CPSC 421/501 Oct 4, 2024

- Last time: $\begin{cases} 2a^3, a^5 \\ a^3, a^5, a^5, a^5, a^6, a^8, a^8 \\ a^3, a^5, a^5, a^6, a^8, a^8 \\ a^3, a^5, a^5, a^5, a^6, a^8 \\ a^3, a^5, a^5, a^6, a^8, a^8 \\ a^3, a^5, a^5, a^6, a^8 \\ a^3, a^6, a^6, a^6 \\ a^3, a^6, a^6, a^6 \\ a^3, a^6 \\ a^5, a^6 \\ a^6$ $\left(\begin{bmatrix} \mathbf{x} & \mathbf{y} & \mathbf{y} \\ \mathbf{y} \mathbf{y} \\ \mathbf{y} & \mathbf{y} \\ \mathbf{y} \\ \mathbf{y} & \mathbf{y} \\ \mathbf{$ - Today : Thm: Let L be regular. Then so is Lt - Tool ! NFA's (non-deterministic)

DEA for $\{c^3, a^5\}$: Wish list for 2a3, as]* SGY WE EFFASC $\neg (\neg) \neg (\neg) \neg) \rightarrow (\neg) \neg (\neg) ???$ "hulting anything after and rejecting" here is rejected

 $\neg \bigcirc \overset{\circ}{\rightarrow} \bigcirc$ gaz, as accept E Say non-determinist more than one possible rest state... T T T T T T 9 9, 9 2 9, 9 9

econy a symbol \rightarrow T T T T T 90 9, 22 93 9n 7. J. 7 T T T T T T 9- 9, 9- 93 9- 95 \sim $C^{3}C^{3}$

Equiverent, no jump 3)-10-10 R $\mathcal{C} \rightarrow \mathcal{C}$ junp 16 Jump From any final (accepting) state we can jump to go a Ja a a Peggo A Do Do Do Do Do but we need to accept C³G³

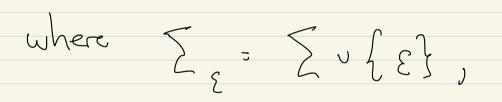
Clarify! Under non-determinism a Jazo a Jazo we'll say that string SEZK is accepted by this strange machine if the exists a path through it that lands on an accepting stude

Section 1.2 of [Sip]

Def: An INFA is a 5-tuple

(Q, 5, 5, 90, F) where

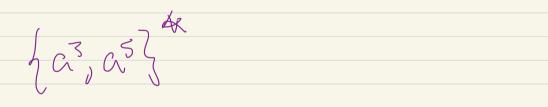
5: Q× ZE -> Power (Q)



E means jump wlo reading a symbol

9, 9, 93 9y 90 (3) うううううううううう R E E

this is an NFA that recognizes



Thm! If L is regular, then

L* is ___ the set of acepting

strings of some NEA ---

Se what? Thm! For each WFA, there is a equivalent DEA, i.e. the NEA -S DEA accept the same set of strings

Stert aca --- A Gachah state 290} 6 _ر 29,4 11 C (92 hext 9 193190) next a 294,914 \sim next 5 29,5,90,925 $\left\{\begin{array}{c} y \\ q \\ q \\ \end{array}, \begin{array}{c} 2 \\ q \\ \end{array}\right\}$