### Model - Ramin F v1.0

September 11, 2021

### 1 Titanic Competition - Model - Ramin F.

in this notebook we are going to develope a machine learning model for titanic competition. for this purpose we are going to test multiple approaches and algorithms to investigate which one will have the most accuracy.

```
[]: import pandas as pd
     import numpy as np
     import matplotlib.pyplot as plt
     import seaborn as sns
     import warnings
     from sklearn.model_selection import GridSearchCV, learning_curve, __
      →train_test_split, RepeatedStratifiedKFold, cross_val_score
     from sklearn.metrics import confusion matrix, classification report,
     →roc_auc_score, roc_curve
     import pickle
     warnings.filterwarnings("ignore")
     pd.set option('display.max rows', 200)
     np.set_printoptions(suppress=True)
     pd.set_option('display.float_format', lambda x: '%.2f' % x)
     sns.set_style('darkgrid')
[]: train = pd.read_csv('data/train.csv')
     test = pd.read_csv('data/test.csv')
```

## 2 Droping unwanted features

there are some useless features for ML models, in this section we are going to drop them.

```
[]: train.drop(['PassengerId', 'Name', 'Ticket', 'Cabin'], axis=1, inplace=True)
```

# 3 Making Categorical Variables Continious (One-Hot)

there are some categorical variables in dataset, i.e. "Pclass", "Sex" and "Embarked". in order to make this features usable by ML models we must make them continious. we are going to use one-hot encoding approach for this matter.

```
[]: dummy_pclass = pd.get_dummies(train['Pclass'], prefix='Pclass')
  dummy_sex = pd.get_dummies(train['Sex'], prefix='Sex')
  dummy_embarked = pd.get_dummies(train['Embarked'], prefix='Embarked')
  train = pd.concat([train, dummy_pclass, dummy_sex, dummy_embarked], axis=1)
  train.drop(['Pclass', 'Sex', 'Embarked'], axis=1, inplace=True)
  train
```

L J:	Survived	Age	SibSp	Parch	Fare	Pclass_1	Pclass_2	Pclass_3	\
0	0	22.00	1	0	7.25	0	0	1	
1	1	38.00	1	0	71.28	1	0	0	
2	1	26.00	0	0	7.92	0	0	1	
3	1	35.00	1	0	53.10	1	0	0	
4	0	35.00	0	0	8.05	0	0	1	
				•••	•••		•••		
886	0	27.00	0	0	13.00	0	1	0	
887	1	19.00	0	0	30.00	1	0	0	
888	0	NaN	1	2	23.45	0	0	1	
889	1	26.00	0	0	30.00	1	0	0	
890	0	32.00	0	0	7.75	0	0	1	

	Sex_female	Sex_male	${\tt Embarked\_C}$	${\tt Embarked\_Q}$	${\tt Embarked\_S}$
0	0	1	0	0	1
1	1	0	1	0	0
2	1	0	0	0	1
3	1	0	0	0	1
4	0	1	0	0	1
	•••	•••	•••	•••	•••
886	0	1	0	0	1
887	1	0	0	0	1
888	1	0	0	0	1
889	0	1	1	0	0
890	0	1	0	1	0

[891 rows x 13 columns]

# 4 Treating Missing Values Problem

as we saw in the EDA notebook, some records have missing values. to be more specific, in "Age" feature we have 177 records with missing data and 3 records with missing data in "Embarked" Features. the "Cabin" feature also has some missing values but since we will going to drop that feature, there is no need for imputing that feature.

```
[]: train.isnull().sum()
```

```
[]: Survived 0
Age 177
SibSp 0
```

```
Fare
    Pclass_1
    Pclass_2
    Pclass_3
    Sex_female
                   0
    Sex male
                   0
    {\tt Embarked\_C}
                   0
    Embarked Q
                   0
    Embarked S
                   0
    dtype: int64
[]: from sklearn.experimental import enable_iterative_imputer
    from sklearn.impute import IterativeImputer
[]: train imputation matrix = train.values
    imp = IterativeImputer(max iter = 10)
    predicted_imp = np.round(imp.fit_transform(train_imputation_matrix))
[]: train_imputed = pd.DataFrame(predicted_imp, columns=['Survived', 'Age', |
     'Sex_female', 'Sex_male', u
     train = train.merge(train_imputed, on=train.index.values, how='left')
    train.drop(['key_0', 'Survived_x', 'Age_x', 'SibSp_x', 'Parch_x', 'Fare_x', _
     'Sex_female_x', 'Sex_male_x', 'Embarked_C_x', 'Embarked_Q_x',_
     →'Embarked_S_x'], axis=1, inplace=True)
    train.rename(columns={'Survived y': 'Survived',
                        'Age_y': 'Age',
                        'SibSp_y': 'SibSp',
                        'Parch_y': 'Parch',
                        'Fare_y': 'Fare',
                        'Pclass_1_y': 'Pclass_1',
                        'Pclass_2_y': 'Pclass_2',
                        'Pclass_3_y': 'Pclass_3',
                        'Sex_female_y': 'Sex_female',
                        'Sex_male_y': 'Sex_male',
                        'Embarked_C_y': 'Embarked_C',
                        'Embarked_Q_y': 'Embarked_Q',
                        'Embarked_S_y': 'Embarked_S'}, inplace=True)
    train
[]:
         Survived
                       SibSp Parch Fare Pclass_1 Pclass_2 Pclass_3 \
                   Age
                                             0.00
                                                      0.00
    0
            0.00 22.00
                        1.00
                              0.00 7.00
                                                               1.00
    1
            1.00 38.00
                        1.00
                              0.00 71.00
                                             1.00
                                                      0.00
                                                               0.00
```

