

# main

April 11, 2025

```
[ ]: #!/usr/bin/env python3
import seaborn as sns
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
from pathlib import Path
import logging
import os
from sklearn import svm
from sklearn.linear_model import Perceptron, LogisticRegression, SGDClassifier
from sklearn import model_selection
from sklearn.model_selection import GridSearchCV, RandomizedSearchCV
from sklearn import metrics
from sklearn.preprocessing import StandardScaler, LabelEncoder
from sklearn.decomposition import PCA
from sklearn.pipeline import Pipeline
from sklearn.discriminant_analysis import LinearDiscriminantAnalysis
from sklearn.neighbors import KNeighborsClassifier
from sklearn.ensemble import RandomForestClassifier
from sklearn.feature_selection import SequentialFeatureSelector

import pickle
```

```
[16]: # logger.
    ↪info("-----")
# region init
cwd_path = Path(".")
test_data_path = cwd_path / Path("test.csv")
train_data_path = cwd_path / Path("train.csv")
pairplot_file = "pairplot.png"
pairplot_PCA_file = "pairplot_PCA.png"
random_state = 42
grid_search_cv_file = 'grid_search_cv.pkl'
grid_search_cv_path = cwd_path / Path(grid_search_cv_file)
kaggle_path = cwd_path / Path("kaggle_submition.csv")
```

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#endregion

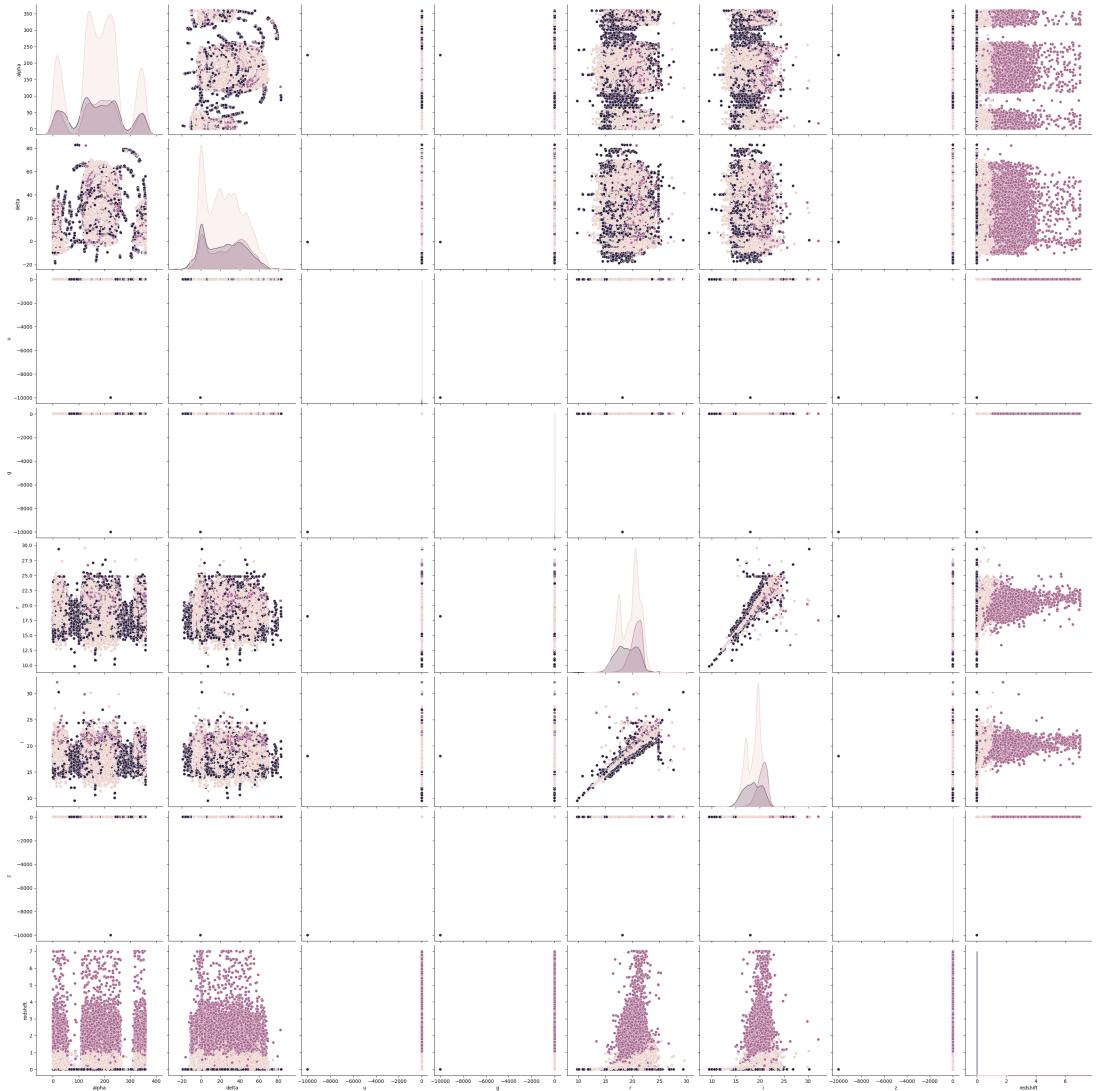
[17]: # region reading from file
# logger.info("reding training file")
df_train = pd.read_csv(train_data_path).drop(["obj_ID", "run_ID", "rerun_ID", "cam_col", "field_ID", "spec_obj_ID", "plate", "MJD", "fiber_ID"], axis=1)
df_train["class"] = df_train["class"].map({"GALAXY": 0, "QSO": 1, "STAR": 2})
# logger.info("remapping of class data {\\"GALAXY\\": 0, \\"QSO\\": 1, \\"STAR\\": 2}")
# logger.info("reding test file")
df_test = pd.read_csv(test_data_path).drop(["obj_ID", "run_ID", "rerun_ID", "cam_col", "field_ID", "spec_obj_ID", "plate", "MJD", "fiber_ID"], axis=1)

# df_nan_values = df_train[df_train.isna().any(axis=1)]
# print(len(df_nan_values))
# endregion
```

```
[6]: # region pairplot

# logger.info("plotting pairplot")
pairplot = sns.pairplot(df_train, hue="class", height=4.0)
pairplot
# logger.info("saving plot to file %s", pairplot_file)
# pairplot.savefig(cwd_path / Path(pairplot_file))
# plt.clf()
```

[6]: <seaborn.axisgrid.PairGrid at 0x7bb78a876900>



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[7]: pca = PCA()
df_pca = pd.DataFrame(pca.fit_transform(df_train.drop("class", axis=1).dropna().
                                         to_numpy()))
print(pca.explained_variance_)
explained_variance = str(pca.explained_variance_)
# logger.info("explained_variance %s", explained_variance)

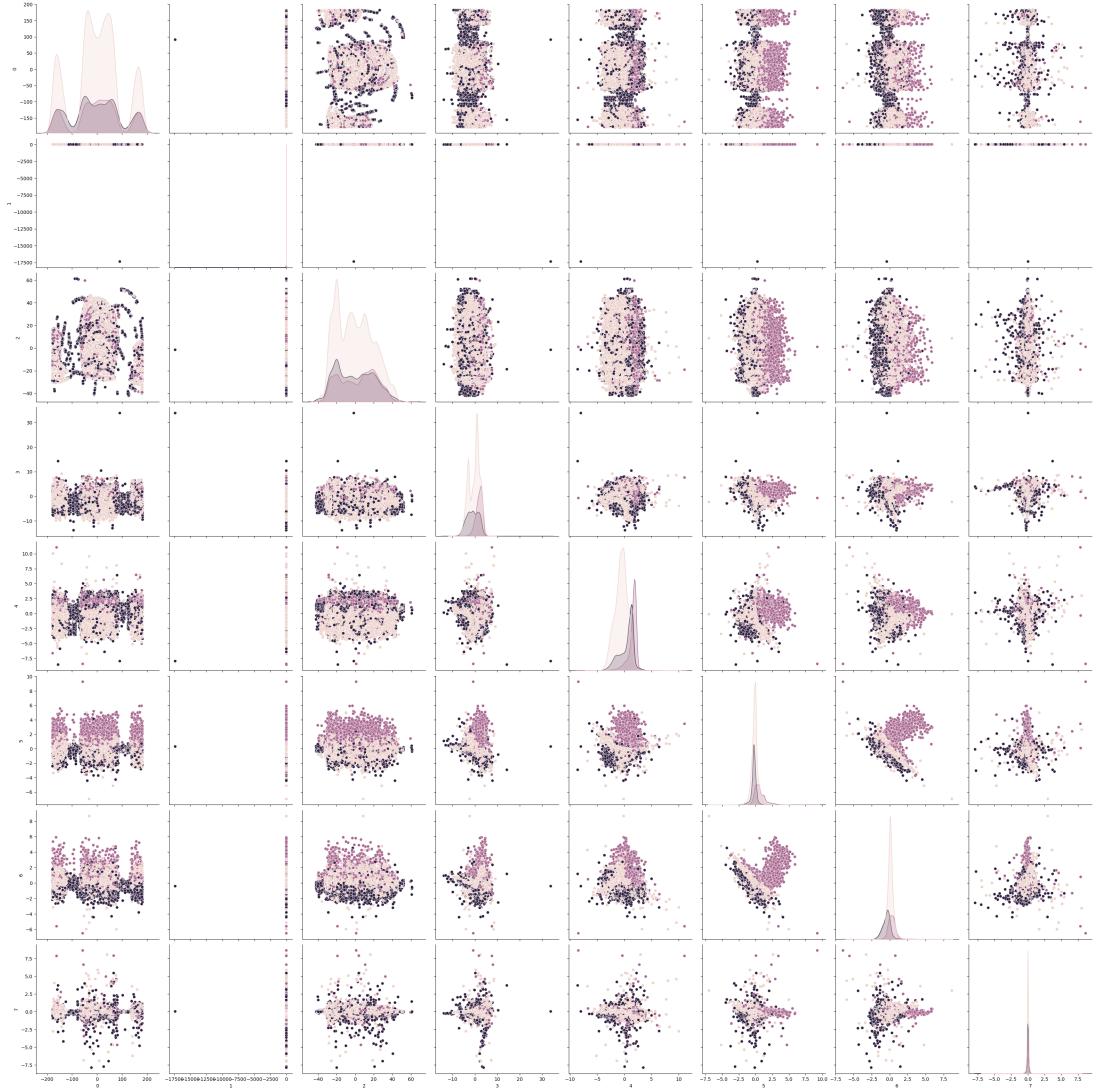
# logger.info("plotting pairplot PCA")
df_pca["class"] = df_train.dropna()["class"].to_numpy()
pairplot = sns.pairplot(df_pca, hue="class", height=4.0)
pairplot
# logger.info("saving plot to file %s", pairplot_PCA_file)
# pairplot.savefig(cwd_path / Path(pairplot_PCA_file))
```

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# plt.clf()
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# endregion
```

