Reviewed submissions to ICML 2020, NeurIPS 2019, EMNLP-IJCNLP 2019
Nominated to attend Amazon Research Days 2018, Microsoft Academic Summit 2018.

TECHNICAL SKILLS

Courses *(IIT Delhi)* Deep Learning, Natural Language Processing, Machine Learning, Computer Vision, Deep Reinforcement Learning *(IIT Bbs)* Pattern Recognition, Soft Computing
Libraries (Advanced) PyTorch (Basic) Tensorflow, Dynet, Theano