**EE 559 Project**

**Perceptron**

**No Preprocessing 5000 Iterations**

Training accuracy is 0.6546714349575324

Testing accuracy is 0.6333333333333333

**Normalizing Data 5000 Iterations**

Training accuracy is 0.6433864810240287

Testing accuracy is 0.6387225548902196

**Using PCA**

Training accuracy is 0.41184327693677647

Testing accuracy is 0.42207792207792205

Training accuracy pca is 0.5859305431878896

Testing accuracy pca is 0.5909090909090909

**Linear Regression**

Training accuracy lin regression is 0.6429696287964004

Testing accuracy lin regression is 0.6817288801571709

Training accuracy lin regression is 0.637965648003569

Testing accuracy lin regression is 0.7006369426751592

Training accuracy lin regression is 0.6461228148812191

Testing accuracy lin regression is 0.6321138211382114

**Linear Regression PCA**

Training accuracy lin regression pca is 0.6189725101397026

Testing accuracy lin regression pca is 0.5872093023255814

Training accuracy lin regression pca is 0.6145413870246085

Testing accuracy lin regression pca is 0.6301652892561983

**KNN**

Training accuracy knn is 0.7309497206703911

Testing accuracy knn is 0.5594989561586639

Training accuracy knn is 0.7376975169300226

Testing accuracy knn is 0.5877862595419847

**KNN PCA**

Training accuracy knn is 0.7205151378219612

Testing accuracy knn is 0.5681818181818182

Training accuracy knn pca is 0.7202953680912956

Testing accuracy knn pca is 0.554639175257732

**Naïve Bayes**

Training accuracy nb is 0.5963774597495528

Testing accuracy nb is 0.5892116182572614

Training accuracy nb is 0.5940257976917854

Testing accuracy nb is 0.616822429906542

**Naïve Bayes PCA**

Training accuracy nb pca is 0.5937995021498077

Testing accuracy nb pca is 0.616822429906542

Training accuracy nb pca is 0.5913494030186979

Testing accuracy nb pca is 0.6058252427184466

**SVM**

Training accuracy for svm is 0.5896467451677405

Testing accuracy for svm is 0.5827814569536424

Optimal gamma is 0.01

Optimal C value is 0.01

Training accuracy for svm is 0.5896467451677405

Testing accuracy for svm is 0.5827814569536424