

Sept 28

COMPSCI 3331

Fall 2022

# What's next?

- ▶ Assignment 1: out now, due Oct 11.

# NFA construction

Pattern Matching: all words over  $\Sigma = \{a, b, c, \dots, z\}$  that contain the subword “mike” somewhere..

$$L = \{w \in \Sigma^* : \exists u, v \in \Sigma^* \text{ such that } w = umikev\}$$

# Subset Construction

- ▶  $M = (Q, \Sigma, \delta, q_0, F)$  be an NFA.  $\delta : Q \times \Sigma \rightarrow 2^Q$ .
- ▶ Define a DFA  $M_D = (2^Q, \Sigma, \delta_D, q_D, F_D)$ .
- ▶  $\delta_D(P, a) =$
- ▶  $q_D =$
- ▶  $F_D =$

# Subset Construction Example

