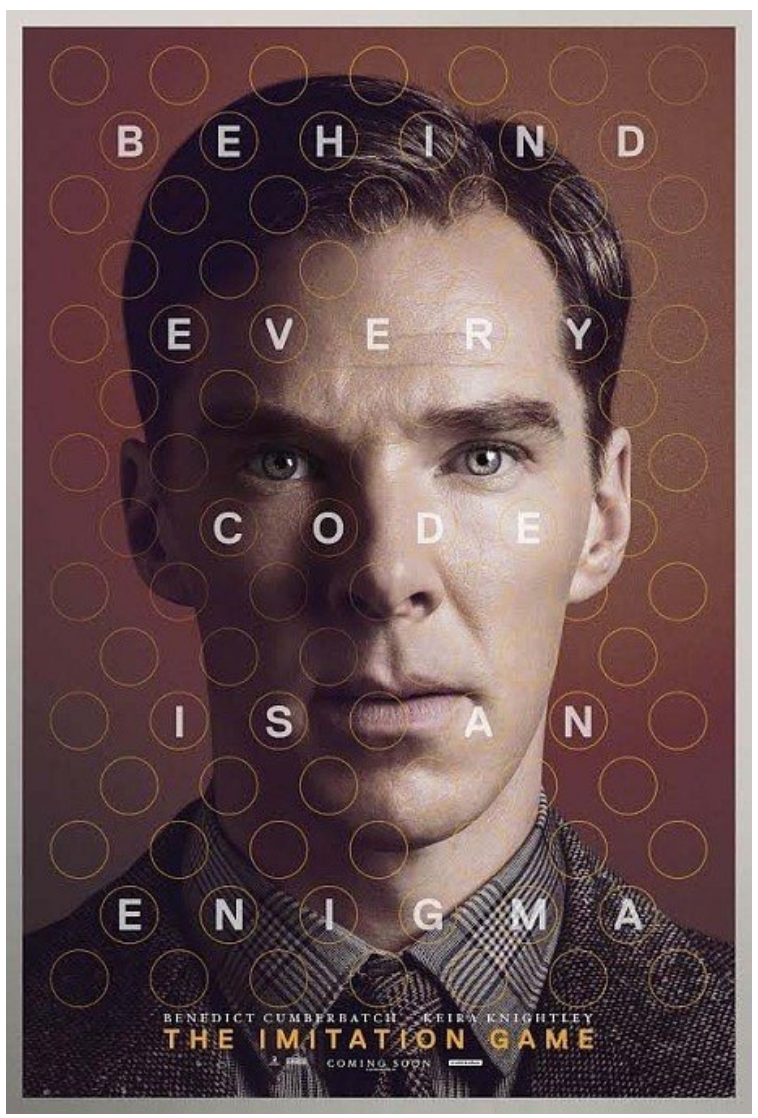
Automata & languages

A primer on the Theory of Computation



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Part 2 out of 5

Last week was all about

Deterministic Finite Automaton

We saw three main concepts

Regular Language

Formal definition

Closure

Regular Language

Formal definition

Closure

A language *L* is *regular* if some finite automaton recognizes it

Regular Language

Formal definition

Closure

A finite automaton is a 5-tuple

$$(Q, \Sigma, \delta, q_0, F)$$

set of states

alphabet

start state

$$(Q, \Sigma, \delta, q_0, F)$$

transition function

set of accept states

Regular Language

Formal definition

Closure

If L_1 and L_2 are regular, then so are:

$L_1 \cup L_2$ $L_1 \cap L_2$ $\overline{L_1}$

$L_1 \oplus L_2$ $L_1 - L_2$

Finite Automata

Thu Sept 26

1 Closure

2 Equivalence

- DFA
- NFA
- Regular Expression