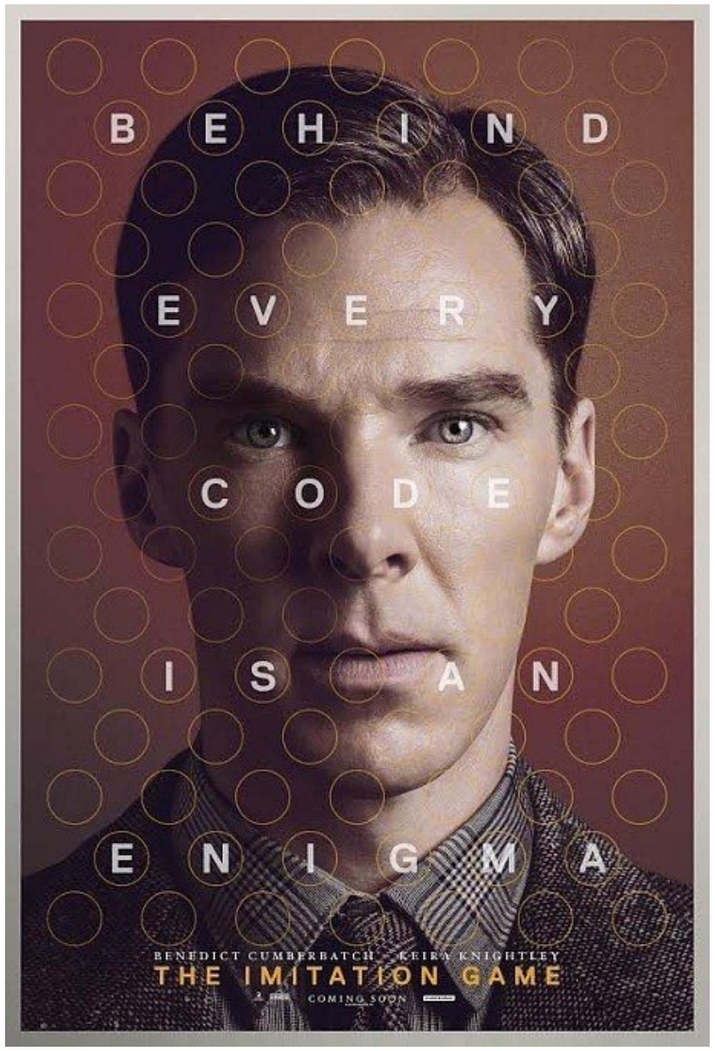
Automata & languages

A primer on the Theory of Computation



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Part 3

Last week, we started to learn about
closure and equivalence of regular languages

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The class of regular languages

is closed under the

- union
- concatenation
- star

regular operations

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regular operations

if L_1 and L_2 are regular,

then so are

$L_1 \cup L_2$

$L_1 \cdot L_2$

L_1^*

Last week, we started to learn about
closure and equivalence of regular languages

is equivalent to

DFA ≃ NFA

)(

REX

We'll finish that today then start asking ourselves whether all languages are regular

L_1 $\{0^n1^n \mid n \geq 0\}$

L_2 {w | w has an equal number of 0s and 1s}

L_3 {w | w has an equal number of occurrences of 01 and 10}

(only one of them actually is)

Advanced Automata

Thu Oct 1

1 Equivalence (the end)

- DFA
- NFA
- Regular Expression

2 Non-regular languages

3 Context-free languages