```
[9.29945774e+03 3.79178861e+03 3.78501641e+02 6.57208479e+00  
1.99730697e+00 4.09759761e-01 3.29058027e-01 4.61861051e-02]
```

[7]: <seaborn.axisgrid.PairGrid at 0x7bb788eb47d0>



[18]: 

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# region extracting data as numpy array  
# logger.info("converting to numpy array")
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train_np_array = df_train.fillna(df_train.mean()).drop("class", axis=1).
    to_numpy()
train_class_np_array = df_train.fillna(df_train.mean())["class"].to_numpy()
test_np_array = df_test.fillna(df_train.mean()).to_numpy()
# endregion

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[19]:

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# region splitting data for training
# logger.info("splitting X_train_standardized for training")

# # used for redusing the train size when first starting the task
# train_test_split = model_selection.train_test_split(
#     train_np_array,
#     train_class_np_array,
#     test_size=0.9,
#     random_state=random_state
# )

# x_train, x_test, y_train, y_test = train_test_split

x_train, y_train = (train_np_array, train_class_np_array)
# endregion

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[20]:

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# region setting upp a pipeline
# logger.info("creating pipeline")
pipeline = Pipeline([
    ('scaling', StandardScaler()),
    ('preprocessoer', PCA(n_components=5)),
    ('classifier', svm.SVC())
])
# endregion

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[21]:

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# region setting upp grid search
if os.path.isfile(grid_search_cv_path):
    # logger.info("found grid_search_cv file. loading from file.")
    with open(grid_search_cv_path, 'rb') as f:
        grid_search_cv = pickle.load(f)
else:
    # logger.info("creating grid search")
    # logger.info("setting upp parameters")
    param_SVC_C = np.logspace(-1, 2.8, 25).tolist()
    param_RFC_n_estimator = np.linspace(10, 50, 10).astype(int).tolist()
    param_RFC_max_depth = np.linspace(2, 50, 10).astype(int).tolist()
    param_KNN_n_neighbors = np.linspace(2, 10, 8).astype(int).tolist()

    pca = PCA(n_components=6)
    lda = LinearDiscriminantAnalysis()
    sfs = SequentialFeatureSelector(LogisticRegression())

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preprocessoer = [pca, lda]

param_grid = [
    {
        'preprocessoer': preprocessoer,
        'classifier': [svm.SVC()],
        'classifier__C': param_SVC_C,
        'classifier__kernel': ['rbf', 'poly'],
    },
    {
        'preprocessoer': preprocessoer,
        'classifier': [RandomForestClassifier()],
        'classifier__n_estimators': param_RFC_n_estimator,
        'classifier__max_depth': param_RFC_max_depth
    },
    {
        'preprocessoer': preprocessoer,
        'classifier': [LogisticRegression()],
        'classifier__C': param_SVC_C,
        'classifier__solver': ['lbfgs', 'newton-cg', 'newton-cholesky'],
    },
    {
        'preprocessoer': preprocessoer,
        'classifier': [KNeighborsClassifier()],
        'classifier__n_neighbors': param_KNN_n_neighbors,
    }
]

# logger.info("defining grid search using param_grid")
grid_search_cv = GridSearchCV(
    estimator=pipeline,
    param_grid=param_grid,
    cv=5,
    n_jobs=-1,
    verbose=3
)

# logger.info("fitting grid search to training set. this might take a long time")
grid_search_cv.fit(x_train, y_train)
# logger.info("dumping grid_search_cv to pickle file")
with open(grid_search_cv_path, 'wb') as f:
    pickle.dump(grid_search_cv, f)

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Fitting 5 folds for each of 466 candidates, totalling 2330 fits  
[CV 1/5] END classifier=SVC(), classifier\_\_C=0.1, classifier\_\_kernel=rbf,  
preprocessoer=LinearDiscriminantAnalysis();, score=0.916 total time= 49.6s  
[CV 3/5] END classifier=SVC(), classifier\_\_C=0.1, classifier\_\_kernel=rbf,

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preprocessoer=LinearDiscriminantAnalysis();, score=0.926 total time= 50.3s
[CV 4/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=rbf,
preprocessoer=LinearDiscriminantAnalysis();, score=0.932 total time= 51.4s
[CV 5/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=rbf,
preprocessoer=LinearDiscriminantAnalysis();, score=0.922 total time= 53.1s
[CV 2/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=rbf,
preprocessoer=LinearDiscriminantAnalysis();, score=0.920 total time= 53.6s
[CV 1/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=poly,
preprocessoer=LinearDiscriminantAnalysis();, score=0.909 total time= 53.3s
[CV 2/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=poly,
preprocessoer=LinearDiscriminantAnalysis();, score=0.912 total time= 51.2s
[CV 3/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=poly,
preprocessoer=LinearDiscriminantAnalysis();, score=0.918 total time= 50.7s
[CV 5/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=poly,
preprocessoer=LinearDiscriminantAnalysis();, score=0.908 total time= 53.1s
[CV 4/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=poly,
preprocessoer=LinearDiscriminantAnalysis();, score=0.920 total time= 55.1s
[CV 4/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=rbf,
preprocessoer=PCA(n_components=6);, score=0.943 total time= 1.9min
[CV 2/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=rbf,
preprocessoer=PCA(n_components=6);, score=0.939 total time= 2.1min
[CV 1/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=rbf,
preprocessoer=PCA(n_components=6);, score=0.934 total time= 2.2min
[CV 5/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=rbf,
preprocessoer=PCA(n_components=6);, score=0.933 total time= 2.2min
[CV 3/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=rbf,
preprocessoer=PCA(n_components=6);, score=0.939 total time= 2.3min
[CV 1/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier_kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917
total time= 49.0s
[CV 2/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=poly,
preprocessoer=PCA(n_components=6);, score=0.829 total time= 2.7min
[CV 4/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=poly,
preprocessoer=PCA(n_components=6);, score=0.895 total time= 2.7min
[CV 1/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier_kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.939 total
time= 1.8min
[CV 2/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier_kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.921
total time= 50.6s
[CV 2/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier_kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.945 total
time= 1.9min
[CV 1/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=poly,
preprocessoer=PCA(n_components=6);, score=0.837 total time= 2.9min
[CV 5/5] END classifier=SVC(), classifier__C=0.1, classifier_kernel=poly,
preprocessoer=PCA(n_components=6);, score=0.823 total time= 2.9min
[CV 3/5] END classifier=SVC(), classifier__C=0.1439903320881633,

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classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.927
total time= 48.2s
[CV 3/5] END classifier=SVC(), classifier__C=0.1, classifier__kernel=poly,
preprocessoer=PCA(n_components=6);, score=0.846 total time= 3.0min
[CV 4/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.933
total time= 49.8s
[CV 5/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 49.6s
[CV 4/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.947 total
time= 1.5min
[CV 3/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.944 total
time= 1.9min
[CV 5/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.942 total
time= 1.8min
[CV 1/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 1.0min
[CV 2/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 1.0min
[CV 3/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 58.9s
[CV 5/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.908 total time= 58.3s
[CV 4/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 1.0min
[CV 1/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917
total time= 47.6s
[CV 3/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.927
total time= 45.7s
[CV 2/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.921
total time= 48.5s
[CV 4/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.933
total time= 46.3s
[CV 5/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923

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total time= 45.3s
[CV 4/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.951 total
time= 1.6min
[CV 1/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.945 total
time= 1.9min
[CV 1/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.848 total
time= 2.6min
[CV 2/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.947 total
time= 1.9min
[CV 3/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.947 total
time= 1.9min
[CV 4/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.901 total
time= 2.4min
[CV 5/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.947 total
time= 1.6min
[CV 2/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.840 total
time= 2.8min
[CV 3/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.858 total
time= 2.7min
[CV 5/5] END classifier=SVC(), classifier__C=0.1439903320881633,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.833 total
time= 2.8min
[CV 1/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 1.0min
[CV 2/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 1.0min
[CV 3/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 1.0min
[CV 4/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 1.0min
[CV 5/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 1.1min
[CV 1/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917

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total time= 50.3s
[CV 2/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.922
total time= 49.3s
[CV 3/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.928
total time= 45.8s
[CV 1/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.859 total
time= 2.7min
[CV 4/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.933
total time= 46.0s
[CV 5/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 47.5s
[CV 1/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.948 total
time= 1.8min
[CV 2/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.849 total
time= 2.4min
[CV 2/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.950 total
time= 1.7min
[CV 4/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.954 total
time= 1.5min
[CV 3/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.949 total
time= 1.7min
[CV 5/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.950 total
time= 1.6min
[CV 4/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.906 total
time= 2.4min
[CV 5/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.845 total
time= 2.6min
[CV 3/5] END classifier=SVC(), classifier__C=0.2073321573485955,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.868 total
time= 2.6min
[CV 1/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 59.8s
[CV 2/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
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score=0.913 total time= 1.1min
[CV 4/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 1.0min
[CV 3/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 1.1min
[CV 5/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 1.1min
[CV 1/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917
total time= 45.0s
[CV 2/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.922
total time= 40.9s
[CV 4/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 1.3min
[CV 1/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.870 total
time= 2.5min
[CV 2/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.953 total
time= 1.6min
[CV 4/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.933
total time= 44.1s
[CV 3/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.927
total time= 47.0s
[CV 1/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.950 total
time= 1.7min
[CV 5/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 44.9s
[CV 3/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.952 total
time= 1.6min
[CV 5/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.952 total
time= 1.4min
[CV 4/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.914 total
time= 2.1min
[CV 2/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.863 total

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time= 2.3min
[CV 3/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.879 total
time= 2.5min
[CV 5/5] END classifier=SVC(), classifier__C=0.29853826189179594,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.860 total
time= 2.5min
[CV 1/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 1.0min
[CV 3/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 1.0min
[CV 4/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 1.0min
[CV 2/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 1.1min
[CV 5/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 1.1min
[CV 1/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917
total time= 44.6s
[CV 4/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 1.2min
[CV 1/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.879 total
time= 2.3min
[CV 2/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.955 total
time= 1.5min
[CV 3/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.954 total
time= 1.5min
[CV 2/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.877 total
time= 2.2min
[CV 1/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.954 total
time= 1.7min
[CV 2/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.922
total time= 45.2s
[CV 4/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.933

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total time= 44.6s
[CV 3/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.927
total time= 46.2s
[CV 5/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 46.0s
[CV 5/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.954 total
time= 1.4min
[CV 4/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.923 total
time= 2.1min
[CV 3/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.891 total
time= 2.3min
[CV 5/5] END classifier=SVC(), classifier__C=0.42986623470822766,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.874 total
time= 2.3min
[CV 1/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 1.1min
[CV 2/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 1.1min
[CV 3/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 1.1min
[CV 4/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 1.2min
[CV 5/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 1.1min
[CV 1/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917
total time= 45.6s
[CV 4/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.2min
[CV 2/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 1.3min
[CV 1/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 1.5min
[CV 3/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.957 total

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time= 1.5min
[CV 1/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.896 total
time= 2.2min
[CV 5/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 1.3min
[CV 2/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.922
total time= 45.5s
[CV 2/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.892 total
time= 2.3min
[CV 3/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.927
total time= 49.8s
[CV 4/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 46.4s
[CV 3/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.910 total
time= 2.2min
[CV 4/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.930 total
time= 2.1min
[CV 5/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 48.0s
[CV 5/5] END classifier=SVC(), classifier__C=0.6189658188912605,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.891 total
time= 2.4min
[CV 1/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 1.1min
[CV 2/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 1.2min
[CV 4/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 1.2min
[CV 3/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 1.3min
[CV 4/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.961 total
time= 1.0min
[CV 1/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917

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total time= 47.5s
[CV 5/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 1.3min
[CV 1/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.3min
[CV 2/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.961 total
time= 1.3min
[CV 3/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.3min
[CV 5/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.3min
[CV 2/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.922
total time= 45.9s
[CV 1/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.914 total
time= 2.3min
[CV 4/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.936 total
time= 2.1min
[CV 2/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.914 total
time= 2.3min
[CV 4/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 44.6s
[CV 3/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.924 total
time= 2.3min
[CV 3/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.927
total time= 47.5s
[CV 5/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 46.0s
[CV 5/5] END classifier=SVC(), classifier__C=0.8912509381337455,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.910 total
time= 2.2min
[CV 1/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 1.2min
[CV 1/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917

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```

total time= 44.6s
[CV 2/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 1.3min
[CV 4/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 1.2min
[CV 1/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.961 total
time= 1.2min
[CV 3/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 1.3min
[CV 4/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.962 total
time= 1.1min
[CV 2/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.963 total
time= 1.2min
[CV 3/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.961 total
time= 1.2min
[CV 5/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.962 total
time= 1.2min
[CV 5/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 1.5min
[CV 2/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.922
total time= 47.8s
[CV 1/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.924 total
time= 2.2min
[CV 5/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.921 total
time= 2.1min
[CV 2/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.925 total
time= 2.3min
[CV 3/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.928
total time= 46.2s
[CV 4/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.943 total
time= 2.2min
[CV 3/5] END classifier=SVC(), classifier__C=1.2833151855576512,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.929 total

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time= 2.2min
[CV 4/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 47.7s
[CV 5/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 45.2s
[CV 1/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917
total time= 46.4s
[CV 1/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 1.4min
[CV 4/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.964 total
time= 1.0min
[CV 1/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.962 total
time= 1.1min
[CV 2/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.964 total
time= 1.1min
[CV 3/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.962 total
time= 1.1min
[CV 5/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.963 total
time= 1.1min
[CV 2/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 1.7min
[CV 4/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 1.6min
[CV 3/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 1.6min
[CV 5/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 1.6min
[CV 4/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.948 total
time= 2.2min
[CV 1/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.927 total
time= 2.3min
[CV 3/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.932 total

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time= 2.2min
[CV 5/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.928 total
time= 2.2min
[CV 2/5] END classifier=SVC(), classifier__C=1.8478497974222907,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.930 total
time= 2.3min
[CV 2/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.922
total time= 50.4s
[CV 3/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.928
total time= 50.9s
[CV 4/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 51.1s
[CV 5/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 50.0s
[CV 1/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917
total time= 48.3s
[CV 1/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.964 total
time= 59.1s
[CV 2/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.965 total
time= 59.5s
[CV 3/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.963 total
time= 58.9s
[CV 4/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.966 total
time= 56.7s
[CV 5/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.964 total
time= 57.8s
[CV 1/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 1.5min
[CV 2/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 1.8min
[CV 2/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.933 total
time= 2.2min
[CV 3/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.935 total

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time= 2.3min
[CV 3/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 1.8min
[CV 4/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 48.1s
[CV 2/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.922
total time= 52.9s
[CV 3/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.928
total time= 51.9s
[CV 5/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 1.9min
[CV 5/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 51.1s
[CV 4/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.950 total
time= 2.2min
[CV 4/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 1.9min
[CV 1/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.930 total
time= 2.5min
[CV 5/5] END classifier=SVC(), classifier__C=2.6607250597988084,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.932 total
time= 2.3min
[CV 1/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917
total time= 49.6s
[CV 4/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.966 total
time= 55.5s
[CV 3/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.964 total
time= 56.8s
[CV 1/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.965 total
time= 58.8s
[CV 2/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.965 total
time= 58.3s
[CV 5/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.965 total

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time= 57.6s
[CV 1/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.934 total
time= 2.4min
[CV 1/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 1.8min
[CV 2/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.936 total
time= 2.5min
[CV 4/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 48.9s
[CV 2/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.922
total time= 52.8s
[CV 3/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.928
total time= 52.8s
[CV 4/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.951 total
time= 2.2min
[CV 5/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 54.0s
[CV 3/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.940 total
time= 2.5min
[CV 2/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 2.1min
[CV 4/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 2.1min
[CV 5/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.936 total
time= 2.4min
[CV 5/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 2.1min
[CV 3/5] END classifier=SVC(), classifier__C=3.831186849557287,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 2.3min
[CV 1/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.966 total
time= 52.6s
[CV 2/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total

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time= 51.1s
[CV 3/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.965 total
time= 53.1s
[CV 4/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total
time= 51.6s
[CV 5/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total
time= 52.5s
[CV 1/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917
total time= 53.9s
[CV 2/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.939 total
time= 2.4min
[CV 2/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.922
total time= 55.5s
[CV 3/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.928
total time= 54.5s
[CV 1/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.938 total
time= 2.8min
[CV 5/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 51.7s
[CV 4/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 55.2s
[CV 1/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 2.2min
[CV 4/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.953 total
time= 2.4min
[CV 3/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.943 total
time= 2.6min
[CV 2/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 2.6min
[CV 5/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.940 total
time= 2.9min
[CV 3/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.919 total time= 2.9min
[CV 5/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 2.9min
[CV 1/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total
time= 47.8s
[CV 4/5] END classifier=SVC(), classifier__C=5.51653866759558,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 3.1min
[CV 2/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total
time= 46.9s
[CV 3/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.966 total
time= 47.5s
[CV 4/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total
time= 46.6s
[CV 1/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.942 total
time= 2.5min
[CV 5/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total
time= 48.2s
[CV 1/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 50.0s
[CV 2/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 54.0s
[CV 2/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.943 total
time= 2.7min
[CV 3/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.928
total time= 52.0s
[CV 4/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.955 total
time= 2.5min
[CV 3/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.946 total
time= 2.8min
[CV 4/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 54.5s
[CV 1/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.909 total time= 2.6min
[CV 5/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 54.2s
[CV 5/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.944 total
time= 2.9min
[CV 2/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 3.2min
[CV 1/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total
time= 43.4s
[CV 3/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 3.4min
[CV 2/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total
time= 45.1s
[CV 5/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 3.3min
[CV 2/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.946 total
time= 2.1min
[CV 3/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.966 total
time= 45.5s
[CV 4/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.968 total
time= 44.7s
[CV 5/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.968 total
time= 43.7s
[CV 1/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.917
total time= 55.6s
[CV 2/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 56.1s
[CV 4/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.956 total
time= 2.6min
[CV 3/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.928
total time= 55.3s
[CV 4/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934

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total time= 55.5s
[CV 5/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 53.4s
[CV 5/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.947 total
time= 3.1min
[CV 1/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.945 total
time= 3.6min
[CV 1/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 3.1min
[CV 3/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.948 total
time= 3.5min
[CV 1/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.968 total
time= 42.3s
[CV 3/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 4.0min
[CV 2/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.949 total
time= 2.2min
[CV 2/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 4.4min
[CV 2/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.968 total
time= 42.2s
[CV 5/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 4.4min
[CV 3/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.949 total
time= 2.5min
[CV 3/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total
time= 41.2s
[CV 1/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.947 total
time= 2.9min
[CV 4/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 44.3s
[CV 5/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total

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time= 42.5s
[CV 5/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.949 total
time= 2.7min
[CV 4/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 3.0min
[CV 1/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 59.7s
[CV 2/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 1.0min
[CV 3/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.928
total time= 58.7s
