


May 12, 2021

Machine learning is the field of study that gives computers the ability to learn w/o being explicitly programmed.

- Arthur Samuel, 1959

A computer program is said to **learn** from experience E w/ respect to some task T and some performance measure P if its performance on T measured by P improves w/ experience E .

- Tom Mitchell, 1998

The two most common types of ml algos are supervised and unsupervised learning.

Supervised Learning:

Refers to training algorithms by giving a dataset in which the "right answers" are given.

Regression problems - predicting continuous values

Classification problems - predicting results in a discrete output/categories

↳ main two categories of supervised learning

Unsupervised Learning:

Refers to using an algorithm to find structures in data w/t telling it what each data point is.

↳ i.e., Discovering structure from unlabelled data
- no feedback on prediction results

Main two categories are **clustering** and **non-clustering** (e.g., Cocktail Party Algorithm)