Definition

KNN(K-Nearest Neighbours) is an algorithm for supervised learning. Where the data is 'trained' with data points corresponding to their classification. Once a point is to be predicted, it takes into account the 'K' nearest points to it to determine it's classification. KNN is ***non-parametic***(means that it doesn't make any assumptions on the underlying data distribution),***instance-based***(means that our algorithm does not implicitly learn a model. Instead, it chooses to memorize the training instances).

Instance-based learning learn the training examples by heart and then generalizes to new instances based on some similarity measure. It is called instance-based because it builds the hypotheses from the training instances. It is also known as memory-based learning or lazy-learning (because they delay processing until a new instance must be classified)

More info: Instance-based-learning

How does K-NN aLgorithm work?

KNN is used for classification – the output is class membership(predicts a class - a discrete value)

three main elements:

- A set of label objects
- The distance between objects
- The value of **K**