[CV 4/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 58.2s
[CV 5/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 58.2s
[CV 1/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 3.9min
[CV 4/5] END classifier=SVC(), classifier__C=7.943282347242813,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 9.5min
[CV 5/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.951 total
time= 2.1min
[CV 2/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.950 total
time= 2.7min
[CV 4/5] END classifier=SVC(), classifier__C=11.437558630495378,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 7.7min
[CV 3/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 5.2min
[CV 1/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 41.2s
[CV 3/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.950 total
time= 2.9min
[CV 1/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.950 total

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time= 3.2min
[CV 2/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 5.7min
[CV 2/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.968 total
time= 40.3s
[CV 3/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.967 total
time= 41.4s
[CV 4/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 47.1s
[CV 5/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 42.5s
[CV 5/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 6.0min
[CV 4/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 3.7min
[CV 1/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 59.6s
[CV 2/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 1.1min
[CV 3/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.929
total time= 58.2s
[CV 4/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 1.0min
[CV 5/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.925
total time= 1.0min
[CV 1/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 4.7min
[CV 1/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.952 total
time= 2.5min
[CV 1/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 39.4s
[CV 2/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.951 total

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time= 2.5min
[CV 3/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.952 total
time= 2.4min
[CV 5/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.952 total
time= 2.3min
[CV 3/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.968 total
time= 43.5s
[CV 2/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 44.4s
[CV 5/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 44.2s
[CV 4/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 54.8s
[CV 1/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 1.1min
[CV 4/5] END classifier=SVC(), classifier__C=16.46897865482869,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 9.6min
[CV 3/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.929
total time= 1.1min
[CV 2/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 1.2min
[CV 4/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 1.1min
[CV 2/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 7.4min
[CV 5/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.925
total time= 1.1min
[CV 3/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 7.6min
[CV 5/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 7.0min
[CV 4/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.960 total

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time= 4.5min
[CV 1/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 6.0min
[CV 1/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.954 total
time= 2.8min
[CV 2/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.953 total
time= 3.0min
[CV 5/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.954 total
time= 2.7min
[CV 3/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.953 total
time= 2.9min
[CV 1/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 42.9s
[CV 2/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 42.9s
[CV 3/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.968 total
time= 44.8s
[CV 5/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 45.5s
[CV 4/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 1.0min
[CV 1/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 1.2min
[CV 2/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 1.2min
[CV 3/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.928
total time= 1.3min
[CV 4/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 1.2min
[CV 5/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.925
total time= 1.3min
[CV 5/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.911 total time= 9.2min
[CV 4/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.961 total
time= 5.7min
[CV 3/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time=10.1min
[CV 1/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.955 total
time= 3.2min
[CV 2/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time=11.2min
[CV 2/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.954 total
time= 3.3min
[CV 5/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.955 total
time= 3.0min
[CV 1/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 45.9s
[CV 2/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 47.4s
[CV 1/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 8.8min
[CV 3/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 44.9s
[CV 3/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.955 total
time= 5.1min
[CV 5/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 52.1s
[CV 4/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 1.3min
[CV 1/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 1.6min
[CV 3/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.929
total time= 1.5min
[CV 2/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923

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total time= 1.6min
[CV 4/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 1.4min
[CV 5/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.925
total time= 1.5min
[CV 4/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.963 total
time= 7.8min
[CV 5/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time=13.4min
[CV 3/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time=14.4min
[CV 2/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.955 total
time= 4.0min
[CV 1/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 4.2min
[CV 3/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.956 total
time= 4.1min
[CV 4/5] END classifier=SVC(), classifier__C=23.71373705661655,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time=23.7min
[CV 5/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.956 total
time= 4.0min
[CV 1/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 52.9s
[CV 2/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.969 total
time= 51.5s
[CV 2/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time=17.7min
[CV 1/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time=12.4min
[CV 3/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 50.9s
[CV 4/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total

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time= 1.3min
[CV 5/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 51.9s
[CV 1/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 1.6min
[CV 2/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 1.5min
[CV 3/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.929
total time= 1.5min
[CV 4/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 1.5min
[CV 5/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.925
total time= 1.6min
[CV 4/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.963 total
time= 9.4min
[CV 1/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 5.0min
[CV 3/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 5.4min
[CV 4/5] END classifier=SVC(), classifier__C=49.16620262745641,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time=25.4min
[CV 3/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time=19.8min
[CV 5/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 4.9min
[CV 5/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time=19.9min
[CV 2/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.956 total
time= 7.5min
[CV 1/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 1.0min
[CV 2/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total

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time= 1.0min
[CV 3/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 1.1min
[CV 4/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 1.8min
[CV 5/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 1.1min
[CV 1/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 2.1min
[CV 2/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 2.2min
[CV 4/5] END classifier=SVC(), classifier__C=34.145488738336006,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time=36.9min
[CV 1/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time=19.8min
[CV 4/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.964 total
time=13.0min
[CV 3/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.929
total time= 2.3min
[CV 4/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 2.3min
[CV 5/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.925
total time= 2.3min
[CV 2/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time=31.5min
[CV 1/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 8.3min
[CV 5/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 7.1min
[CV 2/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.956 total
time= 9.0min
[CV 3/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.957 total

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time= 8.5min
[CV 2/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time=29.3min
[CV 3/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time=29.1min
[CV 1/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 1.4min
[CV 2/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 1.4min
[CV 3/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 1.5min
[CV 5/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time=31.9min
[CV 4/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 2.5min
[CV 5/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.972 total
time= 1.5min
[CV 1/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time=25.3min
[CV 1/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 2.7min
[CV 2/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.923
total time= 2.7min
[CV 3/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.929
total time= 2.6min
[CV 4/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 2.5min
[CV 4/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.964 total
time=17.7min
[CV 5/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.925
total time= 2.7min
[CV 4/5] END classifier=SVC(), classifier__C=101.93734859388726,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.921 total time=38.1min
[CV 2/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.956 total
time= 8.7min
[CV 1/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.959 total
time=10.3min
[CV 5/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 9.5min
[CV 3/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time=41.2min
[CV 2/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time=42.5min
[CV 3/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.958 total
time=15.6min
[CV 1/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 1.6min
[CV 2/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 1.6min
[CV 1/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time=33.8min
[CV 3/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 1.4min
[CV 4/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 2.5min
[CV 5/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.972 total
time= 1.4min
[CV 5/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time=46.0min
[CV 1/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 2.8min
[CV 4/5] END classifier=SVC(), classifier__C=146.7799267622069,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time=48.4min
[CV 4/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934

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total time= 2.7min
[CV 2/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 3.0min
[CV 3/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.929
total time= 2.9min
[CV 4/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.965 total
time=23.1min
[CV 5/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.926
total time= 2.7min
[CV 1/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.960 total
time=10.1min
[CV 5/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.959 total
time=11.7min
[CV 3/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.959 total
time=12.6min
[CV 2/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.956 total
time=12.8min
[CV 2/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time=56.3min
[CV 3/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time=56.2min
[CV 5/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time=55.8min
[CV 1/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 1.8min
[CV 2/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 1.8min
[CV 3/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.970 total
time= 1.8min
[CV 5/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.972 total
time= 1.8min
[CV 1/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.909 total time=49.2min
[CV 4/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=rbf, preprocessoer=PCA(n_components=6);, score=0.971 total
time= 3.4min
[CV 1/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.918
total time= 3.5min
[CV 4/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.965 total
time=29.7min
[CV 2/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.924
total time= 3.5min
[CV 3/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.929
total time= 3.8min
[CV 4/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.934
total time= 3.3min
[CV 4/5] END classifier=SVC(), classifier__C=70.79457843841374,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time=100.7min
[CV 5/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=rbf, preprocessoer=LinearDiscriminantAnalysis();, score=0.926
total time= 3.8min
[CV 1/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.960 total
time=12.9min
[CV 2/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.957 total
time=13.6min
[CV 5/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.959 total
time=13.2min
[CV 3/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.959 total
time=16.8min
[CV 1/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time=60.4min
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.714
total time= 0.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.743
total time= 0.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.783

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total time= 0.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.820
total time= 0.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.734
total time= 0.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.836 total time= 0.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.843 total time= 0.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.825 total time= 0.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.848 total time= 0.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.850 total time= 0.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.758
total time= 1.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.807
total time= 1.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.819
total time= 1.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.749
total time= 1.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.805
total time= 1.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.841 total time= 0.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.840 total time= 0.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.843 total time= 0.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.846 total time= 0.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.840 total time= 0.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.712
total time= 1.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.765
total time= 1.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.759
total time= 1.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.791
total time= 1.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.777
total time= 1.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.833 total time= 1.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.849 total time= 1.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.844 total time= 0.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.848 total time= 0.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.846 total time= 0.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.811
total time= 1.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.772
total time= 1.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.823
total time= 1.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.785
total time= 1.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.742

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total time= 2.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.838 total time= 1.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.835 total time= 1.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.844 total time= 1.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.849 total time= 1.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.845 total time= 1.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.814
total time= 2.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.749
total time= 1.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.828
total time= 2.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.795
total time= 1.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.744
total time= 2.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.842 total time= 1.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.849 total time= 1.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.847 total time= 1.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.848 total time= 1.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.845 total time= 1.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.729

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total time= 2.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.750
total time= 2.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.758
total time= 2.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.782
total time= 2.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.796
total time= 2.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.837 total time= 1.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.844 total time= 1.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.846 total time= 1.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.846 total time= 1.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.849 total time= 1.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.745
total time= 2.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.747
total time= 2.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.757
total time= 2.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.794
total time= 2.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.745
total time= 2.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.842 total time= 1.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.853 total time= 1.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.846 total time= 1.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.849 total time= 1.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.846 total time= 1.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.778
total time= 2.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.796
total time= 2.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.813
total time= 2.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.780
total time= 3.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.750
total time= 3.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.840 total time= 1.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.850 total time= 1.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.847 total time= 1.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.848 total time= 1.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.845 total time= 1.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.813
total time= 3.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.824
total time= 3.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.821

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total time= 3.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.750
total time= 3.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.744
total time= 3.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.839 total time= 1.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.849 total time= 1.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.847 total time= 1.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.849 total time= 1.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.845 total time= 2.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.813
total time= 4.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.782
total time= 4.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.815
total time= 3.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.784
total time= 3.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.756
total time= 3.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.840 total time= 2.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.850 total time= 1.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.846 total time= 2.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.845 total time= 1.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=2,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.845 total time= 2.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.910
total time= 2.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.913
total time= 2.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.910
total time= 2.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.881
total time= 1.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.898
total time= 1.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 1.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 1.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 1.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.930 total time= 1.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 1.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.906
total time= 2.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.910
total time= 2.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.909
total time= 2.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.886
total time= 2.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.905

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total time= 2.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 1.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 1.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 1.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.932 total time= 1.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 1.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.914
total time= 3.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.911
total time= 3.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.909
total time= 3.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.878
total time= 3.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.908
total time= 3.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 2.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 2.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 2.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.933 total time= 1.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 2.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.914

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total time= 4.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.909
total time= 4.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.907
total time= 4.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.881
total time= 4.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.907
total time= 4.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 2.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 2.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 2.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.932 total time= 2.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 2.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.915
total time= 5.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.911
total time= 5.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.912
total time= 5.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.882
total time= 5.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.914
total time= 5.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 3.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
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score=0.921 total time= 3.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 3.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.930 total time= 3.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 3.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.909
total time= 6.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.912
total time= 6.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.913
total time= 6.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.881
total time= 5.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.912
total time= 6.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 4.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 3.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.928 total time= 3.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.931 total time= 3.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 3.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.911
total time= 7.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.913
total time= 7.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.913

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total time= 7.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.882
total time= 6.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.912
total time= 6.8s
[CV 5/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time=76.7min
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 4.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 4.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 4.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.932 total time= 4.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 4.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.909
total time= 8.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.915
total time= 8.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.880
total time= 7.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.910
total time= 8.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 4.5s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.913
total time= 7.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 4.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.928 total time= 4.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.932 total time= 4.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 4.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.912
total time= 9.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.913
total time= 9.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.910
total time= 10.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.880
total time= 9.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 5.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.910
total time= 9.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 5.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.928 total time= 5.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.933 total time= 5.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 5.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.910
total time= 10.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.913
total time= 10.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.882
total time= 9.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.912

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total time= 13.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 5.5s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.910
total time= 9.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 6.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.928 total time= 6.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.932 total time= 6.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.939
total time= 3.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=7,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 5.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.934
total time= 2.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.937
total time= 3.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.929
total time= 3.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.937
total time= 3.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 1.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 1.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 1.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.933 total time= 1.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.924 total time= 1.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.941
