Machine Learning

Machine Learning is the field of study that gives computers the ability to learn without being explicitly programmed.
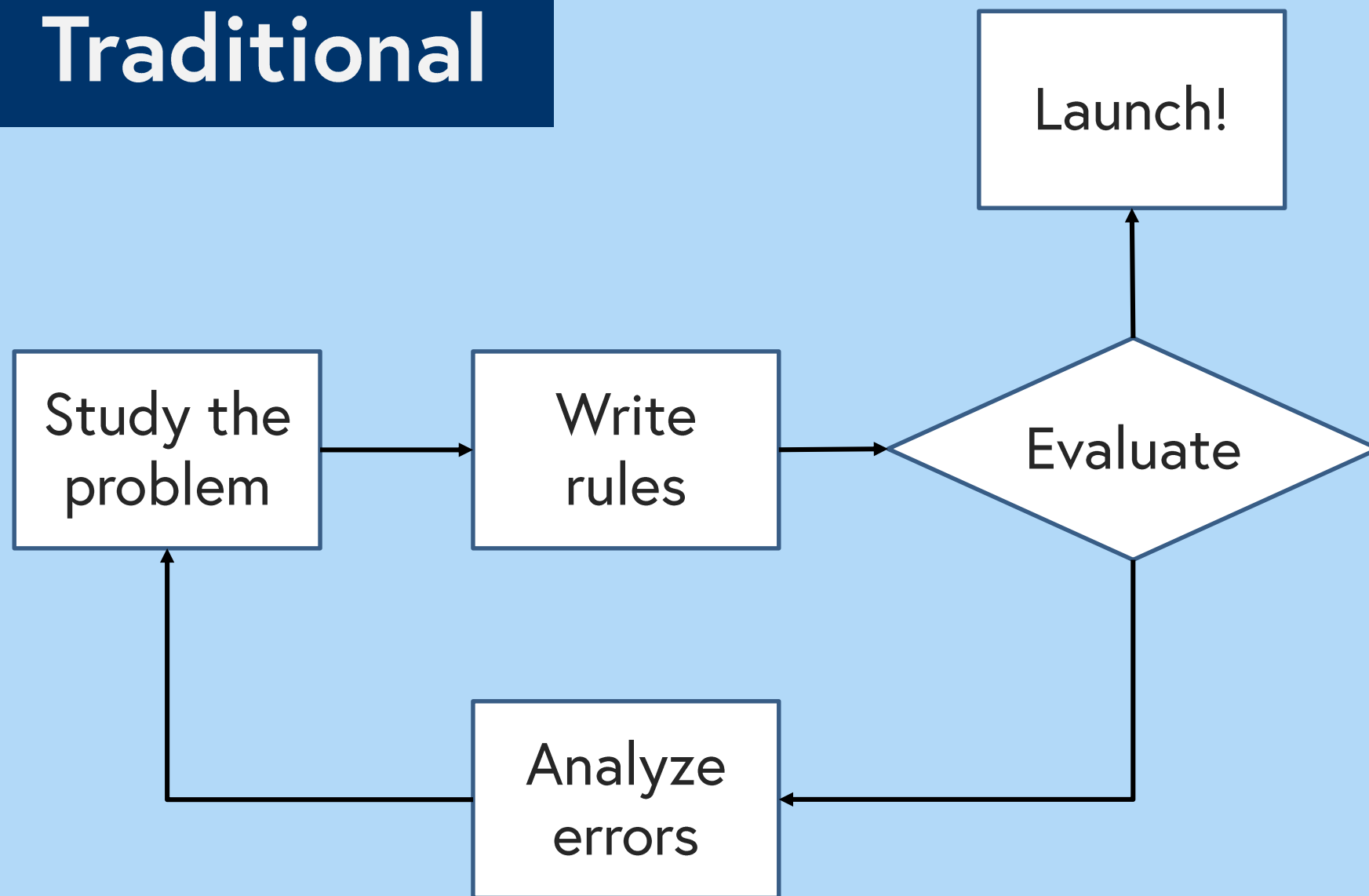
Arthur Samuel, 1959

