Universität Hamburg
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Using Neural Network for Improving parsing

Seminar Paper

Neural Networks

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Abstract

Natural language parsing is the analysis of text to produce the structure of sentences, and dividing it to different parts of speech usually in the form of a parsing tree. This paper aims to give a brief overview of the different parsing technique found in literature, discuss in depth a new parsing technique that benefits from the syntactic and semantic of sentences to improve performance, show experimental results against state of art parsing techniques, and offer a discussion of the results and the performance of the technique and showing other applications of this technique applied in more advanced language processing areas of research.

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1 Introduction

Parsing is the grammatical analysis of text in order to divide it's symbol into grammatical parts **??**. Parsing is one of the most fundamental tasks in computer science. It is a preliminary task to other more sophisticated tasks, for example compilers usually begins by parsing the source code to symbols tables before it begin to generate machine code. Several techniques have been developed to optimize the performance and improve the output of a parser.

In Natural language processing parsing aims to analyze a text input and assign each word in it to it's part of speech (noun phrase, verb phrase, etc. . .).

2 Overview of Natural Language Parsing

2.1 Top-down parsers

2.2 Bottom-down parsers

2.3 Statistical parsing

3 Parsing with Compositional Vector Grammars

4 Experimental results for Classification and recognition

5 Criticism & Discussion

6 Conclusion