total time= 4.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.939
total time= 4.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.935
total time= 4.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.929
total time= 4.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.939
total time= 4.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 2.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 2.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 2.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.933 total time= 2.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 2.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.939
total time= 5.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.941
total time= 6.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.936
total time= 5.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.931
total time= 5.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 3.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.938

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total time= 6.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 3.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 3.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.934 total time= 2.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 3.2s
[CV 4/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=poly, preprocessoer=PCA(n_components=6);, score=0.965 total
time=40.0min
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.941
total time= 6.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.939
total time= 8.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.935
total time= 7.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.928
total time= 6.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 4.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 3.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.937
total time= 6.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 3.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.930 total time= 5.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.934 total time= 4.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.940

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total time= 8.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.936
total time= 8.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.940
total time= 9.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 5.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.931
total time= 8.5s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.939
total time= 8.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 5.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 4.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.934 total time= 5.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 5.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.942
total time= 10.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.938
total time= 10.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.937
total time= 10.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 5.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.939
total time= 10.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.931
total time= 10.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.923 total time= 5.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 5.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.935 total time= 5.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 6.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.940
total time= 12.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.938
total time= 13.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.936
total time= 12.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.939
total time= 10.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.932
total time= 11.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 6.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 5.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.930 total time= 6.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.934 total time= 6.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 5.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.942
total time= 12.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.939
total time= 12.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.936

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total time= 12.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 6.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.933
total time= 11.5s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.939
total time= 11.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 6.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.930 total time= 6.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.934 total time= 7.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 6.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.941
total time= 12.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.940
total time= 13.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.935
total time= 14.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.931
total time= 13.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 7.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.941
total time= 13.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 7.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 7.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.934 total time= 8.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 7.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.941
total time= 15.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.940
total time= 16.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.937
total time= 15.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.932
total time= 16.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 8.9s
[CV 2/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time=90.1min
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.939
total time= 16.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 8.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 9.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.934 total time= 8.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.947
total time= 4.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.946
total time= 4.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=12,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 9.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.944
total time= 4.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.913 total time= 2.5s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.946
total time= 3.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 2.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.939
total time= 4.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 2.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 2.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 2.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.949
total time= 5.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.945
total time= 5.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.945
total time= 6.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.940
total time= 6.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 2.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 3.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.945
total time= 6.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 3.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 3.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.928 total time= 4.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.949
total time= 6.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.948
total time= 7.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.944
total time= 6.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.943
total time= 7.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 4.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 4.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 3.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 4.1s
[CV 3/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time=89.4min
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 4.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.949
total time= 9.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.947
total time= 9.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.945
total time= 8.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.943
total time= 8.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.947

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total time= 9.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 5.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 5.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 4.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.930 total time= 4.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 4.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.949
total time= 10.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.948
total time= 9.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.941
total time= 9.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.946
total time= 10.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.946
total time= 10.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 5.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 5.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 5.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 5.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 6.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.950

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total time= 13.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.948
total time= 12.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.944
total time= 12.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.947
total time= 12.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.945
total time= 13.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 7.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 7.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.930 total time= 6.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 6.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 7.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.947
total time= 13.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.950
total time= 14.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.943
total time= 13.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.946
total time= 14.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.946
total time= 14.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 7.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
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score=0.915 total time= 7.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 7.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 8.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 7.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.950
total time= 15.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.946
total time= 16.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.949
total time= 17.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.948
total time= 15.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.943
total time= 16.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 8.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 8.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.930 total time= 8.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 8.5s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 8.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.950
total time= 17.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.942
total time= 16.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.949

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total time= 18.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.946
total time= 18.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.947
total time= 17.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 10.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 9.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.929 total time= 8.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 9.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 9.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.950
total time= 19.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.946
total time= 18.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.944
total time= 18.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.948
total time= 20.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.948
total time= 22.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 10.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 10.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.930 total time= 11.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.925 total time= 11.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.948
total time= 4.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.948
total time= 4.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=18,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 10.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.937
total time= 3.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.945
total time= 4.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 2.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 2.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 2.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 2.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.945
total time= 4.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 2.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.948
total time= 5.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.947
total time= 5.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.950
total time= 5.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.942
total time= 5.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.949

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total time= 5.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 2.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 2.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 2.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 3.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 3.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.950
total time= 6.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.949
total time= 7.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.949
total time= 7.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.942
total time= 6.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.949
total time= 6.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 3.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 3.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 4.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 3.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 3.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.950

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total time= 8.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.951
total time= 9.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.943
total time= 8.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.948
total time= 9.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.949
total time= 9.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 4.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 5.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 4.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 5.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 5.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.953
total time= 10.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.949
total time= 10.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.950
total time= 11.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.943
total time= 9.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.949
total time= 11.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 6.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
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score=0.926 total time= 5.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 5.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 5.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 6.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.951
total time= 12.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.949
total time= 12.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.953
total time= 13.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.945
total time= 12.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.950
total time= 12.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 6.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 6.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 6.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 8.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 7.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.951
total time= 14.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.952
total time= 13.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.948

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total time= 15.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.943
total time= 14.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.951
total time= 14.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 7.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 7.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 8.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 8.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 9.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.951
total time= 17.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.952
total time= 19.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.949
total time= 18.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.949
total time= 17.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.944
total time= 17.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 8.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 9.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.928 total time= 8.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.917 total time= 9.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 9.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.952
total time= 19.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.951
total time= 19.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.952
total time= 18.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.945
total time= 18.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.949
total time= 20.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 9.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 10.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 10.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 9.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 10.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.951
total time= 18.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.954
total time= 20.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.945
total time= 18.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.951
total time= 19.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.949

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total time= 19.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 10.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 11.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 11.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.949
total time= 4.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 10.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=23,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 11.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.949
total time= 4.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 2.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.946
total time= 4.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 2.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.936
total time= 4.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.946
total time= 4.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 2.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 2.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 2.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.951

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total time= 5.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.950
total time= 5.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.949
total time= 5.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.941
total time= 5.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 3.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 3.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.948
total time= 7.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 3.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 3.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 3.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.951
total time= 7.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.952
total time= 7.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.943
total time= 7.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.947
total time= 8.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.947
total time= 7.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 4.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.911 total time= 4.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 4.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 4.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 4.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.952
total time= 9.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.945
total time= 8.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.951
total time= 10.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.949
total time= 9.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.949
total time= 10.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 5.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 6.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 5.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 5.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 5.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.952
total time= 12.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.952
total time= 11.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.949

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total time= 11.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.945
total time= 10.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.949
total time= 14.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 6.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 6.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 6.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 6.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 6.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.952
total time= 12.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.953
total time= 13.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.950
total time= 13.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.945
total time= 15.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.952
total time= 14.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 7.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 8.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 7.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.926 total time= 6.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 7.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.953
total time= 15.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.952
total time= 15.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.949
total time= 15.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.945
total time= 15.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.952
total time= 15.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 7.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 10.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 8.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 8.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 9.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.954
total time= 17.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.950
total time= 16.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.944
total time= 16.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.952
total time= 19.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.950

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total time= 17.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 9.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 9.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 9.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 10.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 9.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.952
total time= 17.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.953
total time= 19.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.950
total time= 18.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.946
total time= 19.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.951
total time= 19.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 9.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 11.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 10.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 9.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 10.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.953

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total time= 21.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.950
total time= 20.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.952
total time= 21.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.944
total time= 20.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.951
total time= 20.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 10.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 11.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 11.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.947
total time= 4.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 11.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.948
total time= 4.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=28,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 11.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.945
total time= 4.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 2.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.908 total time= 2.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.947
total time= 4.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.940

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total time= 5.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 2.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 2.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 2.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.951
total time= 5.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.950
total time= 6.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.949
total time= 6.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.940
total time= 5.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.950
total time= 6.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 3.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 2.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 2.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 3.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 4.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.952
total time= 7.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.951
total time= 7.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.949

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total time= 7.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.943
total time= 7.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.951
total time= 8.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 4.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 4.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 4.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 4.5s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 3.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.953
total time= 11.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.951
total time= 10.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.950
total time= 10.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.945
total time= 10.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.948
total time= 11.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 5.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 5.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 6.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
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score=0.926 total time= 6.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 5.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.953
total time= 11.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.953
total time= 12.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.945
total time= 11.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.950
total time= 12.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.951
