Notes

Algorithms Explained

KNN

duh

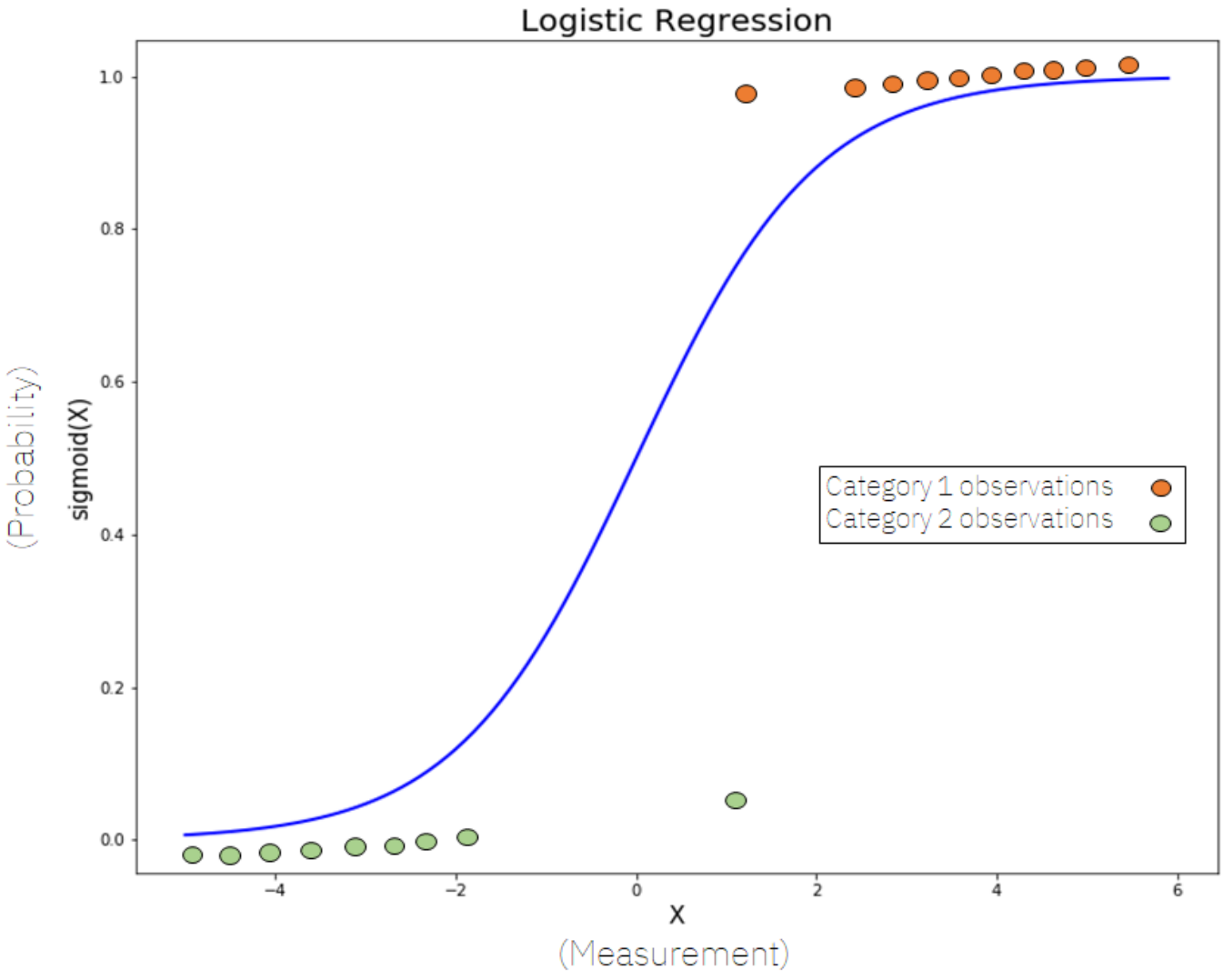
Decision Tree

duh

Random forest

- A composite model (made of many decision trees)
- Each tree predicts the possible label.
- The label with the most votes is chosen.

Logistic Regression



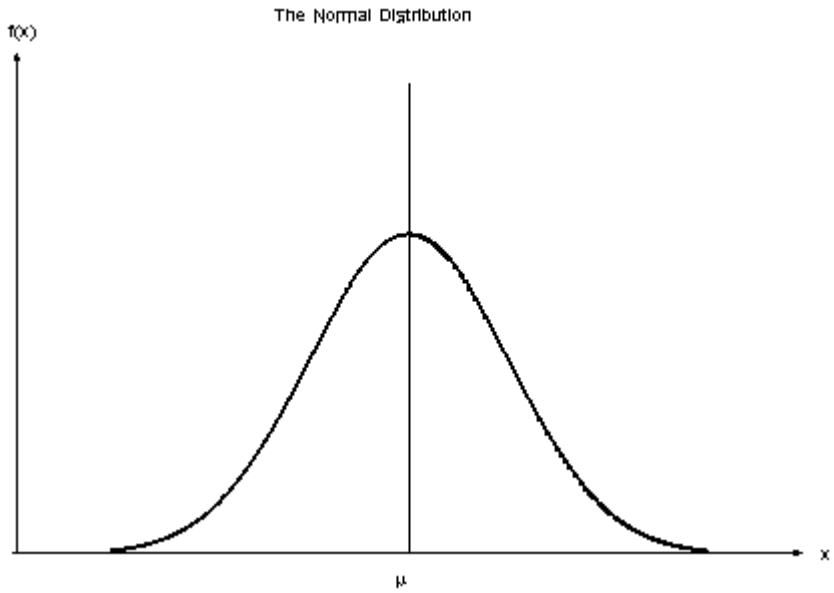
- Creates a sigmoid function using the data given in the dataset in relation to its labels.