Parch

0

2	1.00 26	.00 0.00	0.00 8.00	0.00	0.00	1.00
3	1.00 35	.00 1.00	0.00 53.00	1.00	0.00	0.00
4	0.00 35	.00 0.00	0.00 8.00	0.00	0.00	1.00
			•••	•••	•••	
886	0.00 27	.00 0.00	0.00 13.00	0.00	1.00	0.00
887	1.00 19	.00 0.00	0.00 30.00	1.00	0.00	0.00
888	0.00 24	.00 1.00	2.00 23.00	0.00	0.00	1.00
889	1.00 26	.00 0.00	0.00 30.00	1.00	0.00	0.00
890	0.00 32	.00 0.00	0.00 8.00	0.00	0.00	1.00
	Sex_female	Sex_male	Embarked_C	Embarked_Q	Embarked_S	
0	0.00	1.00	0.00	0.00	1.00	
1	1.00	0.00	1.00	0.00	0.00	
2	1.00	0.00	0.00	0.00	1.00	
3	1.00	0.00	0.00	0.00	1.00	
4	0.00	1.00	0.00	0.00	1.00	
	•••	•••	•••	•••	•••	
886	0.00	1.00	0.00	0.00	1.00	
887	1.00	0.00	0.00	0.00	1.00	
888	1.00	0.00	0.00	0.00	1.00	
889	0.00	1.00	1.00	0.00	0.00	
890	0.00	1.00	0.00	1.00	0.00	

[891 rows x 13 columns]

# []: train.isnull().sum()

]:	Survived	0
	Age	0
	SibSp	0
	Parch	0
	Fare	0
	Pclass_1	0
	Pclass_2	0
	Pclass_3	0
	Sex_female	0
	Sex_male	0
	${\tt Embarked\_C}$	0
	${\tt Embarked}_{\tt Q}$	0
	${\tt Embarked\_S}$	0
	dtype: int64	

as you can see in the cell above all of the 177 records with missing values in "Age" feature had been imputed.

## 5 Splitting Dependent and Independent Variables

next step we have to do is splitting the dependent and independent variables from together. in this project dependent variable is "Survived" feature.

```
[]: Y = np.asarray(train['Survived'])
X = np.asarray(train.loc[:, ~ train.columns.isin(['Survived'])])
print(f'dependent variable matrix shape: {Y.shape}')
print(f'independent variables matrix shape: {X.shape}')

dependent variable matrix shape: (891,)
independent variables matrix shape: (891, 12)

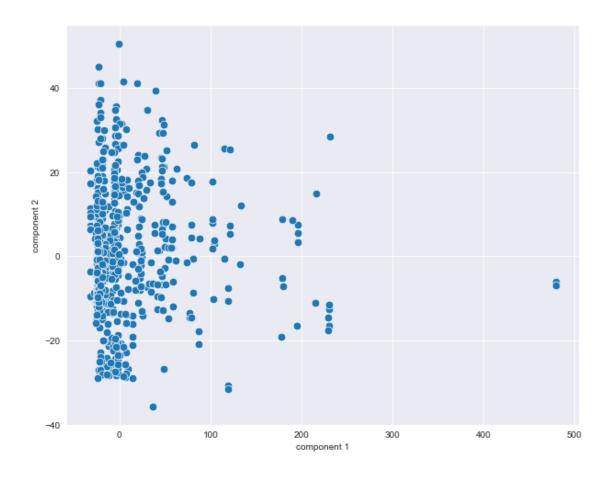
[]: X_train,X_valid,y_train,y_valid=train_test_split(X,Y,test_size=0.2, stratify=Y)
```

## 6 PCA for Demonstrating datapoints in 2-Dimension

```
[]: from sklearn.decomposition import PCA
    pca = PCA(n_components=2)
    pca.fit(X)
    X_pca = pca.transform(X)
    print(f'original shape: {X.shape}.')
    print(f'transformed shape: {X_pca.shape}.')

original shape: (891, 12).
    transformed shape: (891, 2).

[]: plt.figure(figsize = (10, 8))
    sns.scatterplot(X_pca[:, 0], X_pca[:, 1],s=75)
    plt.xlabel('component 1')
    plt.ylabel('component 2')
    plt.show()
```