total time= 12.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 6.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 6.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 6.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 7.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 6.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.952
total time= 14.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.951
total time= 16.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.951
total time= 15.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.951
total time= 14.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.945

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total time= 16.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 8.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 6.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 7.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 8.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 7.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.953
total time= 15.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.953
total time= 15.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.950
total time= 15.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.944
total time= 15.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.951
total time= 15.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 8.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 9.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 9.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 8.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 8.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.953

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total time= 17.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.944
total time= 16.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.952
total time= 17.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.951
total time= 18.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.951
total time= 17.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 8.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 9.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 9.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.928 total time= 8.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 9.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.955
total time= 18.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.950
total time= 18.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.952
total time= 20.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.944
total time= 19.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.952
total time= 18.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 10.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
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score=0.916 total time= 9.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 10.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 9.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 11.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.953
total time= 22.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.945
total time= 20.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.950
total time= 21.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.952
total time= 24.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.950
total time= 21.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 12.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 12.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 12.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 11.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.948
total time= 4.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=34,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 10.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 2.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.946

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total time= 4.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.938
total time= 4.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.946
total time= 4.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.947
total time= 4.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 2.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 2.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 2.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 2.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.951
total time= 5.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.948
total time= 6.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.940
total time= 5.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.948
total time= 6.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.947
total time= 5.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 3.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 3.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 3.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.924 total time= 3.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 3.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.951
total time= 7.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.950
total time= 6.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.949
total time= 7.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.948
total time= 7.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.943
total time= 9.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 3.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 3.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 3.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 4.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 4.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.953
total time= 9.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.952
total time= 9.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.950
total time= 9.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.943
total time= 9.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.912 total time= 5.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.952
total time= 11.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 5.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 5.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 6.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 5.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.950
total time= 12.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.953
total time= 14.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.950
total time= 13.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.951
total time= 12.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.944
total time= 14.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 7.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 6.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 8.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 8.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 7.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.955

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total time= 14.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.951
total time= 15.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.951
total time= 15.5s
[CV 4/5] END classifier=SVC(), classifier__C=211.34890398366454,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time=121.2min
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.945
total time= 15.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 7.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.950
total time= 15.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 7.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 8.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 7.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 8.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 8.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.953
total time= 16.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.952
total time= 18.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.949
total time= 16.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.952
total time= 16.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.945

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total time= 17.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 8.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 8.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 8.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 10.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 11.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.954
total time= 17.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.945
total time= 16.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.950
total time= 18.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.952
total time= 19.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.951
total time= 18.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 9.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 9.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 9.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 10.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 9.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.953

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total time= 21.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.952
total time= 20.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.946
total time= 19.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.950
total time= 23.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.951
total time= 23.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 11.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 9.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 12.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 11.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 11.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.953
total time= 22.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.945
total time= 22.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.950
total time= 24.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.951
total time= 22.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.954
total time= 28.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.950
total time= 5.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
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score=0.917 total time= 13.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 12.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.947
total time= 5.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.946
total time= 4.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.909 total time= 2.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.939
total time= 5.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 2.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 13.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=39,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 13.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.944
total time= 5.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 2.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 2.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 2.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.908 total time= 3.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.950
total time= 5.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.948
total time= 5.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.941

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total time= 5.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.951
total time= 6.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.947
total time= 6.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 3.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 3.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 3.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 3.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 4.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.952
total time= 7.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.948
total time= 8.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.951
total time= 8.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.941
total time= 7.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.951
total time= 7.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 3.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 4.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 3.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.924 total time= 4.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 4.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.952
total time= 9.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.943
total time= 8.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.951
total time= 10.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.949
total time= 10.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.951
total time= 9.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 5.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 5.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 5.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 5.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 6.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.953
total time= 11.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.952
total time= 11.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.949
total time= 11.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.950
total time= 11.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.944

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total time= 11.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 5.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 6.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 5.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 5.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 6.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.953
total time= 13.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.951
total time= 12.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.944
total time= 12.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.949
total time= 13.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.952
total time= 12.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 6.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 7.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 8.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 7.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 7.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.952

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total time= 15.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.952
total time= 15.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.951
total time= 14.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.945
total time= 15.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.952
total time= 14.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time= 7.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 7.4s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 8.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 8.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 9.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.953
total time= 16.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.953
total time= 19.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.952
total time= 16.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.945
total time= 16.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.950
total time= 16.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 8.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
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score=0.921 total time= 9.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 9.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 9.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 9.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.953
total time= 18.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.954
total time= 18.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.951
total time= 18.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.945
total time= 18.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.951
total time= 17.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 9.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 9.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 9.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 9.6s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 11.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.953
total time= 19.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.954
total time= 21.3s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.951

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total time= 19.7s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.945
total time= 20.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.951
total time= 22.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.948
total time= 4.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.948
total time= 4.5s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 12.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 10.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 10.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.946
total time= 5.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.939
total time= 3.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.908 total time= 2.5s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=44,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 11.2s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 2.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=10, preprocessoer=PCA(n_components=6);, score=0.946
total time= 4.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.918 total time= 2.4s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 2.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=10, preprocessoer=LinearDiscriminantAnalysis();,
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score=0.911 total time= 2.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 3.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.950
total time= 5.9s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.950
total time= 5.8s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.949
total time= 6.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.942
total time= 5.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=14, preprocessoer=PCA(n_components=6);, score=0.949
total time= 5.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 3.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 3.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 3.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=14, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 3.3s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time= 4.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.951
total time= 7.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.951
total time= 7.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.948
total time= 8.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.943
total time= 8.0s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=18, preprocessoer=PCA(n_components=6);, score=0.949

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total time= 7.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 4.1s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.920 total time= 4.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 3.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=18, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 3.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.910 total time= 5.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.952
total time= 10.0s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.954
total time= 9.8s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.950
total time= 9.5s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.950
total time= 9.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 4.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=23, preprocessoer=PCA(n_components=6);, score=0.944
total time= 12.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 5.1s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 4.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=23, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 4.9s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 5.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.953

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total time= 11.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.949
total time= 11.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.953
total time= 11.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.944
total time= 10.6s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=27, preprocessoer=PCA(n_components=6);, score=0.950
total time= 11.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 6.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 6.0s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 6.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=27, preprocessoer=LinearDiscriminantAnalysis();,
score=0.914 total time= 8.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.952
total time= 14.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 6.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.944
total time= 13.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.953
total time= 14.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.950
total time= 14.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 6.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=32, preprocessoer=PCA(n_components=6);, score=0.949
total time= 15.7s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.922 total time= 7.2s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.926 total time= 6.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=32, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 8.1s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 8.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.953
total time= 17.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.951
total time= 15.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.944
total time= 15.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.952
total time= 16.5s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=36, preprocessoer=PCA(n_components=6);, score=0.951
total time= 15.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 8.5s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 8.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.925 total time= 9.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=36, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 8.7s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time= 8.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.953
total time= 18.0s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.955
total time= 18.8s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.945

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total time= 16.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.950
total time= 20.6s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 9.9s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=41, preprocessoer=PCA(n_components=6);, score=0.952
total time= 19.0s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 9.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 10.4s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=41, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 9.2s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 10.5s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.953
total time= 21.1s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.953
total time= 19.3s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.950
total time= 19.7s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.952
total time= 18.9s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=45, preprocessoer=PCA(n_components=6);, score=0.945
total time= 19.9s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.916 total time= 10.2s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.922 total time= 10.3s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
score=0.928 total time= 9.8s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=45, preprocessoer=LinearDiscriminantAnalysis();,
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score=0.917 total time= 10.7s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.953
total time= 20.8s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 11.4s
[CV 1/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.954
total time= 21.6s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.949
total time= 21.1s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.952
total time= 20.6s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=50, preprocessoer=PCA(n_components=6);, score=0.943
total time= 22.2s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.943 total
time= 1.1s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.945 total
time= 0.9s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.948 total
time= 1.0s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.952 total
time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.908 total time= 0.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.2s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.2s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.946 total
time= 1.0s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,

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score=0.912 total time= 0.3s
[CV 2/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.917 total time= 11.4s
[CV 3/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 11.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.943
total time= 1.5s
[CV 4/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis();,
score=0.927 total time= 11.8s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.952
total time= 0.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.948
total time= 1.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.908 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.945
total time= 1.9s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.7s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.943 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.945 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.946 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
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score=0.952 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.948 total time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.946
total time= 1.9s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.908 total time= 0.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.953 total
time= 0.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.908 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.947 total
time= 0.8s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.947 total
time= 1.1s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.948 total
time= 1.1s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.945 total
time= 1.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.2s
[CV 5/5] END classifier=RandomForestClassifier(), classifier__max_depth=50,
classifier__n_estimators=50, preprocessoer=LinearDiscriminantAnalysis(); ,

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score=0.915 total time= 12.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.2s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.908 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.953
total time= 0.9s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.948
total time= 1.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.947
total time= 1.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.945
total time= 1.8s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.947
total time= 1.9s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.945 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.7s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.947 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.948 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
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score=0.953 total time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.947 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.908 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.1439903320881633,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.953 total
time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.923 total time= 0.2s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.949 total
time= 1.2s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.947 total
time= 1.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.948 total
time= 1.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.945 total

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time= 1.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.953
total time= 1.0s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.948
total time= 1.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.949
total time= 1.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.945
total time= 2.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.948 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.947
total time= 2.1s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.945 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.949 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.953 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
```

