CSCI 301 - Lecture 31 : Church - Turing Thesis Computability

The Church - Turing Thesis Any model of algorithmic computation is than a Tring Machine. no more powerful



 $\lambda$ 

Idea: Leasian problems about machines:  

$$L = \{(M, w): M \text{ accepts } w\}$$
Detail: waits (M, w) isn't a string!  

$$\langle M, w \rangle : \text{ string representation of } (M, w)$$

$$\begin{aligned} Decidade? \\ L_{DFA} &= \left\{ (M_{DFA}, w) : M accepts w \right\} & Y \\ L_{NFA} &= \left\{ (M_{NFA}, w) : M accepts w \right\} & Y \\ L_{PDA} &= PDA \Rightarrow CFG \Rightarrow CNF \Rightarrow PDA(CNF) & Y! \\ L_{TM} & N \end{aligned}$$