# 7 Logistic Regression

Fitting 5 folds for each of 20 candidates, totalling 100 fits
[CV 1/5] END C=1, fit\_intercept=True;, score=(train=0.810, test=0.846) total
time= 0.0s
[CV 2/5] END C=1, fit\_intercept=True;, score=(train=0.826, test=0.769) total
time= 0.0s
[CV 3/5] END C=1, fit\_intercept=True;, score=(train=0.821, test=0.768) total

```
time=
       0.0s
[CV 4/5] END C=1, fit_intercept=True;, score=(train=0.807, test=0.817) total
       0.0s
[CV 5/5] END C=1, fit_intercept=True;, score=(train=0.814, test=0.831) total
       0.0s
[CV 1/5] END C=1, fit_intercept=False;, score=(train=0.810, test=0.832) total
       0.0s
[CV 2/5] END C=1, fit_intercept=False;, score=(train=0.824, test=0.769) total
       0.0s
[CV 3/5] END C=1, fit_intercept=False;, score=(train=0.823, test=0.782) total
time=
       0.0s
[CV 4/5] END C=1, fit_intercept=False;, score=(train=0.809, test=0.810) total
      0.0s
[CV 5/5] END C=1, fit_intercept=False;, score=(train=0.811, test=0.831) total
       0.0s
[CV 1/5] END C=0.5, fit intercept=True;, score=(train=0.810, test=0.846) total
time=
       0.0s
[CV 2/5] END C=0.5, fit intercept=True;, score=(train=0.826, test=0.769) total
       0.0s
[CV 3/5] END C=0.5, fit intercept=True;, score=(train=0.819, test=0.789) total
[CV 4/5] END C=0.5, fit intercept=True;, score=(train=0.809, test=0.817) total
      0.0s
[CV 5/5] END C=0.5, fit_intercept=True;, score=(train=0.811, test=0.831) total
time=
      0.0s
[CV 1/5] END C=0.5, fit intercept=False;, score=(train=0.812, test=0.839) total
time=
      0.0s
[CV 2/5] END C=0.5, fit_intercept=False;, score=(train=0.826, test=0.769) total
       0.0s
[CV 3/5] END C=0.5, fit_intercept=False;, score=(train=0.818, test=0.789) total
time=
       0.0s
[CV 4/5] END C=0.5, fit_intercept=False;, score=(train=0.811, test=0.810) total
time=
       0.0s
[CV 5/5] END C=0.5, fit_intercept=False;, score=(train=0.811, test=0.838) total
      0.0s
[CV 1/5] END C=0.25, fit_intercept=True;, score=(train=0.810, test=0.832) total
      0.0s
[CV 2/5] END C=0.25, fit_intercept=True;, score=(train=0.828, test=0.769) total
time=
      0.0s
[CV 3/5] END C=0.25, fit_intercept=True;, score=(train=0.819, test=0.782) total
time=
       0.0s
[CV 4/5] END C=0.25, fit_intercept=True;, score=(train=0.809, test=0.817) total
time=
[CV 5/5] END C=0.25, fit_intercept=True;, score=(train=0.809, test=0.831) total
time=
       0.0s
[CV 1/5] END C=0.25, fit intercept=False;, score=(train=0.810, test=0.839) total
time=
       0.0s
[CV 2/5] END C=0.25, fit intercept=False;, score=(train=0.824, test=0.769) total
```

```
time=
       0.0s
[CV 3/5] END C=0.25, fit_intercept=False;, score=(train=0.819, test=0.789) total
       0.0s
[CV 4/5] END C=0.25, fit_intercept=False;, score=(train=0.812, test=0.803) total
       0.0s
[CV 5/5] END C=0.25, fit_intercept=False;, score=(train=0.807, test=0.845) total
       0.0s
[CV 1/5] END C=0.1, fit_intercept=True;, score=(train=0.812, test=0.846) total
       0.0s
[CV 2/5] END C=0.1, fit_intercept=True;, score=(train=0.828, test=0.762) total
time=
       0.0s
[CV 3/5] END C=0.1, fit intercept=True;, score=(train=0.819, test=0.796) total
      0.0s
[CV 4/5] END C=0.1, fit intercept=True;, score=(train=0.812, test=0.817) total
       0.0s
[CV 5/5] END C=0.1, fit intercept=True;, score=(train=0.811, test=0.838) total
time=
       0.0s
[CV 1/5] END C=0.1, fit_intercept=False;, score=(train=0.812, test=0.839) total
       0.0s
[CV 2/5] END C=0.1, fit intercept=False;, score=(train=0.831, test=0.762) total
[CV 3/5] END C=0.1, fit intercept=False;, score=(train=0.823, test=0.803) total
       0.0s
[CV 4/5] END C=0.1, fit_intercept=False;, score=(train=0.807, test=0.803) total
time=
      0.0s
[CV 5/5] END C=0.1, fit_intercept=False;, score=(train=0.809, test=0.852) total
time=
      0.0s
[CV 1/5] END C=0.05, fit_intercept=True;, score=(train=0.815, test=0.832) total
       0.0s
[CV 2/5] END C=0.05, fit_intercept=True;, score=(train=0.828, test=0.762) total
time=
       0.0s
[CV 3/5] END C=0.05, fit_intercept=True;, score=(train=0.821, test=0.803) total
time=
       0.0s
[CV 4/5] END C=0.05, fit_intercept=True;, score=(train=0.816, test=0.796) total
      0.0s
[CV 5/5] END C=0.05, fit_intercept=True;, score=(train=0.812, test=0.838) total
       0.0s
[CV 1/5] END C=0.05, fit_intercept=False;, score=(train=0.819, test=0.832) total
time=
      0.0s
[CV 2/5] END C=0.05, fit_intercept=False;, score=(train=0.826, test=0.755) total
time=
       0.0s
[CV 3/5] END C=0.05, fit intercept=False;, score=(train=0.823, test=0.803) total
time=
[CV 4/5] END C=0.05, fit intercept=False;, score=(train=0.818, test=0.803) total
       0.0s
[CV 5/5] END C=0.05, fit intercept=False;, score=(train=0.814, test=0.852) total
time=
       0.0s
[CV 1/5] END C=0.025, fit intercept=True;, score=(train=0.803, test=0.825) total
```

```
time=
       0.0s
[CV 2/5] END C=0.025, fit_intercept=True;, score=(train=0.822, test=0.783) total
       0.0s
[CV 3/5] END C=0.025, fit_intercept=True;, score=(train=0.823, test=0.810) total
       0.0s
[CV 4/5] END C=0.025, fit_intercept=True;, score=(train=0.800, test=0.803) total
       0.0s
[CV 5/5] END C=0.025, fit_intercept=True;, score=(train=0.796, test=0.831) total
time=
      0.0s
[CV 1/5] END C=0.025, fit_intercept=False;, score=(train=0.815, test=0.811)
total time=
             0.0s
[CV 2/5] END C=0.025, fit intercept=False;, score=(train=0.826, test=0.797)
total time=
[CV 3/5] END C=0.025, fit intercept=False;, score=(train=0.823, test=0.817)
total time=
             0.0s
[CV 4/5] END C=0.025, fit intercept=False;, score=(train=0.809, test=0.775)
total time=
             0.0s
[CV 5/5] END C=0.025, fit_intercept=False;, score=(train=0.798, test=0.845)
total time=
             0.0s
[CV 1/5] END C=0.01, fit intercept=True;, score=(train=0.752, test=0.755) total
      0.0s
[CV 2/5] END C=0.01, fit intercept=True;, score=(train=0.764, test=0.741) total
       0.0s
[CV 3/5] END C=0.01, fit intercept=True;, score=(train=0.760, test=0.739) total
time=
      0.0s
[CV 4/5] END C=0.01, fit_intercept=True;, score=(train=0.751, test=0.746) total
time=
      0.0s
[CV 5/5] END C=0.01, fit_intercept=True;, score=(train=0.751, test=0.775) total
       0.0s
[CV 1/5] END C=0.01, fit intercept=False;, score=(train=0.752, test=0.741) total
time=
       0.0s
[CV 2/5] END C=0.01, fit intercept=False;, score=(train=0.763, test=0.734) total
time=
       0.0s
[CV 3/5] END C=0.01, fit_intercept=False;, score=(train=0.763, test=0.739) total
time=
      0.0s
[CV 4/5] END C=0.01, fit_intercept=False;, score=(train=0.747, test=0.746) total
       0.0s
[CV 5/5] END C=0.01, fit_intercept=False;, score=(train=0.746, test=0.754) total
time=
      0.0s
[CV 1/5] END C=0.005, fit_intercept=True;, score=(train=0.717, test=0.706) total
time=
       0.0s
[CV 2/5] END C=0.005, fit intercept=True;, score=(train=0.717, test=0.727) total
time=
[CV 3/5] END C=0.005, fit_intercept=True;, score=(train=0.716, test=0.718) total
       0.0s
[CV 4/5] END C=0.005, fit intercept=True;, score=(train=0.719, test=0.725) total
time=
       0.0s
[CV 5/5] END C=0.005, fit intercept=True;, score=(train=0.726, test=0.690) total
```

```
time=
       0.0s
[CV 1/5] END C=0.005, fit_intercept=False;, score=(train=0.721, test=0.713)
total time=
             0.0s
[CV 2/5] END C=0.005, fit_intercept=False;, score=(train=0.717, test=0.727)
total time=
             0.0s
[CV 3/5] END C=0.005, fit_intercept=False;, score=(train=0.728, test=0.711)
total time=
[CV 4/5] END C=0.005, fit_intercept=False;, score=(train=0.716, test=0.732)
total time=
             0.0s
[CV 5/5] END C=0.005, fit_intercept=False;, score=(train=0.726, test=0.697)
total time=
             0.0s
[CV 1/5] END C=0.0025, fit_intercept=True;, score=(train=0.691, test=0.699)
total time=
             0.0s
[CV 2/5] END C=0.0025, fit_intercept=True;, score=(train=0.689, test=0.699)
total time=
              0.0s
[CV 3/5] END C=0.0025, fit_intercept=True;, score=(train=0.691, test=0.704)
total time=
             0.0s
[CV 4/5] END C=0.0025, fit intercept=True;, score=(train=0.704, test=0.711)
total time=
             0.0s
[CV 5/5] END C=0.0025, fit intercept=True;, score=(train=0.696, test=0.662)
total time=
[CV 1/5] END C=0.0025, fit intercept=False;, score=(train=0.703, test=0.699)
total time=
             0.0s
[CV 2/5] END C=0.0025, fit_intercept=False;, score=(train=0.703, test=0.699)
total time=
             0.0s
[CV 3/5] END C=0.0025, fit_intercept=False;, score=(train=0.696, test=0.718)
total time=
             0.0s
[CV 4/5] END C=0.0025, fit_intercept=False;, score=(train=0.702, test=0.697)
total time=
             0.0s
[CV 5/5] END C=0.0025, fit_intercept=False;, score=(train=0.705, test=0.669)
total time=
             0.0s
[CV 1/5] END C=0.001, fit_intercept=True;, score=(train=0.680, test=0.678) total
time=
       0.0s
[CV 2/5] END C=0.001, fit_intercept=True;, score=(train=0.678, test=0.678) total
time=
      0.0s
[CV 3/5] END C=0.001, fit_intercept=True;, score=(train=0.670, test=0.711) total
       0.0s
[CV 4/5] END C=0.001, fit_intercept=True;, score=(train=0.682, test=0.669) total
time=
      0.0s
[CV 5/5] END C=0.001, fit_intercept=True;, score=(train=0.684, test=0.655) total
time=
       0.0s
[CV 1/5] END C=0.001, fit intercept=False;, score=(train=0.684, test=0.699)
total time=
[CV 2/5] END C=0.001, fit intercept=False;, score=(train=0.680, test=0.713)
total time=
             0.0s
[CV 3/5] END C=0.001, fit intercept=False;, score=(train=0.684, test=0.711)
total time=
              0.0s
[CV 4/5] END C=0.001, fit intercept=False;, score=(train=0.689, test=0.662)
```

