Using Recursive Neural Networks to Improve Natural Language Parsing

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Abstract

The proposed paper aims to give a brief introduction about the current advances in the field of Natural Language Parsing. Compare the state of the art parsing technique with a parser that uses Recursive Neural Network on top of a Probabilistic Context-Free Grammars parser to achieve better performance.

1 Introduction

Natural language Parsing is a preliminary step to any serious NLP research to be able to understand the meaning of sentences you have to first divide them into sentence part. The approach to be examined by the proposed paper is trying to combine the abilities of the PCFGs to categorize the sentence parts (NP, PP , VP,...) and the abilities of the RNNs to capture the syntactic syntactic and compositional-semantic information from the sentence. This combination is said to improve the overall performance of the parsing process by adding more information improve the categorization of the sentence parts.

Paper Outline The proposed paper will be structured as following:

- Introduction
- Detailed explanation of the Compositional Vector Grammars approach
- Brief summary of other state-of-art parsing technique
- Performance comparison
- Discussion and Remarks
- Conclusion
- References