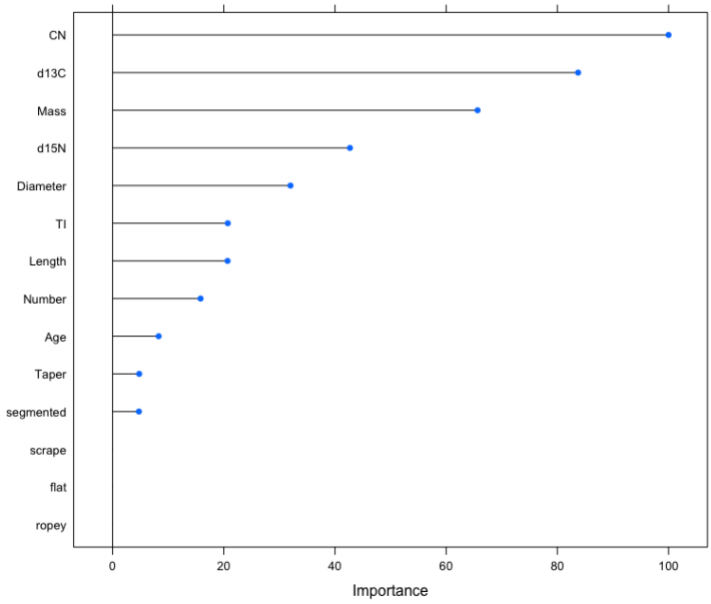
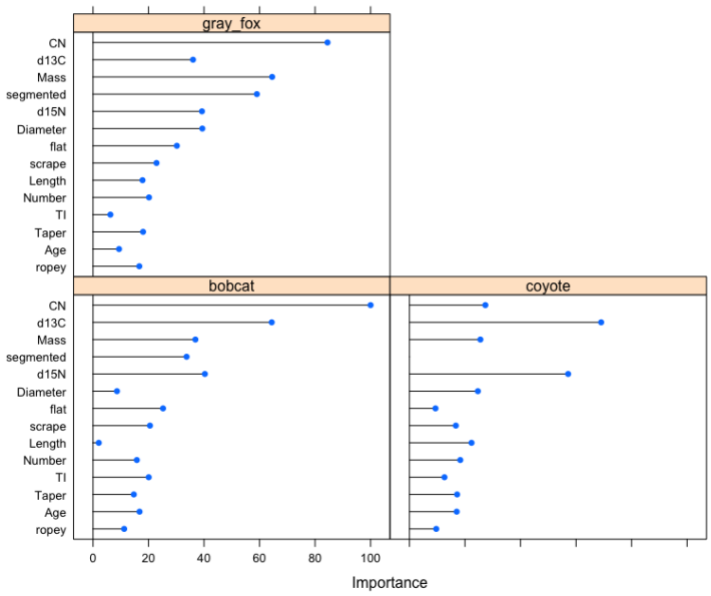
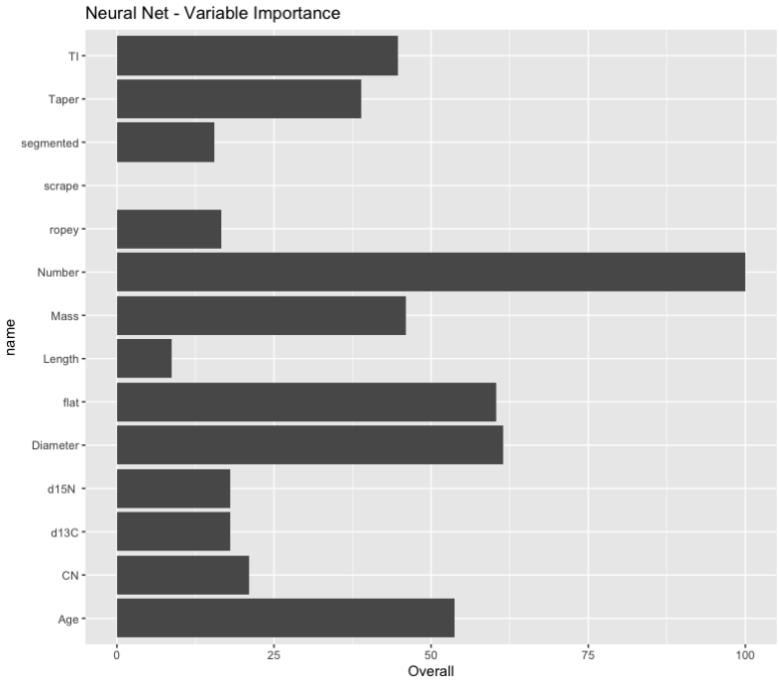
GBM - Variable Importance