A computer program is said to learn from experience E with respect to some task T and some performance measure P, if its performance on T, as measured by P, improves with experience E.
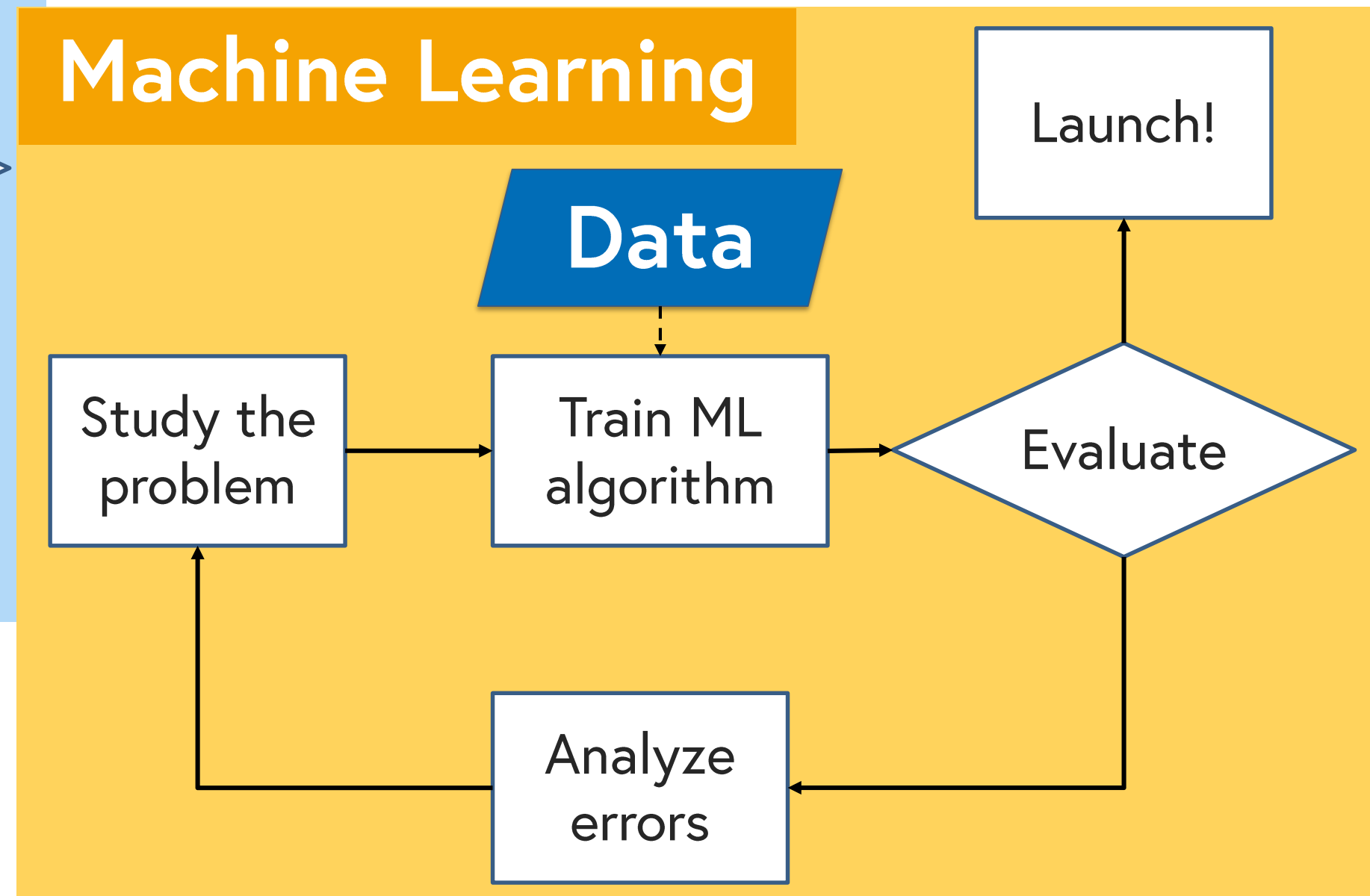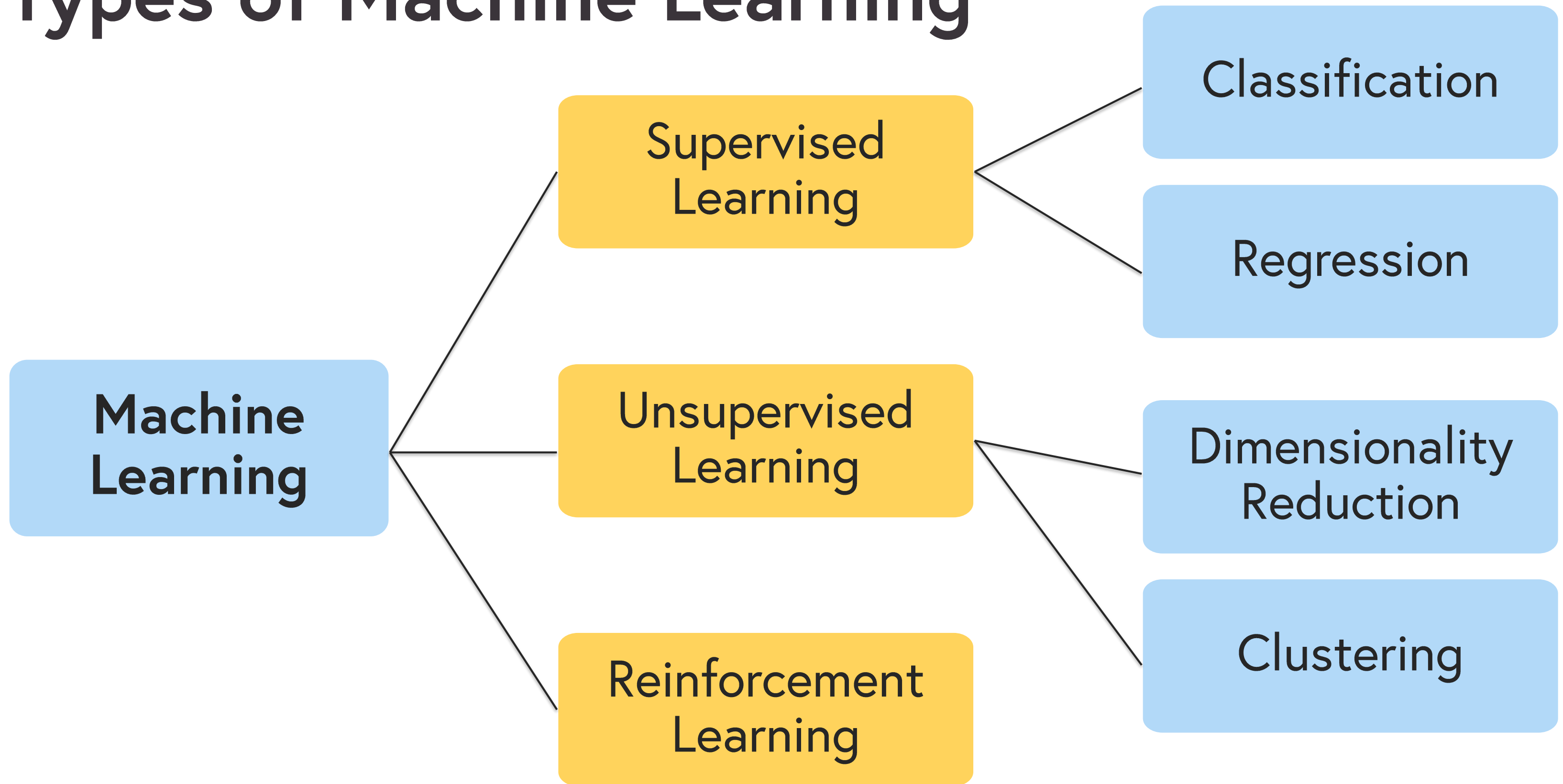
Tom Mitchell, 1997