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score=0.923 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.947 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
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score=0.907 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.2073321573485955,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.954 total
time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.947 total
time= 1.2s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.950 total
time= 1.1s
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classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.948 total
time= 1.5s
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classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.954
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[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.949 total
time= 2.1s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(); ,

```

```

score=0.907 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.7s
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classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.947
total time= 1.9s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.949
total time= 2.0s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.923 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.950
total time= 2.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.947 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.949 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.950 total time= 0.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
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classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.954 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.948 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.948

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total time= 2.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.29853826189179594,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.923 total time= 0.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.955 total
time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.2s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.948 total
time= 1.2s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.950 total
time= 1.3s
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classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.950 total
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classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.950 total
time= 1.3s
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classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.954
total time= 1.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.950
total time= 1.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(); ,

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score=0.915 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.948
total time= 1.9s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.950
total time= 2.0s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.7s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.950
total time= 2.1s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.948 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.950 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.950 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.954 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.950 total time= 0.7s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.42986623470822766,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,

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```

score=0.912 total time= 0.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.956 total
time= 0.7s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.950 total
time= 1.3s[CV 4/5] END classifier=LogisticRegression(),
classifier__C=0.6189658188912605, classifier__solver=lbfgs,
preprocessoer=LinearDiscriminantAnalysis();, score=0.924 total time= 0.3s

[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.951 total
time= 1.2s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.951 total
time= 1.2s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.3s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```
n_iter_i = _check_optimize_result(
```

```
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.951 total
time= 1.8s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
```

```

classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.956
total time= 1.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.951
total time= 1.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.915 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.924 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.951
total time= 2.2s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.950
total time= 2.2s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.951
total time= 2.1s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.919 total time= 0.7s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.951 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.951 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.950 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.956 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.912 total time= 0.9s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.951 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(),
score=0.907 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(),
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,

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classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.6189658188912605,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.912 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.907 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.957 total
time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.915 total time= 0.2s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.912 total time= 0.3s
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classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.952 total
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classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.952 total
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[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.952 total
time= 1.8s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

n\_iter\_i = \_check\_optimize\_result(

```

[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.951 total
time= 2.0s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.951
total time= 1.9s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.957
total time= 1.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.952
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classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.952
total time= 2.2s
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classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
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classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
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classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.952 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.7s
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classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
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[CV 4/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.957 total time= 0.7s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
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classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.952
total time= 2.7s

```

```

[CV 1/5] END classifier=LogisticRegression(), classifier__C=0.8912509381337455,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.4s
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classifier__C=0.8912509381337455, classifier__solver=newton-cholesky,
preprocessoer=LinearDiscriminantAnalysis(); , score=0.924 total time= 0.3s

[CV 1/5] END classifier=LogisticRegression(), classifier__C=1.2833151855576512,
classifier__solver=lbgfs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=1.2833151855576512,
classifier__solver=lbgfs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=1.2833151855576512,
classifier__solver=lbgfs, preprocessoer=PCA(n_components=6); , score=0.957 total
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classifier__solver=lbgfs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=1.2833151855576512,
classifier__solver=lbgfs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
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classifier__solver=lbgfs, preprocessoer=LinearDiscriminantAnalysis(); ,
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classifier__solver=lbgfs, preprocessoer=PCA(n_components=6); , score=0.953 total
time= 1.4s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbgfs failed
to converge (status=1):
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```

Increase the number of iterations (`max_iter`) or scale the data as shown in:  
<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:  
[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result()

[CV 5/5] END classifier=LogisticRegression(), classifier__C=1.2833151855576512,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.953 total
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score=0.924 total time= 0.6s
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classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s
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classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
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```

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classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
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classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=1.2833151855576512,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.953
total time= 2.9s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=1.2833151855576512,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=1.2833151855576512,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=lbgf, preprocessoer=PCA(n_components=6); , score=0.958 total
time= 0.7s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=lbgf, preprocessoer=PCA(n_components=6); , score=0.954 total
time= 1.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=lbgf, preprocessoer=PCA(n_components=6); , score=0.954 total
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```

```

classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.953 total
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classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.954 total
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classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.907 total time= 0.7s
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score=0.915 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.954
total time= 1.8s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.924 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.912 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.919 total time= 0.9s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.954
total time= 2.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.953 total time= 0.7s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.954 total time= 0.7s
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classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
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classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(),
score=0.915 total time= 0.3s
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classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.954 total time= 0.6s
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```

```

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score=0.907 total time= 0.6s
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classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
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classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.954
total time= 3.2s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=1.8478497974222907,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.958 total
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classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
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classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
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/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (`max_iter`) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

```

https://scikit-learn.org/stable/modules/linear_model.html#logistic-
regression
n_iter_i = _check_optimize_result(
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
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/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
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regression
n_iter_i = _check_optimize_result(
[CV 5/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.955 total
time= 1.9s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.955
total time= 1.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.955
total time= 1.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,

```

```

classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.958
total time= 1.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.955
total time= 2.2s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.955 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.955 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.955 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.958 total time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.955 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=2.6607250597988084,

```

```

classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.955
total time= 3.0s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=lbfsgs, preprocessoer=LinearDiscriminantAnalysis();
score=0.907 total time= 0.3s [CV 4/5] END classifier=LogisticRegression(),
classifier__C=3.831186849557287, classifier__solver=lbfsgs,
preprocessoer=PCA(n_components=6);, score=0.959 total time= 0.6s

[CV 3/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=lbfsgs, preprocessoer=LinearDiscriminantAnalysis();
score=0.919 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=lbfsgs, preprocessoer=LinearDiscriminantAnalysis();
score=0.915 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=lbfsgs, preprocessoer=PCA(n_components=6);, score=0.955 total
time= 1.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=lbfsgs, preprocessoer=LinearDiscriminantAnalysis();
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=lbfsgs, preprocessoer=LinearDiscriminantAnalysis();
score=0.912 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=lbfsgs, preprocessoer=PCA(n_components=6);, score=0.955 total
time= 1.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=lbfsgs, preprocessoer=PCA(n_components=6);, score=0.956 total
time= 1.5s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfsgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:  
<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:  
[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result(
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfsgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (`max_iter`) or scale the data as shown in:  
<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:  
[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result(
    [CV 5/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.956 total
    time= 1.3s
    [CV 1/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
    score=0.907 total time= 0.5s
    [CV 4/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.958
    total time= 1.2s
    [CV 2/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
    score=0.915 total time= 0.6s
    [CV 1/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.955
    total time= 1.8s
    [CV 3/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.955
    total time= 1.9s
    [CV 4/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
    score=0.924 total time= 0.6s
    [CV 3/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
    score=0.919 total time= 0.9s
    [CV 5/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
    score=0.912 total time= 0.6s
    [CV 1/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
    score=0.956 total time= 0.5s
    [CV 2/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.955
    total time= 2.6s
    [CV 2/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
    score=0.955 total time= 0.6s
    [CV 4/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
    score=0.959 total time= 0.5s
    [CV 1/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
    classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
```

