## Jonny Hughes

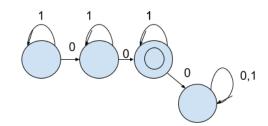
## Automata

## 1-24-2020

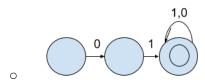
## Homework 2

- All strings containing exactly 2 0's
  - o 1\* 0 1\* 0 1\*

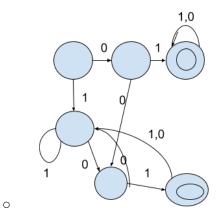
0



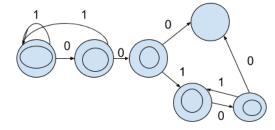
- All strings containing at least 2 0's
  - o (1 | 0)\* 0 (1 | 0)\* 0 (1 | 0)\*



- All strings that begin or end or both with 01
  - o (0 1 (0 | 1)\*) | ((0 | 1)\* 0 1)



- All strings containing no more than one occurrence of the substring 00(000 Has it 2 times)
  - $\circ \quad (1^* \mid (0 \ 1)^*)(0 \mid 1)(0 \mid 1)((1 \ 0)^* \mid 1^*)$



0