/Users/bmc/Desktop/Screen Shot 2017-04-03 at 9.46.03 PM.png/Users/bmc/Desktop/Screen Shot 2017-04-03 at 9.39.55 PM.png**Formulas**:

*Multivariate Normal Normal:*

; ;

+ ;

Higher gain better split, lower Gini better split. Entropy is a measure of uncertainty. Lower entropy is best

**Objective Functions**:

/Users/bmc/Desktop/Screen Shot 2017-04-03 at 9.41.00 PM.png

**Bayes**: Maximize the likelihood of a point being in a class Ci

**Naïve Bayes**: For each class finds the probability of a point being in that by multiplying the probability of getting into that class, then multiples it by the product of each columns probability of holding its individual value from the input vector x, then iterates to find the highest probability corresponding to the class.

**KNN**:

**LDA**:

**SVM**:

**Decision Tree:**