

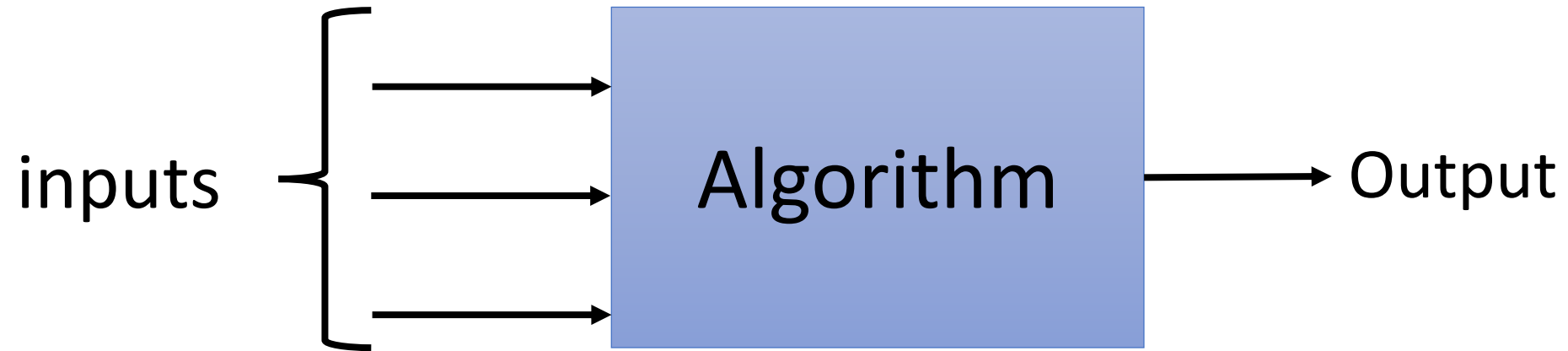
Lecture 1

Intro to Machine Learning

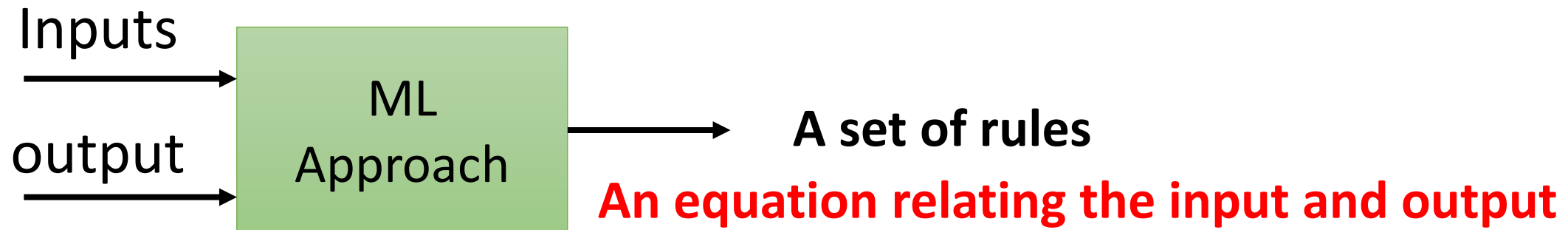
Suman Samui

Getting Started with Machine Learning

Classical Programming



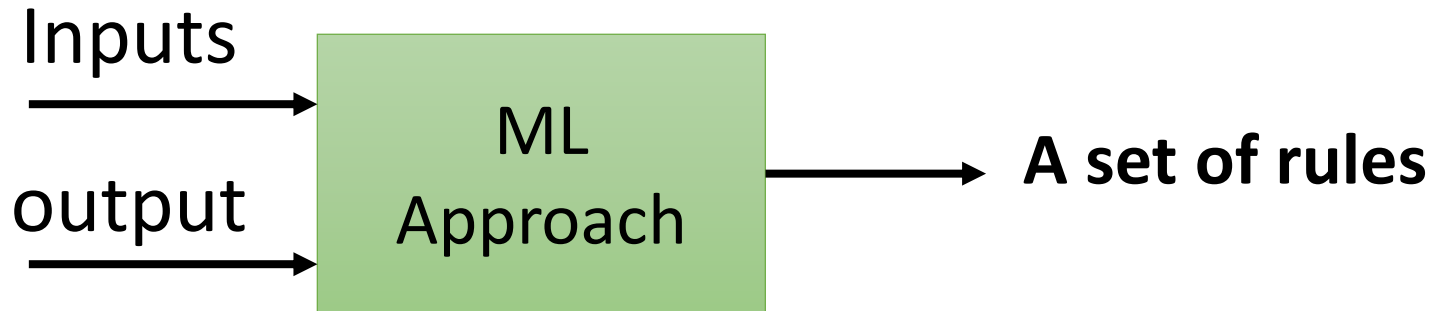
Examples



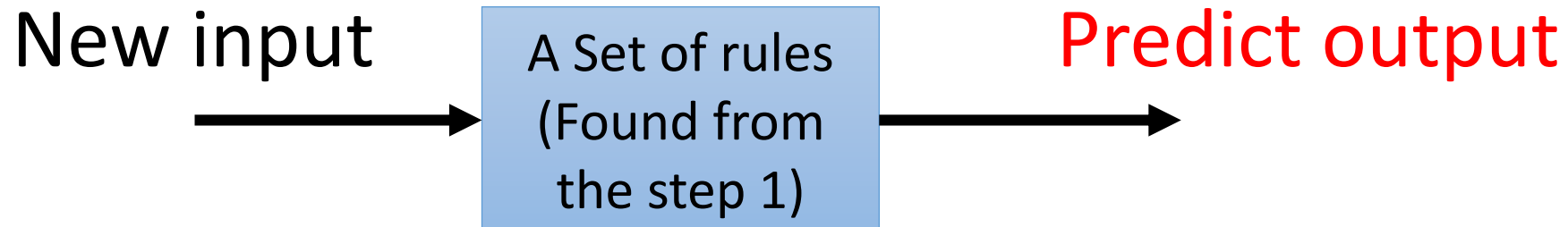
ML Approach for solving problem

Step 1:

Examples



Step 2:



What is Machine Learning?

- It is an art of writing computer programs which learns from data (examples)

TASK → T

Experience → E  **Performance → P** 

Why use ML ?

- Traditional approach may have long list of rules (algorithm) which is hard to follow.
- **Complex problems** → Hardcode of an algorithm is not a good solution
- **Data mining**
- A ML system (program) can **adapt to new data**

Objective of this course

- Help you to build up concepts, tools and intuition which you need to implement programs capable of *learning from data*
- *Starting from logistic regression to advanced deep learning technique*
- *Python frameworks: Scikit-learn, TensorFlow & Keras*
- *Prerequisites:*
 1. *Python Programming Language (Numpy/Pandas/Matplotlib)*
 2. *College-level math (Calculus/linear algebra/ Probabilities/Statistics)*