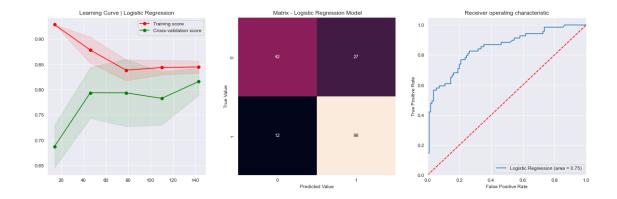
```
[CV 5/5] END C=0.001, fit intercept=False;, score=(train=0.704, test=0.641)
    total time=
                  0.0s
     LogisticRegression(C=0.1, fit intercept=False) best hyperparameters are: {'C':
    0.1, 'fit_intercept': False} with the accuracy of: 0.81
    as you can see above the best model with optimum hyperparameters achieved 0.81 Accuracy.
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
     train_sizes, train_scores, test_scores, = learning_curve(LogisticRegression(),_
     →X_valid, y_valid, train_sizes=np.linspace(.1, 1, 5))
     train_scores_mean = np.mean(train_scores, axis=1)
     train_scores_std = np.std(train_scores, axis=1)
     test_scores_mean = np.mean(test_scores, axis=1)
     test_scores_std = np.std(test_scores, axis=1)
     y_pred = grid.best_estimator_.predict(X_valid)
     cls_rep=classification_report(y_valid,y_pred)
     print(cls_rep)
     axes[0].fill_between(train_sizes, train_scores_mean - train_scores_std,
                         train_scores_mean + train_scores_std, alpha=0.1, color="r")
     axes[0].fill_between(train_sizes, test_scores_mean - test_scores_std,
                         test_scores_mean + test_scores_std, alpha=0.1, color="g")
     axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_"
      →score")
     axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",_
      →label="Cross-validation score")
     axes[0].legend(loc='best')
     axes[0].set_title('Learning Curve | Logistic Regression')
     cnf_matrix = confusion_matrix(y_valid, y_pred, labels=[1,0])
     sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g', __
     \rightarrowax=axes[1])
     axes[1].set xlabel('Predicted Value')
     axes[1].set_ylabel('True Value')
     axes[1].set_title(' Matrix - Logistic Regression Model')
     logit_roc_auc = roc_auc_score(y_valid, grid.predict(X_valid))
     fpr, tpr, thresholds = roc_curve(y_valid, grid.predict_proba(X_valid)[:,1],__
     →pos_label=1)
     axes[2].plot(fpr, tpr, label='Logistic Regression (area = %0.2f)' %
     →logit_roc_auc)
     axes[2].plot([0, 1], [0, 1], 'r--')
     axes[2].set_xlim([0.0, 1.0])
```

