6.

One-vs-one trains the classifiers on each class where each class are grouped in pairs whereas one-vs-rest classifier trains each class. Both approaches use binary classification to categorise the data into 2 groups based on the labels e.g. (+1) and (-1).

Both algorithms have their limitations:

* Both uses different number of classifiers, one-vs-rest uses  classifiers whereas one-vs-one uses classifiers which meant that the one-vs-one classifier is a more time-consuming approach than one-vs-rest approach with a time complexity of compared to the one-vs-rests’ time complexity of .
* One-vs-one classifier trains on a larger dataset and has the potential of providing more detail than its one-vs-rest counterpart.
* One-vs-rest creates a discrepancy between the one and the rest’s data size whereas having the same dataset for one-vs-one approach creates a more balanced dataset.