→ Model parameters are estimated from data automatically while model hyperparameters are set manually & are used in the process to help estimate model parameters.

→ Parametric statistics is a branch of statistics which assume that the sample data comes from a population that can be adequately modelled by a probability distribution that has a fixed set of parameters.

→ Non-parametric model doesn't assume an explict mathematical form for the distribution when modelling the data

Parametric ML Algos ——▷ Algos that simplify the function to a known form ——→ summarizes data with a set of parameters of fixed size (independent of the # of training examples)

Pros —— Simpler
—— Speed
—— Less Data

Cons —— Constrained
—— Limited Complexity
—— poor fit

Non-Parametric ML Algos ——▷ don't make strong assumptions about the form of the mapping function ——▷ Free to learn any functional form ——▷ Non-Parametric methods are good when we have a lot of data & no prior knowledge

Pros —— Flexibility
—— Power
—— Performance

Cons —— more data
—— slower
—— overfitting