Computer Science
Seminar

Toward Robust Abstractive Multi-Document Summarization and Information Consolidation

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Abstract: Humans can consolidate textual information from multiple sources and organize the content into a coherent summary. Can machines be taught to do the same? The most important obstacles facing multi-document summarization include excessive redundancy in source content, less-understood sentence fusion and the looming shortage of training data. In this talk, I will present our recent work tackling these issues through decoupling of content selection and surface realization. I will describe a lightly-supervised optimization framework using determinantal point processes (DPP) for content selection. I will further present a new method leveraging DPP to select self-contained summary segments to be highlighted on the source documents to make it easier for users to navigate through a large amount of text. Finally, I will discuss challenges and opportunities for driving forward research on abstractive multi-document summarization. ¡br¿¡br¿

Biography: Dr. Fei Liu is an associate professor of Computer Science at the University of Central Florida, where she leads the Natural Language Processing Group. Her research areas are natural language processing and machine learning, with a special emphasis on automatic summarization. Her research aims to generate summaries from a massive amount of textual data to combat information overload. Building on recent advances in deep learning, Dr. Liu's research explores both extractive and abstractive approaches to produce informative, succinct and accurate summaries. Dr. Liu was a postdoctoral fellow at Carnegie Mellon University, member of Noah's ARK. She worked as a senior scientist at Bosch Research, Palo Alto, California, one of the largest German companies building intelligent car systems and home appliances. Liu received her Ph.D. in Computer Science from the University of Texas at Dallas, supported by Erik Jonsson Distinguished Research Fellowship. She obtained her Bachelor and Master's degrees in Computer Science from Fudan University. Dr. Liu has published 60+ peer-reviewed papers in leading conferences and journals. She regularly serves on program committees of major international conferences. Liu was selected for the 2015 "MIT Rising Stars in EECS" program. Her work was nominated as Best Paper Award Finalist at WWW 2016 and Area Chair Favorite Paper at COLING 2018.

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