total time=

0.0s

```
axes[2].set_ylim([0.0, 1.05])
axes[2].set_xlabel('False Positive Rate')
axes[2].set_ylabel('True Positive Rate')
axes[2].set_title('Receiver operating characteristic')
axes[2].legend(loc="lower right")
plt.show()
```

	precision	recall	f1-score	support
0.0	0.78	0.89	0.83	110
1.0	0.78	0.61	0.68	69
accuracy			0.78	179
macro avg	0.78	0.75	0.76	179
weighted avg	0.78	0.78	0.78	179



in the graph above you can see the Learning curve, Confusion matrix and ROC Curve for the most optimum model of logistic regression,

## 8 K-Nearest Neighbor

```
Fitting 5 folds for each of 28 candidates, totalling 140 fits
[CV 1/5] END n_neighbors=2, weights=uniform;, score=(train=0.851, test=0.741)
total time=
              0.0s
[CV 2/5] END n_neighbors=2, weights=uniform;, score=(train=0.865, test=0.671)
total time=
              0.0s
[CV 3/5] END n_neighbors=2, weights=uniform;, score=(train=0.832, test=0.746)
total time=
[CV 4/5] END n_neighbors=2, weights=uniform;, score=(train=0.856, test=0.732)
total time=
              0.0s
[CV 5/5] END n_neighbors=2, weights=uniform;, score=(train=0.854, test=0.718)
total time=
              0.0s
[CV 1/5] END n neighbors=2, weights=distance;, score=(train=0.981, test=0.748)
total time=
[CV 2/5] END n neighbors=2, weights=distance;, score=(train=0.986, test=0.692)
total time=
              0.0s
[CV 3/5] END n neighbors=2, weights=distance;, score=(train=0.975, test=0.775)
total time=
              0.0s
[CV 4/5] END n neighbors=2, weights=distance;, score=(train=0.981, test=0.711)
total time=
              0.0s
[CV 5/5] END n_neighbors=2, weights=distance;, score=(train=0.979, test=0.761)
total time=
[CV 1/5] END n_neighbors=3, weights=uniform;, score=(train=0.854, test=0.734)
total time=
[CV 2/5] END n_neighbors=3, weights=uniform;, score=(train=0.849, test=0.692)
total time=
              0.0s
[CV 3/5] END n_neighbors=3, weights=uniform;, score=(train=0.858, test=0.746)
total time=
              0.0s
[CV 4/5] END n_neighbors=3, weights=uniform;, score=(train=0.856, test=0.754)
total time=
[CV 5/5] END n_neighbors=3, weights=uniform;, score=(train=0.858, test=0.718)
total time=
              0.0s
[CV 1/5] END n_neighbors=3, weights=distance;, score=(train=0.981, test=0.748)
total time=
              0.0s
[CV 2/5] END n_neighbors=3, weights=distance;, score=(train=0.982, test=0.664)
total time=
[CV 3/5] END n_neighbors=3, weights=distance;, score=(train=0.975, test=0.746)
total time=
[CV 4/5] END n_neighbors=3, weights=distance;, score=(train=0.981, test=0.732)
total time=
              0.0s
[CV 5/5] END n_neighbors=3, weights=distance;, score=(train=0.981, test=0.711)
total time=
              0.0s
[CV 1/5] END n neighbors=4, weights=uniform;, score=(train=0.815, test=0.699)
total time=
              0.0s
[CV 2/5] END n_neighbors=4, weights=uniform;, score=(train=0.831, test=0.657)
total time=
              0.0s
[CV 3/5] END n neighbors=4, weights=uniform;, score=(train=0.796, test=0.711)
total time=
              0.0s
[CV 4/5] END n_neighbors=4, weights=uniform;, score=(train=0.816, test=0.754)
```

```
total time=
              0.0s
[CV 5/5] END n_neighbors=4, weights=uniform;, score=(train=0.832, test=0.697)
total time=
              0.0s
[CV 1/5] END n_neighbors=4, weights=distance;, score=(train=0.981, test=0.748)
total time=
              0.0s
[CV 2/5] END n_neighbors=4, weights=distance;, score=(train=0.986, test=0.678)
total time=
[CV 3/5] END n_neighbors=4, weights=distance;, score=(train=0.975, test=0.768)
total time=
              0.0s
[CV 4/5] END n_neighbors=4, weights=distance;, score=(train=0.981, test=0.732)
total time=
              0.0s
[CV 5/5] END n neighbors=4, weights=distance;, score=(train=0.981, test=0.711)
total time=
              0.0s
[CV 1/5] END n neighbors=5, weights=uniform;, score=(train=0.798, test=0.734)
total time=
              0.0s
[CV 2/5] END n neighbors=5, weights=uniform;, score=(train=0.815, test=0.706)
total time=
              0.0s
[CV 3/5] END n_neighbors=5, weights=uniform;, score=(train=0.786, test=0.746)
total time=
              0.0s
[CV 4/5] END n_neighbors=5, weights=uniform;, score=(train=0.812, test=0.725)
total time=
[CV 5/5] END n_neighbors=5, weights=uniform;, score=(train=0.812, test=0.683)
total time=
[CV 1/5] END n_neighbors=5, weights=distance;, score=(train=0.981, test=0.755)
total time=
              0.0s
[CV 2/5] END n neighbors=5, weights=distance;, score=(train=0.986, test=0.657)
total time=
              0.0s
[CV 3/5] END n_neighbors=5, weights=distance;, score=(train=0.975, test=0.761)
total time=
[CV 4/5] END n_neighbors=5, weights=distance;, score=(train=0.981, test=0.732)
total time=
              0.0s
[CV 5/5] END n_neighbors=5, weights=distance;, score=(train=0.981, test=0.697)
total time=
              0.0s
[CV 1/5] END n_neighbors=6, weights=uniform;, score=(train=0.791, test=0.692)
total time=
[CV 2/5] END n_neighbors=6, weights=uniform;, score=(train=0.796, test=0.734)
total time=
[CV 3/5] END n_neighbors=6, weights=uniform;, score=(train=0.768, test=0.732)
total time=
              0.0s
[CV 4/5] END n_neighbors=6, weights=uniform;, score=(train=0.793, test=0.725)
total time=
              0.0s
[CV 5/5] END n neighbors=6, weights=uniform;, score=(train=0.777, test=0.690)
total time=
              0.0s
