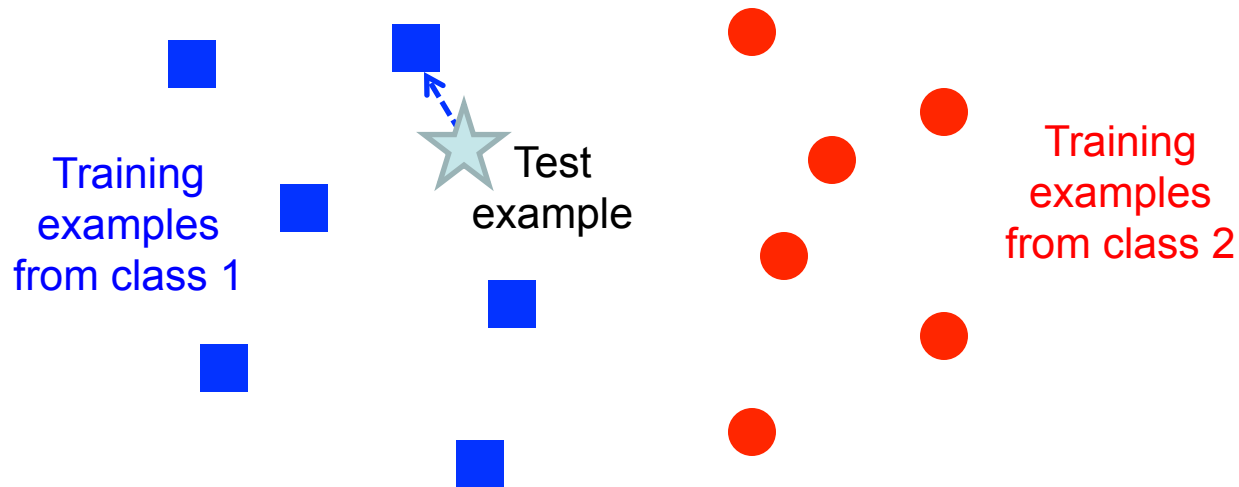


Nearest neighbor classifier

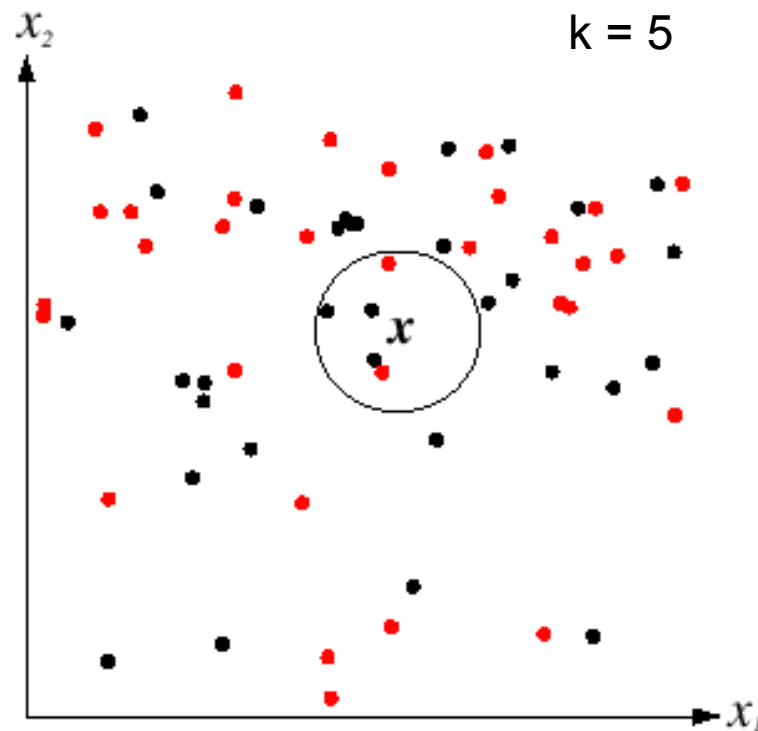


$f(\mathbf{x}) = \text{label of the training example nearest to } \mathbf{x}$

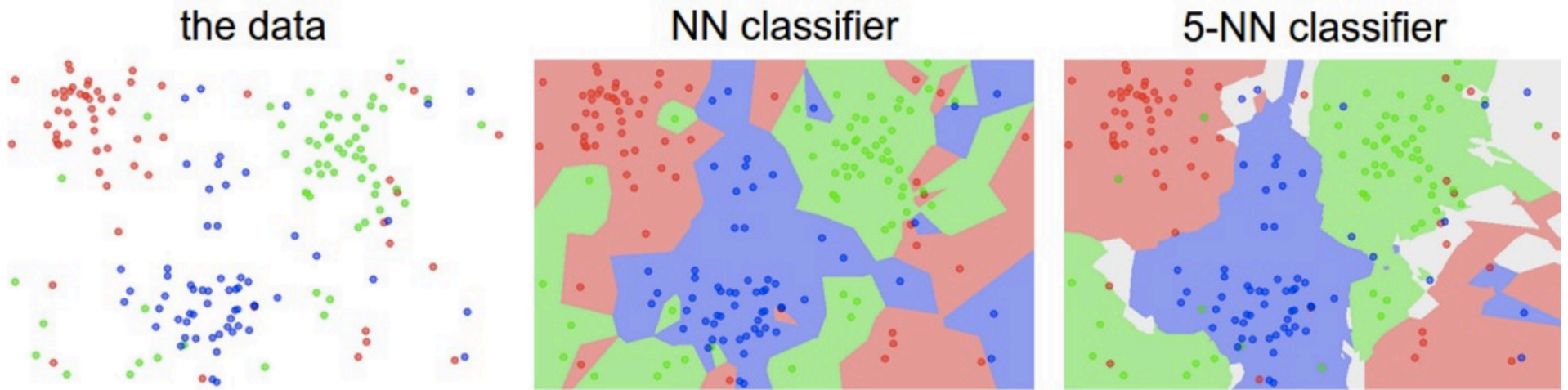
- All we need is a distance function for our inputs
- No training required!

K-nearest neighbor classifier

- For a new point, find the k closest points from training data
- Vote for class label with labels of the k points



K-nearest neighbor classifier



- Which classifier is more robust to *outliers*?

Credit: Andrej Karpathy, <http://cs231n.github.io/classification/>