```

score=0.907 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.955
total time= 2.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.955 total time= 0.8s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.956 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=3.831186849557287,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.960 total
time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.956 total
time= 1.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.956 total
time= 1.2s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.956 total

```

```

time= 1.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.956 total
time= 1.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
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classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
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[CV 1/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.956
total time= 1.9s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.956
total time= 1.9s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.956
total time= 2.2s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.956 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.956 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.956 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.956 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.956

```

```

total time= 2.8s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=5.51653866759558,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.960 total time= 1.1s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=lbgf, preprocessoer=PCA(n_components=6); , score=0.961 total
time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=lbgf, preprocessoer=PCA(n_components=6); , score=0.957 total
time= 1.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=lbgf, preprocessoer=PCA(n_components=6); , score=0.956 total
time= 1.6s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbgf failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

Increase the number of iterations (max_iter) or scale the data as shown in:
```

```
https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
    https://scikit-learn.org/stable/modules/linear_model.html#logistic-
regression
    n_iter_i = _check_optimize_result(
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.
```

Increase the number of iterations (max\_iter) or scale the data as shown in:

```
https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
    https://scikit-learn.org/stable/modules/linear_model.html#logistic-
regression
    n_iter_i = _check_optimize_result(
[CV 1/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 1.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 1.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.961
total time= 1.8s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.957
total time= 2.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.956
total time= 2.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.957
total time= 2.4s
```

```

[CV 5/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.957 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.957 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.956 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.961 total time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.957 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=7.943282347242813,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.957
total time= 3.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.961 total
time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s

```

```

[CV 4/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 1.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 1.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 1.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 1.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 1.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.957
total time= 2.2s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.957
total time= 2.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.957 total time= 0.7s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.957
total time= 2.7s

```

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[CV 3/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.957 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.957 total time= 0.9s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.961 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.957
total time= 3.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.957 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=11.437558630495378,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.961 total
time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.958 total
time= 1.1s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s

```

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[CV 5/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 1.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.7s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.957 total
time= 1.9s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.961
total time= 1.9s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.956
total time= 2.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 2.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.958
total time= 2.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.957 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s

```

```

[CV 2/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.958 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.961 total time= 0.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.958 total time= 1.0s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.957
total time= 3.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=16.46897865482869,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.962 total
time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.958 total
time= 1.2s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (`max_iter`) or scale the data as shown in:  
<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:  
[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result()

[CV 2/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 1.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(),
score=0.912 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 1.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.907 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.915 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.962
total time= 1.9s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 2.1s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.919 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.957
total time= 2.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.912 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis(),
score=0.924 total time= 0.8s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
```

```

classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.958
total time= 2.8s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.958
total time= 2.9s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.958 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.958 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.958 total time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.962 total time= 0.8s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=23.71373705661655,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=lbgf, preprocessoer=PCA(n_components=6);, score=0.962 total
time= 0.7s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,

```

```

classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 1.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
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classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.3s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result()

[CV 5/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 1.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.961
total time= 1.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 2.0s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s

```

```

[CV 3/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.958
total time= 2.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.958 total time= 0.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.958 total time= 0.7s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.962 total time= 0.8s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.957
total time= 3.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 3.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=34.145488738336006,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=lbgf, preprocessoer=PCA(n_components=6);, score=0.962 total
time= 0.6s

```

```

[CV 1/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.2s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.3s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (`max_iter`) or scale the data as shown in:  
<https://scikit-learn.org/stable/modules/preprocessing.html>  
Please also refer to the documentation for alternative solver options:  
[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result()

[CV 2/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 2.0s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (`max_iter`) or scale the data as shown in:  
<https://scikit-learn.org/stable/modules/preprocessing.html>  
Please also refer to the documentation for alternative solver options:  
[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result()

[CV 5/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 2.2s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
```

```

classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.962
total time= 1.8s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.957
total time= 2.2s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 2.4s
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classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.958
total time= 3.0s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.958 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.960 total time= 0.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.962 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,

```

```

classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.912 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.915 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.962 total
time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=49.16620262745641,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.959
total time= 3.9s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.907 total time= 0.2s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.959 total
time= 1.1s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.959 total
time= 1.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.919 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.915 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.924 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.958 total
time= 1.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ,
score=0.912 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.959 total
time= 1.5s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (`max_iter`) or scale the data as shown in:  
<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:  
[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```
n_iter_i = _check_optimize_result(
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.
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Increase the number of iterations (`max_iter`) or scale the data as shown in:  
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[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```
n_iter_i = _check_optimize_result()

[CV 1/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.962
total time= 1.9s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.8s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 2.9s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 2.9s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 3.2s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
```

```

score=0.960 total time= 0.8s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.959 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.962 total time= 0.7s
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classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.959 total time= 0.7s
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classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
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classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.959
total time= 3.8s
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classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.4s
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classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.959 total time= 1.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=70.79457843841374,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.962 total
time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
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classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6); , score=0.960 total

```

```
time= 1.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.2s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
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Increase the number of iterations (max\_iter) or scale the data as shown in:  
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Please also refer to the documentation for alternative solver options:  
[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

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/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
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[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

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n_iter_i = _check_optimize_result()

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classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.8s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.962
total time= 1.7s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 1.1s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
```

```

classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 2.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 3.1s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 3.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.960 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.7s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 3.0s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=101.93734859388726,

```

```

classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.962 total time= 1.1s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.962 total
time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.7s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 1.9s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

n\_iter\_i = \_check\_optimize\_result(

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt

maskinlæring/ca/ca\_4/.venv/lib/python3.12/site-

packages/sklearn/linear\_model/\_logistic.py:465: ConvergenceWarning: lbfgs failed

```

to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

Increase the number of iterations (max_iter) or scale the data as shown in:
    https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
    https://scikit-learn.org/stable/modules/linear\_model.html#logistic-regression

n_iter_i = _check_optimize_result()

[CV 1/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.8s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.961
total time= 1.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.8s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.958
total time= 2.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 2.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 3.0s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.960 total time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.960 total time= 0.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.958
total time= 2.9s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
```

```

score=0.959 total time= 0.9s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.962 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.960 total time= 0.7s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=146.7799267622069,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.907 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=lbgf, preprocessoer=PCA(n_components=6); , score=0.962 total
time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=lbgf, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbgf failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-](https://scikit-learn.org/stable/modules/linear_model.html#logistic-)

```

regression
n_iter_i = _check_optimize_result(
[CV 1/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.3s
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

Increase the number of iterations (max_iter) or scale the data as shown in:
https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
https://scikit-learn.org/stable/modules/linear\_model.html#logistic-regression
n_iter_i = _check_optimize_result(
[CV 5/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 1.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.6s
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

Increase the number of iterations (max_iter) or scale the data as shown in:
https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
https://scikit-learn.org/stable/modules/linear\_model.html#logistic-regression
n_iter_i = _check_optimize_result(
[CV 2/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 2.0s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,

```

```

classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 1.9s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.962
total time= 2.3s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 2.8s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 3.0s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.961 total time= 0.7s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.960 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 3.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.962 total time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.960 total time= 0.8s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,

```

```

classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis() ;
score=0.915 total time= 0.5s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis() ;
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=211.34890398366454,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis() ;
score=0.912 total time= 0.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ;
score=0.907 total time= 0.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ;
score=0.915 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.962 total
time= 0.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ;
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ;
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis() ;
score=0.912 total time= 0.3s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result(
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

```

    https://scikit-learn.org/stable/modules/linear_model.html#logistic-
regression
    n_iter_i = _check_optimize_result(
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

Increase the number of iterations (max_iter) or scale the data as shown in:
    https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
    https://scikit-learn.org/stable/modules/linear_model.html#logistic-
regression
    n_iter_i = _check_optimize_result(
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

Increase the number of iterations (max_iter) or scale the data as shown in:
    https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
    https://scikit-learn.org/stable/modules/linear_model.html#logistic-
regression
    n_iter_i = _check_optimize_result(
[CV 1/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.8s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.958 total
time= 1.6s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.962

```

```

total time= 2.0s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 2.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 2.8s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.9s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.961 total time= 0.8s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 3.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.962 total time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.960 total time= 0.9s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.960 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.6s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
```

```

score=0.912 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=304.32198871077225,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 4.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.963 total
time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.2s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.5s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result(
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

regression
n_iter_i = _check_optimize_result(
[CV 5/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.4s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.7s
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result(
[CV 2/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 2.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.962
total time= 2.0s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 2.4s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.7s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.5s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.958

```

```

total time= 2.9s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 2.9s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.961 total time= 0.8s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 3.1s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.960 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.5s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.960 total time= 0.8s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.963 total time= 0.9s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=438.19424216194363,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.962 total
time= 0.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total

```

```

time= 1.1s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.4s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=lbfgs, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.960 total
time= 1.5s

/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result(
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

<https://scikit-learn.org/stable/modules/preprocessing.html>

Please also refer to the documentation for alternative solver options:

[https://scikit-learn.org/stable/modules/linear\\_model.html#logistic-regression](https://scikit-learn.org/stable/modules/linear_model.html#logistic-regression)

```

n_iter_i = _check_optimize_result(
/media/oystein/Server/Server/Master/Vår 2025/DAT200-1 25V Anvendt
maskinlæring/ca/ca_4/.venv/lib/python3.12/site-
packages/sklearn/linear_model/_logistic.py:465: ConvergenceWarning: lbfgs failed
to converge (status=1):
STOP: TOTAL NO. OF ITERATIONS REACHED LIMIT.

```

Increase the number of iterations (max\_iter) or scale the data as shown in:

```

https://scikit-learn.org/stable/modules/preprocessing.html
Please also refer to the documentation for alternative solver options:
    https://scikit-learn.org/stable/modules/linear_model.html#logistic-
regression
n_iter_i = _check_optimize_result()

[CV 5/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=lbfgs, preprocessoer=PCA(n_components=6);, score=0.959 total
time= 1.5s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.6s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.915 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.962
total time= 1.8s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time= 0.8s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.924 total time= 0.5s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 2.9s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cg, preprocessoer=LinearDiscriminantAnalysis();,
score=0.912 total time= 0.6s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.960
total time= 3.2s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6);, score=0.959
total time= 3.3s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.961 total time= 0.7s
[CV 1/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis();,
score=0.907 total time= 0.4s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.959 total time= 0.6s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6);,
score=0.963 total time= 0.7s

```

