A study on the Relationship between language Interpretation and Automata theory based on the paper "Syntactic analysis employing automata theory"

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Abstract:

The paper highlights the underlying relationship between language interpretation and automata theory. It discusses how language analysis in computer science is based on a vast knowledge base for compiler construction and provides efficient methods to determine the acceptance of a programming language at a lexical, syntactic, or semantic level. The proposed lexical and syntactic analysis model is based on automata theory, explicitly utilizing a pushdown automaton to recognize a context-free language.

We will discuss how this approach avoids additional elements often used in bottom-up parsers, emphasizing the connection between language interpretation and automata theory.

We will analyze the model presented in the paper and its possible applications. We will analyze the aim of this model and discuss how the lexical and syntactic analysis is performed.

We will discuss the usability of this model and compare it with other parsing methods.

At the end, we will present our conclusions on the relationship between language interpretation and automata theory and the usability of this model.