Why to Use Machine Learning?

Traditional

Study the problem → Write rules → Evaluate → Launch!

Evaluate → Analyze errors → Study the problem

Machine Learning

Data

Study the problem → Train ML algorithm → Evaluate → Launch!

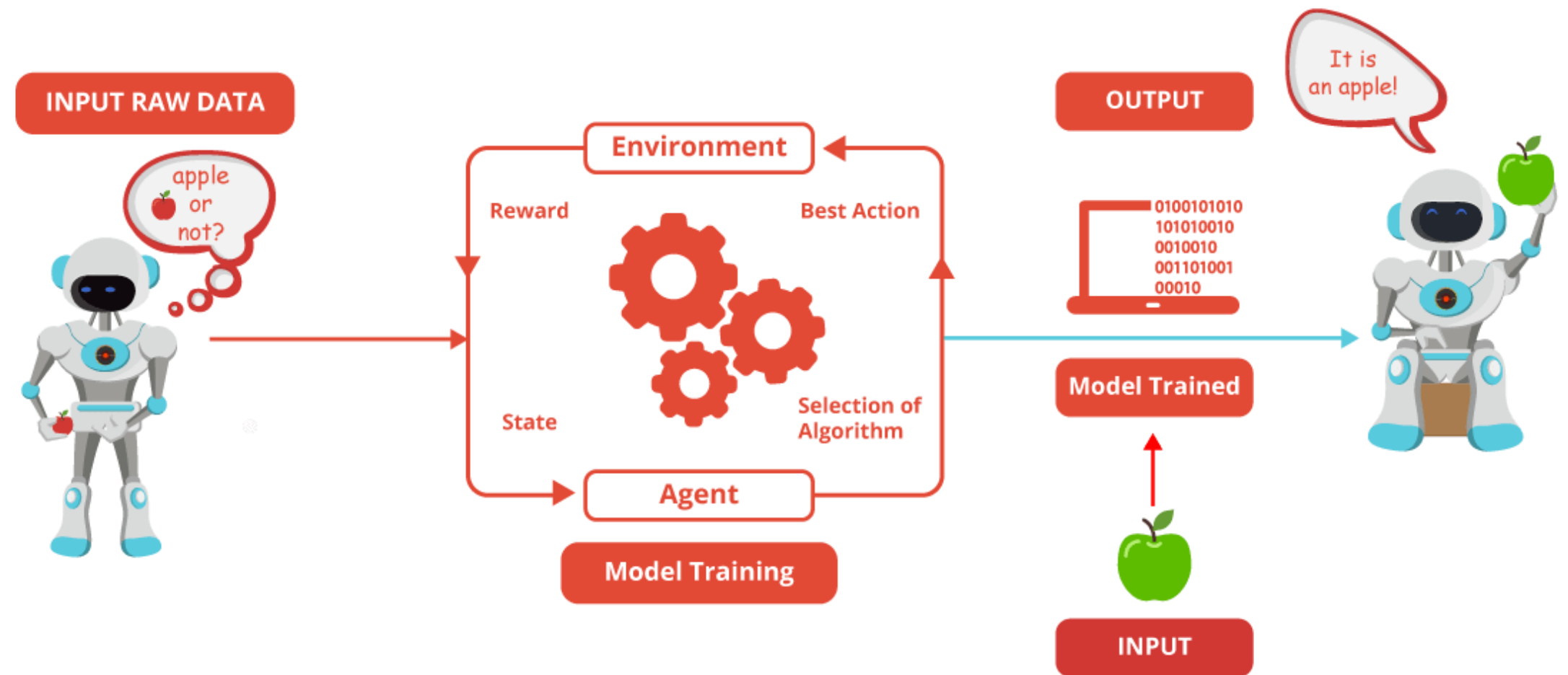Evaluate → Analyze errors → Study the problem
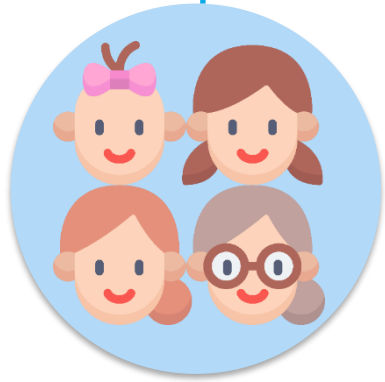
Types of Machine Learning

Supervised Learning

- In supervised learning, the training data you feed to the algorithm includes the desired solutions, called labels

  - Classification

  - Regression

Machine Learning Regression

Predicting

Age of a person

Stock price of a company

The medical cost