



Natural language processing: state of the art, current trends and challenges

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Abstract

Natural language processing (NLP) has recently gained much attention for representing and analyzing human language computationally. It has spread its applications in various fields such as machine translation, email spam detection, information extraction, summarization, medical, and question answering etc. In this paper, we first distinguish four phases by discussing different levels of NLP and components of Natural Language Generation followed by presenting the history and evolution of NLP. We then discuss in detail the state of the art presenting the various applications of NLP, current trends, and challenges. Finally, we present a discussion on some available datasets, models, and evaluation metrics in NLP.

Keywords Natural language processing · Natural language understanding · Natural language generation · NLP applications · NLP evaluation metrics

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