Krishna **Garg**

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

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Education

University of Illinois, Chicago   *Chicago, IL*

PH.D. IN COMPUTER SCIENCE   [CGPA: 3.81/ 4.00]   *Fall 2018 - Exp. May. 2024*

Birla Institute of Technology and Science   *Pilani, India*

B.E. (HONS) IN COMPUTER SCIENCE   [CGPA: 7.25/ 10.00]   *Aug 2012 - May 2016*

Research Interests

Natural Language Processing, Deep Learning

Publications

- Krishna Garg, and Cornelia Caragea. Target-Aware Transformer for Stance Detection. Under Preparation.

- Yingjie Li*, Krishna Garg*, [1], and Cornelia Caragea. 2023. A New Direction in Stance Detection: Target-Stance Extraction in the Wild. To appear at the 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. To appear at the 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. ⬡ 📄

Research Experience

Graduate Research Assistant | Prof. Cornelia Caragea   *UIC*
- Keyphrase Generation, Stance Detection, Explainability, Robustness, Semi-Supervised Learning   *May 21 - PRESENT*
- Papers accepted at 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 📄   *Jan 2020 - Dec 2020*
- Meta-Learning with Fairness Constraints 📄
- optim-meta: Benchmarking meta-learning algorithms ⬡ 📄

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

Work Experience

Samsung Research Institute   *Noida, India*

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

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[1]* denotes equal contribution

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

Teaching Experience

Spring '23	**Graduate Teaching Assistant**, CS 111: Programming Design I	*UIC*
Fall '22	**Graduate Teaching Assistant**, CS 251: Data Structures	*UIC*
Sum '22	**Graduate Teaching Assistant**, CS 480: Database Systems	*UIC*
Spring '21	**Graduate Teaching Assistant**, CS 362: Computer Design	*UIC*
Spring '20	**Graduate Teaching Assistant**, CS 341: Programming Language Design and Implementation	*UIC*
Fall '19	**Graduate Teaching Assistant**, CS 476: Programming Language Design	*UIC*
Fall '19	**Graduate Teaching Assistant**, CS 111: Program Design I, Legal and Public Policy Themes Section	*UIC*
Fall '18	**Graduate Teaching Assistant**, CS 341: Programming Language Design and Implementation	*UIC*

Relevant Coursework

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

Named Entity Recognition ⦿

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

Skills

Programming	Python
DevOps	AWS, Bash scripting
Machine Learning	Pytorch, Tensorflow
Version Control	Git, Perforce
Operating System	MacOS, Ubuntu, Windows
Languages	English, Hindi

Achievements

2018	**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

Services

Reviewer, ACL 2023

Volunteer, EMNLP 2022

Extracurricular Activity

Graduate Student Council _UIC_

CS Department Representative _2022-2023_

Google Developers Group _BITS Pilani_

Event Coordinator _2013_

Organized 3-days long GDG fest including Android Codelab sessions, Google Maps-based Treasure Hunt, guest lectures, Google Social Hackathon (100+ developers), Informative Session on GSoC (300+ enthusiasts)

National Service Scheme _BITS Pilani_

Volunteer _2013_