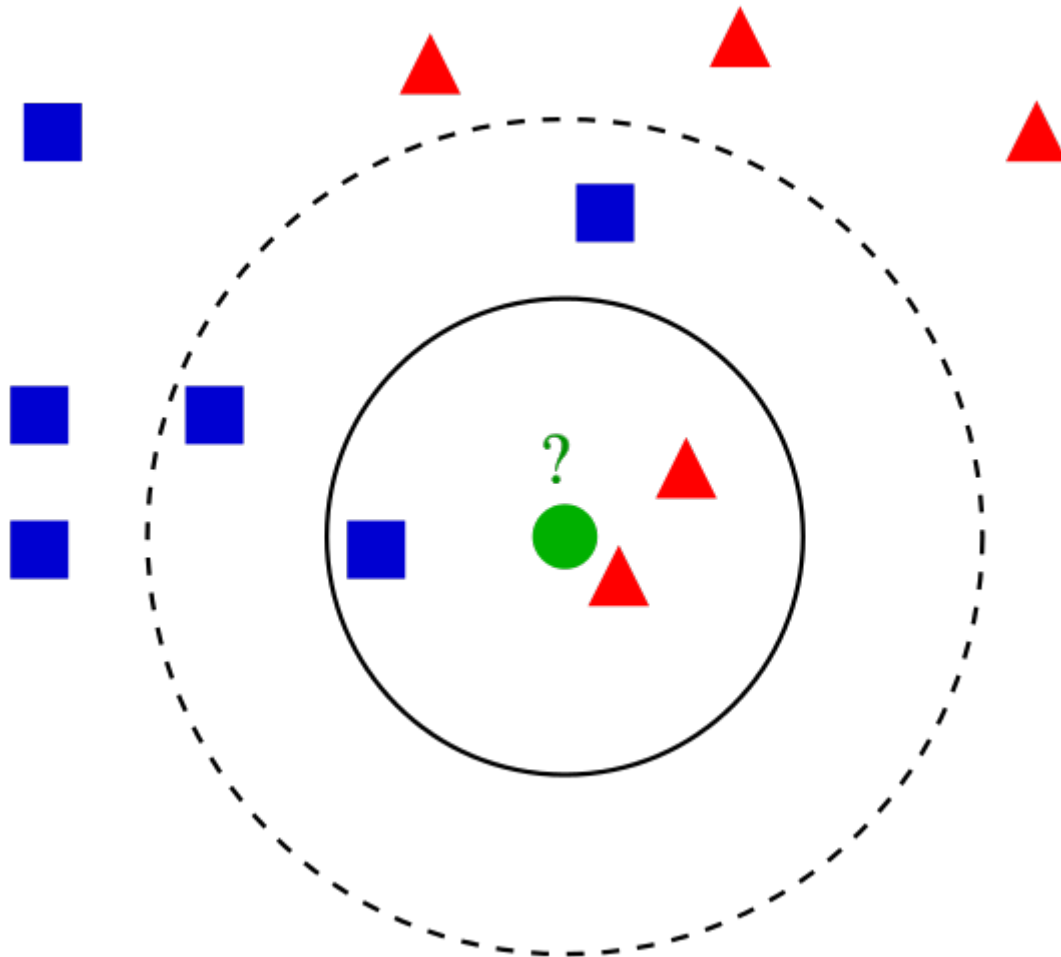*K*-Nearest Neighbor Classification

Instance based learning

Potential problem: nearest neighbor might be an outlier or somehow unusual.

It can take more than one object into consideration: *k* nearest neighbor classifier.

Decision Set

Depending on the size of *k* the result may vary greatly.

If *k* is too small, the classifier becomes sensitive to outliers.

If *k* is too large, the classifier potentially takes objects belonging to other classes into the decision set.

If *k* is "medium" it has the highest likelihood of being correct.

Rule of thumb is: the size of *k* relies on the size of the training data set.