PLA - Simplest learning algorithm. Only works on linearly separable data. Willl find many lines to the linear separable data set. Learning the weights is a hard combinatorial problem. Can be extended to more complex datasets with feature transformation.

Linear SVM - Inspired by statistical learning theory. Requires data to be linearly separable. Find the line that results in the largest margin width. Is trained with Quadratic programming. Can be kernalized to support complex non-linear datasets.

MLP - Inspired by neurons. Can be used in datasets that are not linearly separable. Even more difficult to train that the PLA algorithm.