

A Quick Introduction to Machine Learning

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What Is Machine Learning (ML)?

Automating automation

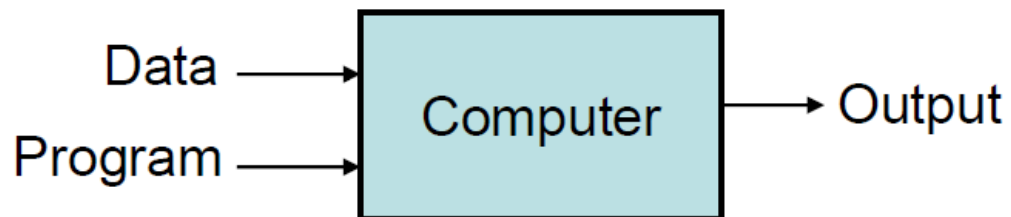
Computer programs can automatically follow rules
How do we determine these rules automatically?

ML focuses on getting computers to program themselves

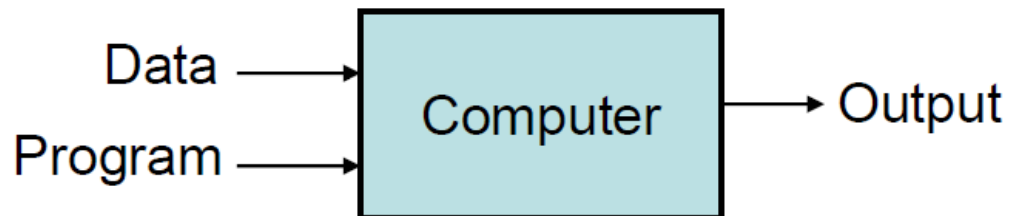
Let the data do the work

Automatically generate programs that create
useful outputs from data

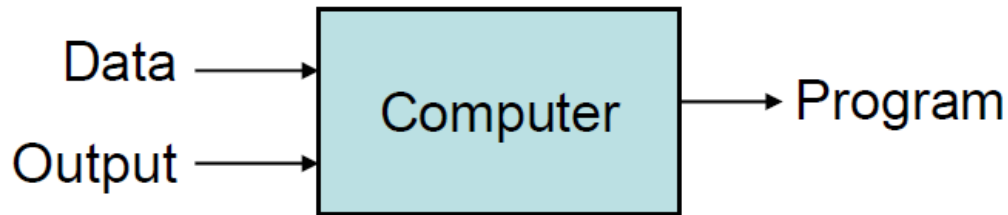
Traditional Programming



Traditional Programming



Machine Learning



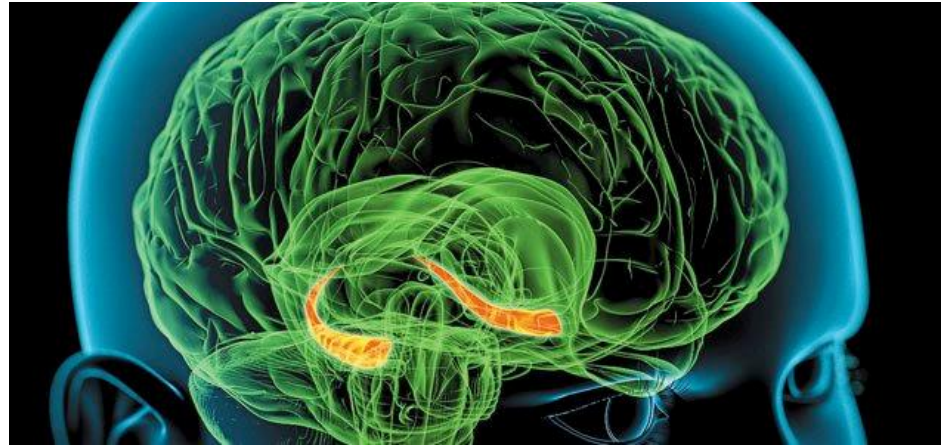
How Do People Learn Things?

Memorization

Accumulation of individual facts

Limited by

Time to observe and memory to store the facts



How Do People Learn Things?

Generalization (what machine learning uses)

Deduce new facts from old ones



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Limited by number of facts and accuracy of deductions