



Talk Title: “*Understanding how machines understand us: A perspective on Natural Language Generation*”

Abstract: How to make machines understand us would be one of the most fascinating questions a few decades ago (and it still probably is!) but at least we now know how to go about answering it – thanks to the enormous advancement the field of Natural Language Processing (*a.k.a.* Computational Linguistics) has undergone.

Natural Language Processing (NLP) is the field of research concerned with endowing computers with language ability- of understanding and generating language. The ever-proliferating amount of information on the web has necessitated more sophisticated methods of data analysis and retrieval, especially when data is in textual form. Moreover, from the scientific objective of enabling machines to mimic human behavior to building “applications for a better tomorrow” (viz. as chatbots, recommenders, translators), that can process, understand and generate human language content, the importance of the research is hard to miss.

In this talk we will briefly cover theories, methods, and challenges in Natural Language Processing and Generation. Our discussion will revolve around two popular, yet difficult generation tasks of: (a) Generation of natural descriptions from structured data, and (b) Persuasive text generation in fashion domain.

About the speaker:

Abhijit Mishra is currently a part of IBM Research AI, Bangalore, India, serving as Research Scientist in the division of AI-Tech. He is involved in multiple projects based on Natural Language Generation (NLG), viz. (1) Controllable Text Transformation (2) Structured Data Summarization, and (3) Devising evaluation metrics for quality estimation of NLG Output.

Prior to joining IBM Research, Abhijit was a Ph.D. student in the Department of Computer Science and Engineering, Indian Institute of Technology Bombay (graduated in 2017). He was advised by Prof. Pushpak Bhattacharyya, one of the eminent figures in NLP research & development activities in India and the world, for his research work on Cognitive NLP which aims to- (i) uncover the cognitive underpinning of

human language processing and (ii) translate the insights into better language processing systems.

Since 2013, Abhijit's works have been consistently getting published in the proceedings of prestigious NLP/AI conferences such as ACL, AAAI, and WWW. During his Ph.D., he received the IBM Ph.D. Fellowship award for the academic year of 2015-2016.

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