[CV 1/5] END n neighbors=6, weights=distance;, score=(train=0.981, test=0.762)
total time=
              0.0s
[CV 2/5] END n neighbors=6, weights=distance;, score=(train=0.986, test=0.692)
total time=
              0.0s
[CV 3/5] END n neighbors=6, weights=distance;, score=(train=0.975, test=0.754)
```

```
total time=
              0.0s
[CV 4/5] END n_neighbors=6, weights=distance;, score=(train=0.982, test=0.725)
total time=
              0.0s
[CV 5/5] END n_neighbors=6, weights=distance;, score=(train=0.981, test=0.718)
total time=
              0.0s
[CV 1/5] END n_neighbors=7, weights=uniform;, score=(train=0.784, test=0.720)
total time=
[CV 2/5] END n_neighbors=7, weights=uniform;, score=(train=0.779, test=0.727)
total time=
              0.0s
[CV 3/5] END n_neighbors=7, weights=uniform;, score=(train=0.789, test=0.775)
total time=
              0.0s
[CV 4/5] END n_neighbors=7, weights=uniform;, score=(train=0.786, test=0.704)
total time=
              0.0s
[CV 5/5] END n neighbors=7, weights=uniform;, score=(train=0.791, test=0.704)
total time=
              0.0s
[CV 1/5] END n neighbors=7, weights=distance;, score=(train=0.981, test=0.734)
total time=
              0.0s
[CV 2/5] END n neighbors=7, weights=distance;, score=(train=0.986, test=0.706)
total time=
              0.0s
[CV 3/5] END n_neighbors=7, weights=distance;, score=(train=0.975, test=0.782)
total time=
[CV 4/5] END n_neighbors=7, weights=distance;, score=(train=0.982, test=0.718)
total time=
[CV 5/5] END n_neighbors=7, weights=distance;, score=(train=0.981, test=0.718)
total time=
              0.0s
[CV 1/5] END n_neighbors=8, weights=uniform;, score=(train=0.772, test=0.706)
total time=
              0.0s
[CV 2/5] END n_neighbors=8, weights=uniform;, score=(train=0.764, test=0.720)
total time=
[CV 3/5] END n_neighbors=8, weights=uniform;, score=(train=0.768, test=0.775)
total time=
              0.0s
[CV 4/5] END n_neighbors=8, weights=uniform;, score=(train=0.784, test=0.704)
total time=
              0.0s
[CV 5/5] END n_neighbors=8, weights=uniform;, score=(train=0.772, test=0.690)
total time=
[CV 1/5] END n_neighbors=8, weights=distance;, score=(train=0.981, test=0.741)
total time=
[CV 2/5] END n_neighbors=8, weights=distance;, score=(train=0.986, test=0.706)
total time=
              0.0s
[CV 3/5] END n_neighbors=8, weights=distance;, score=(train=0.975, test=0.768)
total time=
              0.0s
[CV 4/5] END n neighbors=8, weights=distance;, score=(train=0.982, test=0.732)
total time=
              0.0s
[CV 5/5] END n neighbors=8, weights=distance;, score=(train=0.981, test=0.704)
total time=
              0.0s
[CV 1/5] END n neighbors=9, weights=uniform;, score=(train=0.779, test=0.699)
total time=
              0.0s
[CV 2/5] END n_neighbors=9, weights=uniform;, score=(train=0.772, test=0.727)
```

```
total time=
              0.0s
[CV 3/5] END n_neighbors=9, weights=uniform;, score=(train=0.770, test=0.761)
total time=
              0.0s
[CV 4/5] END n_neighbors=9, weights=uniform;, score=(train=0.774, test=0.711)
total time=
              0.0s
[CV 5/5] END n_neighbors=9, weights=uniform;, score=(train=0.772, test=0.676)
total time=
[CV 1/5] END n_neighbors=9, weights=distance;, score=(train=0.981, test=0.741)
total time=
              0.0s
[CV 2/5] END n_neighbors=9, weights=distance;, score=(train=0.986, test=0.706)
total time=
              0.0s
[CV 3/5] END n neighbors=9, weights=distance;, score=(train=0.975, test=0.761)
total time=
              0.0s
[CV 4/5] END n neighbors=9, weights=distance;, score=(train=0.982, test=0.718)
total time=
              0.0s
[CV 5/5] END n neighbors=9, weights=distance;, score=(train=0.981, test=0.683)
total time=
              0.0s
[CV 1/5] END n neighbors=10, weights=uniform;, score=(train=0.779, test=0.706)
total time=
              0.0s
[CV 2/5] END n_neighbors=10, weights=uniform;, score=(train=0.756, test=0.720)
total time=
[CV 3/5] END n_neighbors=10, weights=uniform;, score=(train=0.749, test=0.746)
total time=
[CV 4/5] END n_neighbors=10, weights=uniform;, score=(train=0.774, test=0.725)
total time=
              0.0s
[CV 5/5] END n neighbors=10, weights=uniform;, score=(train=0.758, test=0.683)
total time=
              0.0s
[CV 1/5] END n_neighbors=10, weights=distance;, score=(train=0.981, test=0.741)
total time=
[CV 2/5] END n_neighbors=10, weights=distance;, score=(train=0.986, test=0.699)
total time=
              0.0s
[CV 3/5] END n_neighbors=10, weights=distance;, score=(train=0.975, test=0.761)
total time=
              0.0s
[CV 4/5] END n_neighbors=10, weights=distance;, score=(train=0.982, test=0.718)
total time=
[CV 5/5] END n_neighbors=10, weights=distance;, score=(train=0.981, test=0.690)
total time=
[CV 1/5] END n_neighbors=11, weights=uniform;, score=(train=0.761, test=0.685)
total time=
              0.0s
[CV 2/5] END n_neighbors=11, weights=uniform;, score=(train=0.757, test=0.720)
total time=
              0.0s
[CV 3/5] END n neighbors=11, weights=uniform;, score=(train=0.749, test=0.754)
total time=
              0.0s
[CV 4/5] END n neighbors=11, weights=uniform;, score=(train=0.772, test=0.704)
total time=
              0.0s
[CV 5/5] END n neighbors=11, weights=uniform;, score=(train=0.767, test=0.669)
total time=
              0.0s
[CV 1/5] END n_neighbors=11, weights=distance;, score=(train=0.981, test=0.727)
```

