Milestone2 Report

# Classification accuracy:

# Chart, bar chart Description automatically generated Classification Training Time:

A picture containing graphical user interface

Description automatically generated

# Classification Testing Time:

Chart, bar chart

Description automatically generated

# Hyperparameter Tuning:

We tried to set:

**C** with values (0.35, **0.55**, 0.75) at Linear SVC model,

**Gamma** with values (0.5, **0.9**, 1.1) at Gaussian model (while setting **C** = 1.5)

**Number Of Trees** with (100, **155**, 160) at AdaBoost model (while setting

**Max depth** = 4).

Conclusion:

Feature transformation is one of the most crucial preprocessing steps in the project since it makes the machine learning algorithms’ understanding easier.

Splitting complex features (such as Misc Features column) and encoding it led to better feature selection decisions, therefore it led the machine learning algorithm to more accurate classification.