

COS40007 Artificial Intelligence for Engineering

Week 3 Studio Activities

Studio activity 6

After performing all the accuracy tests on both the models, the results are below.

SVM Model	Train-test split	Cross validation
Original features	89.77%	89.18%
With hyper parameter tuning	83.63%	83.58
With feature selection and hype parameter tuning	83.92%	83.78%
With PCA and hyper parameter tuning	83.69%	83.60%

Studio Activity 7

After performing The train-test and cross-validation with the original dataset with other available forms of classifiers, as listed, I have written down the observations as follows:

Model	Train-Test Split	Cross Validation
SVM	89.56%	89.17%
SGD	80.05%	87.26%
RandomForest	92.61%	92.59%
MLP	89.40%	83.76%