Automata Theory Tutorial

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**Automata Theory** is a branch of computer science that deals with designing abstract selfpropelled computing devices that follow a predetermined sequence of operations automatically. An automaton with a finite number of states is called a **Finite Automaton**. This is a brief and concise tutorial that introduces the fundamental concepts of Finite Automata, Regular Languages, and Pushdown Automata before moving onto Turing machines and Decidability.

Audience

This tutorial has been prepared for students pursuing a degree in any information technology or computer science related field. It attempts to help students grasp the essential concepts involved in automata theory.

Prerequisites

This tutorial has a good balance between theory and mathematical rigor. The readers are expected to have a basic understanding of discrete mathematical structures.