

Ph.D. CANDIDATE · COMPUTER SCIENCE · UNIVERSITY OF ILLINOIS, CHICAGO

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Education

University of Illinois, Chicago

Chicago, IL

Fall 2018 - December 2025 (Expected)

University of Illinois, Chicago

Chicago, IL

M.S. IN COMPUTER SCIENCE

Ph.D. IN COMPUTER SCIENCE

May 2024

Birla Institute of Technology and Science

Pilani, India

B.E. (HONS) IN COMPUTER SCIENCE

Aug 2012 - May 2016

Research Summary & Interests

My research primarily focuses on advancing the downstream applications of Keyphrase Generation and Stance Detection. I am currently investigating innovative methods to integrate graph structures, such as **knowledge graphs** and **citation networks** encoded through **Graph Neural Networks (GNNs)**, into Large Language Models (LLMs) to enhance performance in various **NLP tasks**. Additionally, I am deeply interested in exploring the **explainability**, **robustness**, and **calibration** of deep learning models to improve their reliability and interpretability.

Publications

- Krishna Garg*, Firoz Shaikh*, Sambaran Bandyopadhyay, Cornelia Caragea. Let's Use ChatGPT to Write Our Paper! Benchmarking LLMs to Write the Introduction of a Research Paper. 2025. Under Review.
- Krishna Garg, Sambaran Bandyopadhyay. Intent-based Summarization with Graph Prompt Learning. 2024. Patent under Review.
- Krishna Garg, and Cornelia Caragea. Target-Aware Transformer for Stance Detection. 2024. In Findings of the Association for Computational Linguistics: EMNLP 2024, Miami, Florida.
- Krishna Garg*, Yingjie Li*, ¹, and Cornelia Caragea. 2023. A New Direction in Stance Detection: Target-Stance Extraction in the Wild. In Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics, Toronto, Canada.
- Krishna Garg, Jishnu Ray Chowdhury, and Cornelia Caragea. 2023. Data Augmentation for Low-Resource Keyphrase Generation. In Findings of the Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics, Toronto, Canada.
- Krishna Garg, Jishnu Ray Chowdhury, and Cornelia Caragea. 2022. Keyphrase Generation Beyond the Boundaries of Title and Abstract. In Findings of the Association for Computational Linguistics: EMNLP 2022, pages 5809–5821, Abu Dhabi, United Arab Emirates. Association for Computational Linguistics.

Work Experience

Adobe Research Bengaluru, India

PhD Research Intern

May 2024 - Aug 2024

- $\bullet \ \ \, \text{Topic: Intent-based Summarization with Graph Prompt Learning (GNN+LLM+NLP space)}\\$
- Proposed Introduction and Related-Works Generation tasks for scientific papers, with the novel Latent Diffusion Models-based architecture
- Patent under submission

May 30, 2025 Krishna Garg · CV

^{1*} denotes equal contribution

AndroidOS Developer | AudioFramework Engineer July 2016 - May 2018

- Bringup of new Samsung smartphone models
- · Contributions to Samsung propreitary software at Framework and Hardware Abstraction layers of Android Architecture
- Contributions in CarMode feature implementation for Samsung smartphones
- Development of new debugging tool in JAVA combining the debugging tool Elfa and the code browsing engine OpenGrok
- Advanced level certification in coding skills by Samsung Korea HQ

Central Public Works Department

Mussoorie, India

SOFTWARE INTERN | TEAM LEAD May 2014 - July 2014

- Development of Billing and Accounting Software in JAVA that replaced accounting on excel sheets
- Development of android application CivilCalculator to enable civil engineers to calculate raw materials on construction sites
- · Professional Recognition and Certificate of Excellence from executive engineer Mr. Hitesh Kejriwal

Research Experience _____

Graduate Research Assistant | Prof. Cornelia Caragea

· Keyphrase Generation, Stance Detection, Explainability, Robustness, Semi-Supervised Learning

May 21 - PRESENT

- Papers accepted at EMNLP 2024, ACL 2023, EMNLP 2022
- Also explored Text Generation, Summarization, Text-Style Transfer 🔾, Neural Machine Translation 🔾

Graduate Research Assistant | Prof. Sathya Ravi

UIC

 Few-Shot Learning • Meta-Learning with Fairness Constraints

• optim-meta: Benchmarking meta-learning algorithms 🗘 🚨

Jan 2020 - Dec 2020

Bachelor Thesis | Prof. Virendra S. Shekhawat

BITS Pilani

• Title: Multi-path Routing Algorithm for Intra-domain Routing in Network Simulator-3

Aug 2015 - Dec 2015

• Open source code contributions to IPv4RoutingProtocol in NS-3

Teaching Experience

GRADUATE TEACHING ASSISTANT

UIC Fall '18, Spring '20, Fall '23, Spring '24

Fall '24

- CS 341: Programming Language Design and Implementation
- HEAD TA for CS 341
- CS 362: Computer Design

• CS 111: Program Design I (Legal & Public Policy Section included)

• CS 251: Data Structures

• CS 480: Database Systems

Spring '21, Spring '25

Fall '19, Spring '23

Fall '22

Summer '22 Fall '19

Relevant Coursework

• CS 476: Programming Language Design

CS 412: Intro to Machine Learning ()	UIC
CS 559: Neural Networks • • • • • • • • • • • • • • • • • • •	UIC
CS 594: Language and Vision	UIC
CS 415: Computer Vision I	UIC
ECE 594: Convex Optimization	UIC
CS 594: Learning and Optimization in Vision	UIC
CS 401: Computer Algorithms I	UIC
MATH 320: Linear Algebra	UIC
Pytorch for Deep learning and Computer Vision	Udemy
Deep Learning Specialization	Coursera
IBM Data Science Specialization	Coursera

Other Projects_

Disaster-Related Tweet Classification | | | | | |



• BERT-based models for classification of Tweets to facilitate disaster management

Hand Gesture Recognition • 🗘

• Using OpenCV2 library and Deep Learning based methods

Visual Dialog: A Survey

• Survey paper on recent advances in Visual Dialog task

Travello 🗘 🖟

• Extracting Addresses from Unstructured Text (e.g. restaurant blogs) using Deep Learning Models like LSTM & BERT

• PyTorch-based project to train a classifier to recognize entities like person, geographical entity, event, location, etc.

Skills

Programming Python

DevOps AWS, Bash scripting, Kubernetes

Machine Learning Pytorch, Tensorflow, LLM

Version Control Git, Perforce

Operating System MacOS, Ubuntu, Windows

Languages English, Hindi

Achievements

2018 Recipient of the GSC Travel Award (\$500) UIC

Recipient of the Peter and Deborah Wexler Graduate Scholarship (\$5000) UIC

2012-2016 Recipient of Merit Cum Need Scholarship (25% Fee Waiver) BITS Pilani

2012 Ranked 6364/400k+, 5962/1.2m+, 13/135k+ in national entrance exams IIT-JEE, AIEEE, BITSAT India

Invited Talks_____

Keyphrase Generation: Redefining Data Science with NLP Applications | CS 418: Intro to Data Science

UI

2022 DPI Research Scholars Workshop: Graduate School Prep and Planning UIC

Services_

Reviewer: ACL 2023, EMNLP 2023, NAACL 2024

Volunteer: ACL 2023, EMNLP 2022

2023 Program Committee Member, EMNLP Industry Track

2023-2024 Executive Committee Member, Senate

2023-2024 Member, Committee on Budget, Planning, and Priorities

2022-2023 Representative of CS Dept in Graduate Student Council

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