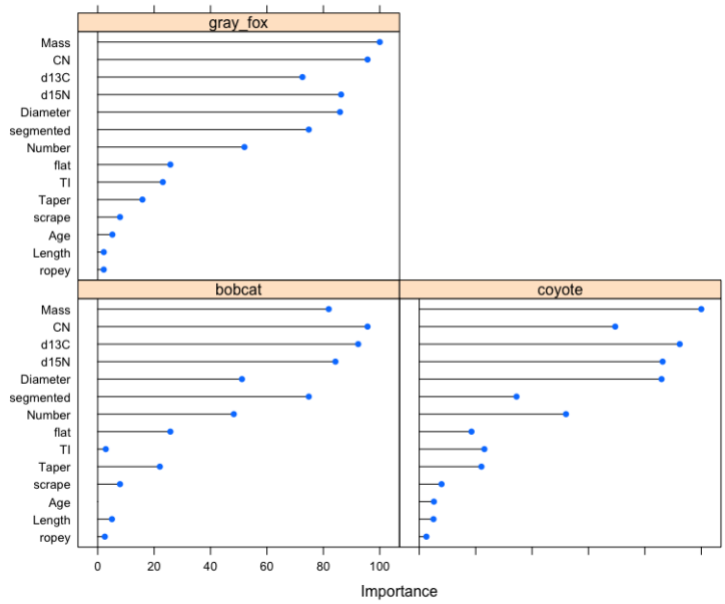


RF - Variable Importance

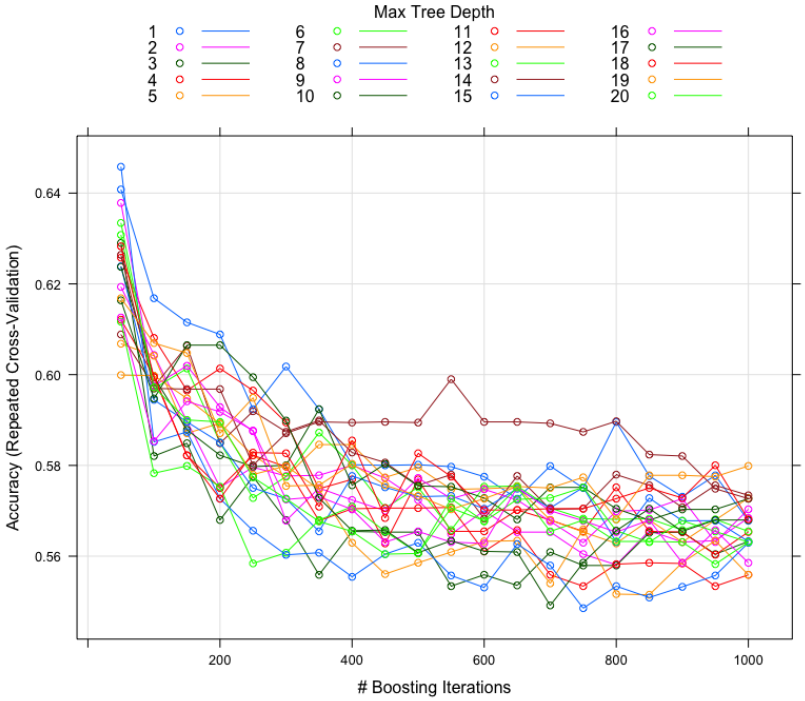




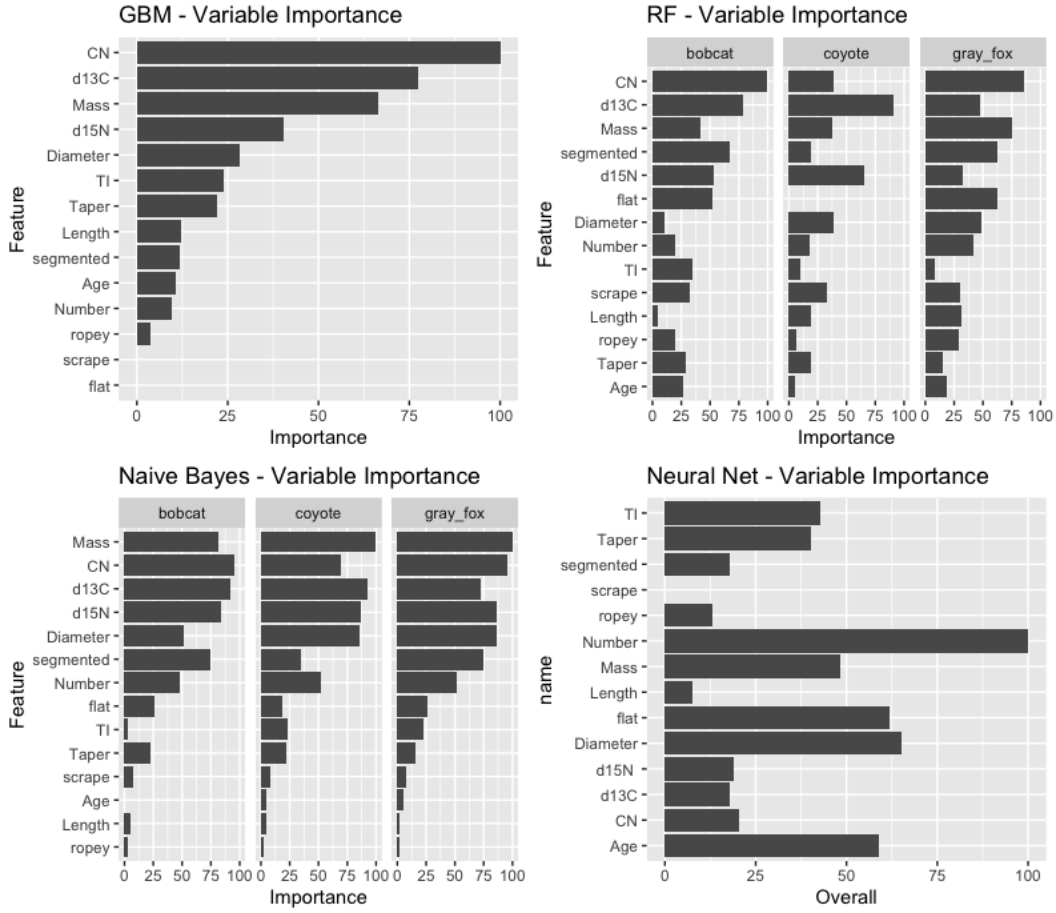
Naive Bayes - Variable Importance



Plotting the GBM with tune length = 20



Combining all the plots together and printing them



Printing Dataframe consisting of all the best models from models build in following scales –

1) Models using the best 3 features
2) Models using the tuning of the features
3) Combination of 1) and 2) Models using best 3 features and tuning of those features

```
> print(total_10)
                                       Experiment  Accuracy     Kappa
80  Neural Network with Tune for top 3 Features 0.7655752 0.6010872
11              Naive Bayes with top 3 Features 0.7564246 0.5765330
40    Neural Network with Tune for all features 0.7378105 0.5660206
22     Naive Bayes with Tune for top 3 Features 0.7360327 0.5345680
6            Neural Network with top 3 Features 0.7298132 0.5449672
12   Random Forest with Tune for top 3 Features 0.7145033 0.5096485
4      Random Forest with Tune for all features 0.7029183 0.4847383
2             Random Forest with top 3 Features 0.6926276 0.4668292
353            GBM with Tune for top 3 Features 0.6809118 0.4729273
21       Naive Bayes with Tune for all features 0.6803497 0.4573714
15                GBM with Tune for all features 0.6416111 0.4058856
1                        GBM with top 3 Features 0.6395396 0.3831167
>
```