- It predicts values by seeing which label it's closer to.

SVM

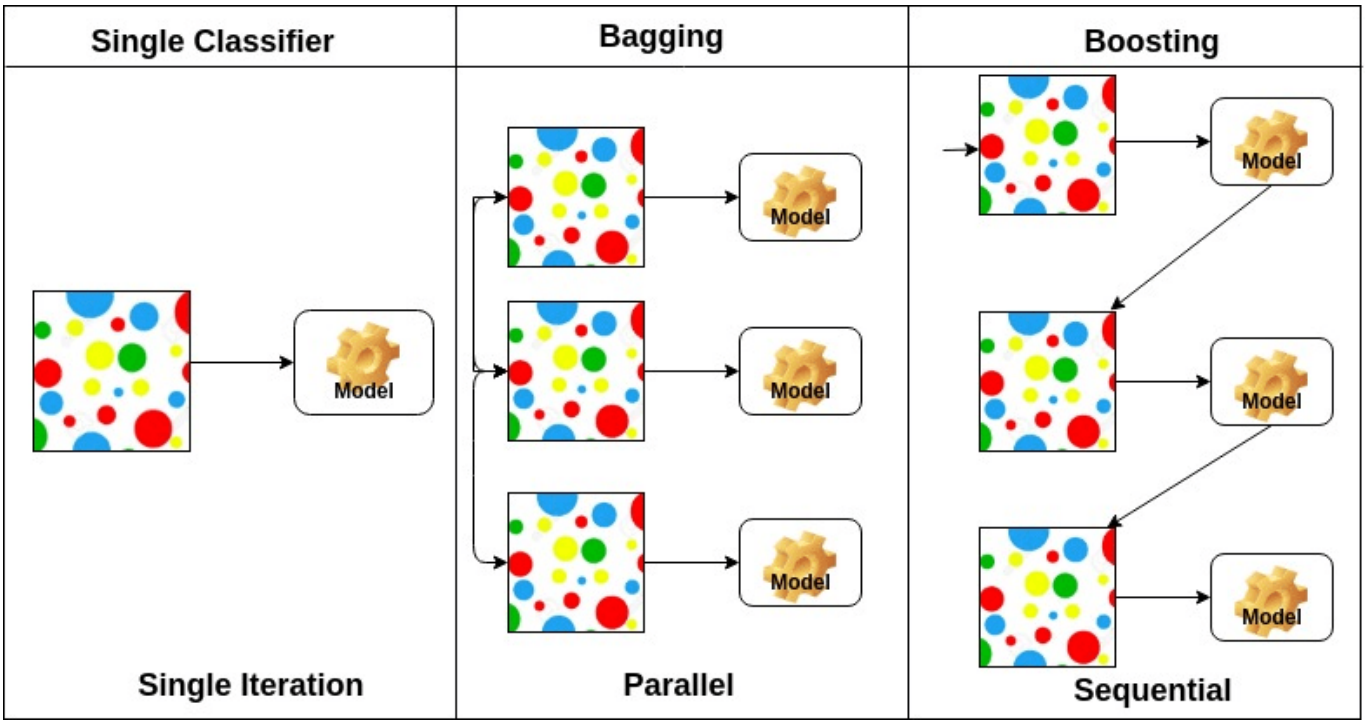
- It attempts to create the best boundary that would differentiate between the data correctly.
- This boundary is n-dimensional where n is the number of features that exist on the dataset.

Gaussian Naive Bayes



- It uses Gaussian (Normal) distribution to predict the likelihood of an observation to have a certain label.
- The label with the highest probability is chosen.

Ada Boost



- A composite model (made of many low-performing classifiers)
- It creates models based on its given classifiers.

- These models are then used to boost each other for more accurate results.

Performance Measures

AUC (area under curve)

- The measure of the ability of a classifier to distinguish between classes.

CA (classification accuracy)

- your usual accuracy.
- right guesses divided by all guesses.

Recall

- It is the number of correct positive results divided by the number of all samples that should have been identified as positive.

Precision

- It is the number of correct positive results divided by the number of positive results predicted by the classifier.

F1

- The harmonic mean between precision and recall.
- It takes the proportion of missed guesses into account to show how robust and precise the classifier is.