Experiment 5 - Support Vector Machine

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1 Experiment Details

1.1 Submitted By

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[ ]:
```
from sklearn.svm import LinearSVC
from sklearn.pipeline import make_pipeline
from sklearn.preprocessing import StandardScaler
from sklearn.datasets import make_classification
from sklearn.model_selection import train_test_split

import matplotlib.pyplot as plt
```

[ ]:
```
X, y = make_classification(n_samples=10000, n_features=5, random_state=20)
```

[ ]:
```
X.shape, y.shape
```

[ ]:
```
((10000, 5), (10000,))
```

[ ]:
```
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.33,␣
↪random_state=20, shuffle=True)
X_train.shape, X_test.shape, y_train.shape, y_test.shape
```

[ ]:
```
((6700, 5), (3300, 5), (6700,), (3300,))
```

[ ]:
```
classifier = make_pipeline(StandardScaler(), LinearSVC(random_state=20,␣
↪tol=1e-10))
```

[ ]:
```
classifier.fit(X_train, y_train)
classifier.score(X_test, y_test)
```

```
/home/volt/.local/lib/python3.10/site-packages/sklearn/svm/_base.py:1244:
ConvergenceWarning: Liblinear failed to converge, increase the number of
iterations.
  warnings.warn(
```

[ ]:
```
0.8727272727272727
```