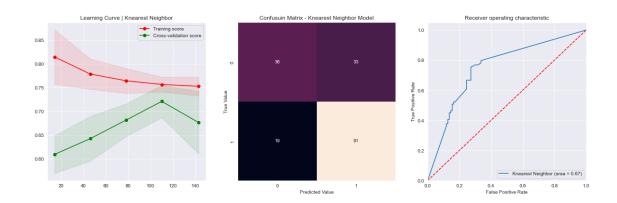
```
total time=
              0.0s
[CV 2/5] END n_neighbors=11, weights=distance;, score=(train=0.986, test=0.692)
total time=
              0.0s
[CV 3/5] END n_neighbors=11, weights=distance;, score=(train=0.975, test=0.754)
total time=
              0.0s
[CV 4/5] END n_neighbors=11, weights=distance;, score=(train=0.982, test=0.711)
total time=
[CV 5/5] END n_neighbors=11, weights=distance;, score=(train=0.981, test=0.697)
total time=
              0.0s
[CV 1/5] END n_neighbors=12, weights=uniform;, score=(train=0.749, test=0.706)
total time=
              0.0s
[CV 2/5] END n neighbors=12, weights=uniform;, score=(train=0.756, test=0.720)
total time=
              0.0s
[CV 3/5] END n neighbors=12, weights=uniform;, score=(train=0.749, test=0.732)
total time=
              0.0s
[CV 4/5] END n neighbors=12, weights=uniform;, score=(train=0.760, test=0.732)
total time=
              0.0s
[CV 5/5] END n neighbors=12, weights=uniform;, score=(train=0.760, test=0.662)
total time=
              0.0s
[CV 1/5] END n_neighbors=12, weights=distance;, score=(train=0.981, test=0.727)
total time=
[CV 2/5] END n_neighbors=12, weights=distance;, score=(train=0.986, test=0.699)
total time=
[CV 3/5] END n_neighbors=12, weights=distance;, score=(train=0.975, test=0.761)
total time=
              0.0s
[CV 4/5] END n neighbors=12, weights=distance;, score=(train=0.982, test=0.697)
total time=
              0.0s
[CV 5/5] END n_neighbors=12, weights=distance;, score=(train=0.981, test=0.697)
total time=
[CV 1/5] END n_neighbors=13, weights=uniform;, score=(train=0.763, test=0.706)
total time=
              0.0s
[CV 2/5] END n_neighbors=13, weights=uniform;, score=(train=0.745, test=0.727)
total time=
              0.0s
[CV 3/5] END n_neighbors=13, weights=uniform;, score=(train=0.733, test=0.746)
total time=
[CV 4/5] END n_neighbors=13, weights=uniform;, score=(train=0.751, test=0.711)
total time=
[CV 5/5] END n_neighbors=13, weights=uniform;, score=(train=0.768, test=0.669)
total time=
[CV 1/5] END n_neighbors=13, weights=distance;, score=(train=0.981, test=0.748)
total time=
              0.0s
[CV 2/5] END n neighbors=13, weights=distance;, score=(train=0.986, test=0.706)
total time=
              0.0s
[CV 3/5] END n neighbors=13, weights=distance;, score=(train=0.975, test=0.754)
total time=
              0.0s
[CV 4/5] END n neighbors=13, weights=distance;, score=(train=0.982, test=0.704)
total time=
              0.0s
[CV 5/5] END n_neighbors=13, weights=distance;, score=(train=0.981, test=0.704)
```

```
0.0s
    total time=
    [CV 1/5] END n_neighbors=14, weights=uniform;, score=(train=0.745, test=0.706)
    total time=
                  0.0s
    [CV 2/5] END n_neighbors=14, weights=uniform;, score=(train=0.733, test=0.713)
    total time=
                  0.0s
    [CV 3/5] END n_neighbors=14, weights=uniform;, score=(train=0.735, test=0.739)
    total time=
    [CV 4/5] END n_neighbors=14, weights=uniform;, score=(train=0.739, test=0.739)
    total time=
    [CV 5/5] END n_neighbors=14, weights=uniform;, score=(train=0.754, test=0.627)
    total time=
                  0.0s
    [CV 1/5] END n neighbors=14, weights=distance;, score=(train=0.981, test=0.734)
    total time=
                  0.0s
    [CV 2/5] END n neighbors=14, weights=distance;, score=(train=0.986, test=0.699)
    total time=
                  0.0s
    [CV 3/5] END n neighbors=14, weights=distance;, score=(train=0.975, test=0.754)
    total time=
                  0.0s
    [CV 4/5] END n_neighbors=14, weights=distance;, score=(train=0.982, test=0.725)
    total time=
                  0.0s
    [CV 5/5] END n_neighbors=14, weights=distance;, score=(train=0.981, test=0.697)
    total time=
    [CV 1/5] END n_neighbors=15, weights=uniform;, score=(train=0.743, test=0.671)
    total time=
    [CV 2/5] END n_neighbors=15, weights=uniform;, score=(train=0.736, test=0.720)
    total time=
                  0.0s
    [CV 3/5] END n neighbors=15, weights=uniform;, score=(train=0.730, test=0.739)
    total time=
                  0.0s
    [CV 4/5] END n_neighbors=15, weights=uniform;, score=(train=0.744, test=0.746)
    total time=
    [CV 5/5] END n_neighbors=15, weights=uniform;, score=(train=0.749, test=0.613)
    total time=
                  0.0s
    [CV 1/5] END n_neighbors=15, weights=distance;, score=(train=0.981, test=0.727)
    total time=
                  0.0s
    [CV 2/5] END n_neighbors=15, weights=distance;, score=(train=0.986, test=0.699)
    total time=
    [CV 3/5] END n_neighbors=15, weights=distance;, score=(train=0.975, test=0.761)
    total time=
    [CV 4/5] END n_neighbors=15, weights=distance;, score=(train=0.982, test=0.725)
    total time=
                  0.0s
    [CV 5/5] END n_neighbors=15, weights=distance;, score=(train=0.981, test=0.690)
    total time=
                  0.0s
    KNeighborsClassifier(n neighbors=2, weights='distance') best hyperparameters
    are: {'n_neighbors': 2, 'weights': 'distance'} with the accuracy of: 0.74
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
```

```
train_sizes, train_scores, test_scores, =__
→learning_curve(KNeighborsClassifier(), X_valid, y_valid, train_sizes=np.
\hookrightarrowlinspace(.1, 1, 5))
train scores mean = np.mean(train scores, axis=1)
train_scores_std = np.std(train_scores, axis=1)
test scores mean = np.mean(test scores, axis=1)
test_scores_std = np.std(test_scores, axis=1)
y_pred = grid.best_estimator_.predict(X_valid)
cls_rep=classification_report(y_valid,y_pred)
print(cls_rep)
axes[0].fill_between(train_sizes, train_scores_mean - train_scores_std,
                    train_scores_mean + train_scores_std, alpha=0.1, color="r")
axes[0].fill_between(train_sizes, test_scores_mean - test_scores_std,
                    test_scores_mean + test_scores_std, alpha=0.1, color="g")
axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_
⇔score")
axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",_
→label="Cross-validation score")
axes[0].legend(loc="best")
axes[0].set_title('Learning Curve | Knearest Neighbor')
cnf_matrix = confusion_matrix(y_valid, y_pred, labels=[1,0])
sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g', __
\rightarrowax=axes[1])
axes[1].set_xlabel('Predicted Value')
axes[1].set_ylabel('True Value')
axes[1].set_title('Confusuin Matrix - Knearest Neighbor Model')
logit_roc_auc = roc_auc_score(y_valid, grid.predict(X_valid))
fpr, tpr, thresholds = roc_curve(y_valid, grid.predict_proba(X_valid)[:,1],_
→pos_label=1)
axes[2].plot(fpr, tpr, label='Knearest Neighbor (area = %0.2f)' % logit_roc_auc)
axes[2].plot([0, 1], [0, 1], 'r--')
axes[2].set_xlim([0.0, 1.0])
axes[2].set_ylim([0.0, 1.05])
axes[2].set_xlabel('False Positive Rate')
axes[2].set_ylabel('True Positive Rate')
axes[2].set_title('Receiver operating characteristic')
axes[2].legend(loc="lower right")
plt.show()
```

