

Deep Approaches to Semantic Text Matching

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Abstract

Semantic matching is critical in many text applications, including paraphrase identification, information retrieval, and question answering. A variety of machine learning techniques have been developed for various semantic matching tasks, referred to as “learning to match”. Recently, deep learning approaches have shown their effectiveness in this area, and a number of methods have been proposed. In this talk, I will discuss the deep solutions to semantic matching from the aspects of the word and the sentence. At the word-level matching, I will discuss the distributed word representations that bridge the semantic gap between different words. At the sentence-level matching, I will discuss the matching methods that capture the proximity and text matching patterns. Potential applications and future directions of semantic text matching will also be discussed.

Bio

Dr. Jun Xu received his Ph.D. in Computer Science from Nankai University, China, in 2006. After that, he worked as an associate researcher, researcher, and senior researcher at Microsoft Research Asia and Huawei Noah’s Ark Lab. In 2014, he joined Institute of Computing Technology, Chinese Academy of Sciences. Jun Xu’s research interests focus on applying machine learning to information retrieval. He has about 40 papers at top international journals and conferences, including TOIS, JMLR, SIGIR, WWW etc. He has also been active in the research communities and served or is serving the top conferences and journals. For example, in 2017, he was the Senior PCs/Area Chairs of SIGIR ’17 and ACML 2017; PC members of KDD ’17, NIPS ’17, CIKM ’17, and WSDM ’17; reviewers of TOIS, JMLR, and TKDE etc.

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