Kundan Krishna

PhD student, Language Technologies Institute, CMU

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Basic Information

Mailing Address   GHC-5515 (LTI), 5000 Forbes Avenue, Pittsburgh, PA-15213

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Research Interests

- Text summarization, understanding pretraining, natural language generation

Education

PhD in Language and Information Technologies   *August 2018 - present*

CARNEGIE MELLON UNIVERSITY   *Pittsburgh, Pennsylvania*

- Advisors: Professor Zachary C. Lipton and Professor Jeffrey Bigham
- CGPA: 3.93/4.0

B.Tech. in Computer Science and Engineering   *July 2012 - June 2016*

INDIAN INSTITUTE OF TECHNOLOGY KANPUR   *Kanpur, India*

- CPI: 9.9/10

Professional Experience

Applied Scientist Intern   *May 2020 - Aug 2020*

AMAZON ALEXA AI

- Worked on improving entity linking for video entities requested via Alexa.
- Implemented and improved a vector search based method delivering over 20% improvement in accuracy.

Research Engineer   *June 2016 - July 2018*

ADOBE RESEARCH, INDIA

- Identified potential applications of machine learning in Adobe's products.
- Designed models and algorithms and implemented research prototypes.

Publications

- **Does Pretraining for Summarization Require Knowledge Transfer?**. Kundan Krishna, Jeffrey Bigham, Zachary Lipton. *Conference on Empirical Methods in Natural Language Processing (EMNLP): Findings, 2021*
- **Generating SOAP Notes from Doctor-Patient Conversations Using Modular Summarization Techniques**. Kundan Krishna, Sopan Khosla, Jeffrey Bigham, Zachary Lipton. *Annual Meeting of the Association for Computational Linguistics (ACL) , 2021*
- **Extracting Structured Data from Physician-Patient Conversations By Predicting Noteworthy Utterances**. Kundan Krishna, Amy Pavel, Benjamin Schloss, Jeffrey Bigham, Zachary Lipton. *International Workshop on Health Intelligence at AAAI 2020*
- **Generating topic-oriented summaries using neural attention**. Kundan Krishna, Balaji V. Srinivasan. *Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), 2018*
- **Vocabulary Tailored Summary Generation**. Kundan Krishna, Aniket Murhekar, Saumitra Sharma, Balaji V. Srinivasan. *International Conference on Computational Linguistics (COLING), 2018*
- **An LSTM based method for prediction of human activities with durations**. Kundan Krishna*, Deepali Jain*, Sanket Mehta, Sunav Choudhary. *UbiComp 2018*

- **CCC: Corpus based Content Creation**. Balaji V. Srinivasan, Pranav R. Maneriker, Kundan Krishna, Natwar Modani. *International Conference on Computational Linguistics (COLING), 2018*
- **Reinforced rewards framework for text style transfer**. Abhilasha Sancheti, Kundan Krishna, Balaji Vasan Srinivasan, Anandhavelu Natarajan. *Advances in Information Retrieval, 2020*
- **ARComposer: Authoring Augmented Reality Experiences through Text**. Sumit Shekhar, Paridhi Maheshwari, Amrit Singhal, Kush Kumar Singh, Kundan Krishna. *ACM Symposium on User Interface Software and Technology (UIST), 2019*

Patents

- Kundan Krishna, Balaji Vasan Srinivasan. **Generating a topic-based summary of textual content**. *US Patent 10685050*
- Saumitra Sharma, Kundan Krishna, Balaji Vasan Srinivasan, Aniket Murhekar . **Generating a Targeted Summary of Textual Content Tuned to a Target Audience Vocabulary**. *US Patent 10534854*
- Balaji Vasan Srinivasan, Pranav R. Maneriker, Kundan Krishna, Shiv Kumar Saini, Cedric Huesler. **Bundling online content fragments for presentation based on content-specific metrics and inter-content constraints**. *US Patent 10891667*
- Balaji Vasan Srinivasan, Pranav Ravindra Maneriker, Kundan Krishna, Natwar Modani. **Constructing content based on multi-sentence compression of source content**. *US Patent 10949452*
- Sumit Shekhar, Paridhi Maheshwari, J Monisha, Kundan Krishna, Amrit Singhal, Kush Kumar Singh. **Visualizing natural language through 3D scenes in augmented reality**. *US Patent 10665030*

Honors & Awards

2014-2016	**Academic Excellence Award** for 3 consecutive years for outstanding academic performance	*IIT Kanpur*
2014	**Dr. Elizabeth and Varkey Cherian Award for best research project** in the Summer Undergraduate Research Grant for Excellence(SURGE) program (jointly awarded to 2 out of 43 total research projects)	*IIT Kanpur*