```

[CV 3/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.960 total time= 0.8s
[CV 2/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.915 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cholesky, preprocessoer=PCA(n_components=6); ,
score=0.960 total time= 0.7s
[CV 3/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.919 total time= 0.3s
[CV 4/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.924 total time= 0.3s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cg, preprocessoer=PCA(n_components=6); , score=0.960
total time= 4.0s
[CV 5/5] END classifier=LogisticRegression(), classifier__C=630.957344480193,
classifier__solver=newton-cholesky, preprocessoer=LinearDiscriminantAnalysis(); ,
score=0.912 total time= 0.5s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=2,
preprocessoer=PCA(n_components=6); , score=0.917 total time= 1.6s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=2,
preprocessoer=PCA(n_components=6); , score=0.920 total time= 1.6s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=2,
preprocessoer=PCA(n_components=6); , score=0.915 total time= 1.7s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=2,
preprocessoer=PCA(n_components=6); , score=0.911 total time= 1.6s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=2,
preprocessoer=PCA(n_components=6); , score=0.911 total time= 1.8s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=2,
preprocessoer=LinearDiscriminantAnalysis(); , score=0.883 total time= 2.1s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=2,
preprocessoer=LinearDiscriminantAnalysis(); , score=0.894 total time= 1.0s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=2,
preprocessoer=LinearDiscriminantAnalysis(); , score=0.884 total time= 1.1s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=2,
preprocessoer=LinearDiscriminantAnalysis(); , score=0.882 total time= 1.1s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=2,
preprocessoer=LinearDiscriminantAnalysis(); , score=0.891 total time= 1.3s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=3,
preprocessoer=PCA(n_components=6); , score=0.934 total time= 1.7s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=3,
preprocessoer=LinearDiscriminantAnalysis(); , score=0.908 total time= 1.2s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=3,
preprocessoer=PCA(n_components=6); , score=0.939 total time= 1.7s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=3,

```

```

preprocessoer=PCA(n_components=6);, score=0.930 total time= 1.8s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=3,
preprocessoer=PCA(n_components=6);, score=0.931 total time= 1.6s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=3,
preprocessoer=LinearDiscriminantAnalysis();, score=0.913 total time= 1.1s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=3,
preprocessoer=LinearDiscriminantAnalysis();, score=0.920 total time= 1.0s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=3,
preprocessoer=LinearDiscriminantAnalysis();, score=0.919 total time= 1.2s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=3,
preprocessoer=PCA(n_components=6);, score=0.938 total time= 2.8s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=3,
preprocessoer=LinearDiscriminantAnalysis();, score=0.911 total time= 1.0s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=4,
preprocessoer=PCA(n_components=6);, score=0.928 total time= 1.9s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=4,
preprocessoer=LinearDiscriminantAnalysis();, score=0.907 total time= 1.0s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=4,
preprocessoer=PCA(n_components=6);, score=0.931 total time= 1.6s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=4,
preprocessoer=PCA(n_components=6);, score=0.931 total time= 1.7s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=4,
preprocessoer=PCA(n_components=6);, score=0.927 total time= 1.8s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=4,
preprocessoer=LinearDiscriminantAnalysis();, score=0.910 total time= 0.9s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=4,
preprocessoer=LinearDiscriminantAnalysis();, score=0.913 total time= 1.2s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=4,
preprocessoer=LinearDiscriminantAnalysis();, score=0.919 total time= 1.1s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=4,
preprocessoer=LinearDiscriminantAnalysis();, score=0.910 total time= 1.0s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=4,
preprocessoer=PCA(n_components=6);, score=0.924 total time= 2.8s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=5,
preprocessoer=PCA(n_components=6);, score=0.937 total time= 1.8s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=5,
preprocessoer=PCA(n_components=6);, score=0.935 total time= 1.8s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=5,
preprocessoer=PCA(n_components=6);, score=0.933 total time= 1.9s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=5,
preprocessoer=PCA(n_components=6);, score=0.933 total time= 2.5s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=5,
preprocessoer=LinearDiscriminantAnalysis();, score=0.913 total time= 1.5s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=5,
preprocessoer=PCA(n_components=6);, score=0.931 total time= 1.8s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=5,
preprocessoer=LinearDiscriminantAnalysis();, score=0.919 total time= 1.0s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=5,

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preprocessoer=LinearDiscriminantAnalysis();, score=0.924 total time= 1.0s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=5,
preprocessoer=LinearDiscriminantAnalysis();, score=0.919 total time= 1.0s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=5,
preprocessoer=LinearDiscriminantAnalysis();, score=0.927 total time= 1.1s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=6,
preprocessoer=LinearDiscriminantAnalysis();, score=0.913 total time= 1.0s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=6,
preprocessoer=PCA(n_components=6);, score=0.929 total time= 2.2s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=6,
preprocessoer=PCA(n_components=6);, score=0.932 total time= 1.9s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=6,
preprocessoer=PCA(n_components=6);, score=0.931 total time= 1.8s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=6,
preprocessoer=PCA(n_components=6);, score=0.926 total time= 2.0s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=6,
preprocessoer=PCA(n_components=6);, score=0.926 total time= 2.0s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=6,
preprocessoer=LinearDiscriminantAnalysis();, score=0.918 total time= 1.2s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=6,
preprocessoer=LinearDiscriminantAnalysis();, score=0.926 total time= 1.1s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=6,
preprocessoer=LinearDiscriminantAnalysis();, score=0.917 total time= 1.0s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=6,
preprocessoer=LinearDiscriminantAnalysis();, score=0.923 total time= 1.6s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=7,
preprocessoer=PCA(n_components=6);, score=0.931 total time= 2.0s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=7,
preprocessoer=PCA(n_components=6);, score=0.934 total time= 1.7s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=7,
preprocessoer=PCA(n_components=6);, score=0.934 total time= 2.1s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=7,
preprocessoer=PCA(n_components=6);, score=0.928 total time= 1.8s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=7,
preprocessoer=LinearDiscriminantAnalysis();, score=0.914 total time= 1.3s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=7,
preprocessoer=PCA(n_components=6);, score=0.930 total time= 1.9s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=7,
preprocessoer=LinearDiscriminantAnalysis();, score=0.920 total time= 1.1s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=7,
preprocessoer=LinearDiscriminantAnalysis();, score=0.926 total time= 1.0s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=7,
preprocessoer=LinearDiscriminantAnalysis();, score=0.920 total time= 0.9s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=7,
preprocessoer=LinearDiscriminantAnalysis();, score=0.932 total time= 1.2s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=8,
preprocessoer=PCA(n_components=6);, score=0.928 total time= 1.7s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=8,

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preprocessoer=PCA(n_components=6), score=0.930 total time= 1.8s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=8,
preprocessoer=LinearDiscriminantAnalysis(), score=0.916 total time= 1.0s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=8,
preprocessoer=PCA(n_components=6), score=0.931 total time= 1.9s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=8,
preprocessoer=PCA(n_components=6), score=0.926 total time= 1.9s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=8,
preprocessoer=LinearDiscriminantAnalysis(), score=0.926 total time= 1.0s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=8,
preprocessoer=LinearDiscriminantAnalysis(), score=0.920 total time= 1.3s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=8,
preprocessoer=PCA(n_components=6), score=0.925 total time= 2.1s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=8,
preprocessoer=LinearDiscriminantAnalysis(), score=0.930 total time= 1.0s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=8,
preprocessoer=LinearDiscriminantAnalysis(), score=0.920 total time= 1.1s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=10,
preprocessoer=PCA(n_components=6), score=0.927 total time= 1.9s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=10,
preprocessoer=PCA(n_components=6), score=0.928 total time= 1.9s
[CV 1/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=10,
preprocessoer=LinearDiscriminantAnalysis(), score=0.918 total time= 1.0s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=10,
preprocessoer=PCA(n_components=6), score=0.931 total time= 1.9s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=10,
preprocessoer=PCA(n_components=6), score=0.924 total time= 2.1s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=10,
preprocessoer=PCA(n_components=6), score=0.922 total time= 2.1s
[CV 2/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=10,
preprocessoer=LinearDiscriminantAnalysis(), score=0.923 total time= 1.1s
[CV 3/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=10,
preprocessoer=LinearDiscriminantAnalysis(), score=0.928 total time= 1.0s
[CV 4/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=10,
preprocessoer=LinearDiscriminantAnalysis(), score=0.932 total time= 1.1s
[CV 5/5] END classifier=KNeighborsClassifier(), classifier__n_neighbors=10,
preprocessoer=LinearDiscriminantAnalysis(), score=0.922 total time= 1.1s
[CV 2/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis(), ,
score=0.913 total time=93.0min
[CV 3/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis(), ,
score=0.919 total time=132.6min
[CV 1/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis(), ,
score=0.909 total time=112.2min
[CV 4/5] END classifier=SVC(), classifier__C=304.32198871077225,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis(), ,

```

```

score=0.921 total time=160.5min
[CV 5/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time=137.7min
[CV 4/5] END classifier=SVC(), classifier__C=438.19424216194363,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time=148.0min
[CV 2/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.913 total time=130.0min
[CV 5/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.911 total time=128.4min
[CV 4/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.921 total time=131.5min
[CV 3/5] END classifier=SVC(), classifier__C=630.957344480193,
classifier__kernel=poly, preprocessoer=LinearDiscriminantAnalysis();,
score=0.919 total time=134.9min

```

```
[22]: best_score = str(grid_search_cv.best_score_)
best_params = str(grid_search_cv.best_params_)
print(f"best score was {best_score}")
print(f"best parameters was {best_params}")

endregion
```

```

best score was 0.9708625
best parameters was {'classifier': SVC(), 'classifier__C': 438.19424216194363,
'classifier__kernel': 'rbf', 'preprocessoer': PCA(n_components=6)}
```

```
[24]: # region visualising result
# logger.info("splitting X_train_standardized for training")

train_test_split = model_selection.train_test_split(
    train_np_array,
    train_class_np_array,
    test_size=0.4,
    random_state=random_state
)

x_train, x_test, y_train, y_test = train_test_split
# logger.info("preforming fitting of best pipeline for 60/40 split")
grid_search_cv.best_estimator_.fit(x_train, y_train)
# logger.info("predicting total score")
y_pred = grid_search_cv.predict(x_test)
print(grid_search_cv.best_estimator_.score(x_test, y_test))
print(metrics.confusion_matrix(y_test, y_pred))
```

```

print(metrics.f1_score(y_test, y_pred, average='macro'))
print(metrics.classification_report(y_test, y_pred))

# endregion

0.97071875
[[18661    233    198]
 [  487   5569      4]
 [   14      1  6833]]
0.9662971726926225
          precision    recall  f1-score   support

           0         0.97      0.98      0.98     19092
           1         0.96      0.92      0.94      6060
           2         0.97      1.00      0.98     6848

   accuracy                           0.97     32000
  macro avg       0.97      0.96      0.97     32000
weighted avg       0.97      0.97      0.97     32000

```

[25]:

```

# region kaggel submition
# logger.info("preforming fit for best pipeline on all training data")
grid_search_cv.best_estimator_.fit(train_np_array, train_class_np_array)
# logger.info("predicting test data for kaggel submition")
y_pred = grid_search_cv.predict(test_np_array)
# logger.info("saving submition to file")
df_y_pred = pd.DataFrame(y_pred, columns=["class"])
df_y_pred.to_csv(kaggle_path, index_label="ID")
# endregion

```