precision recall f1-score support

0.0	0.73	0.83	0.78	110
1.0	0.65	0.52	0.58	69
accuracy			0.71	179
macro avg	0.69	0.67	0.68	179
weighted avg	0.70	0.71	0.70	179



in the graph above you can see the Learning curve, Confusion matrix and ROC Curve for the most optimum model of logistic regression,

#### 9 Decision Tree

total time=

0.0s

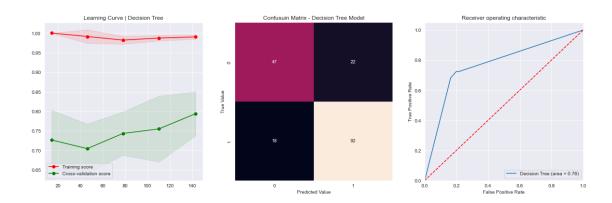
```
[]: from sklearn.tree import DecisionTreeClassifier
[]: params = {
         'criterion': ['gini', 'entropy'],
         'splitter': ['best', 'random']
     }
     grid = GridSearchCV(DecisionTreeClassifier(), param_grid=params,__
     →return_train_score=True, cv=6, verbose=3)
     grid.fit(X_train,y_train)
     print(f'{grid.best_estimator_} best hyperparameters are: {grid.best_params_}_
      →with the accuracy of: {grid.best_score_:.2f}')
    Fitting 6 folds for each of 4 candidates, totalling 24 fits
    [CV 1/6] END criterion=gini, splitter=best;, score=(train=0.981, test=0.807)
    total time=
    [CV 2/6] END criterion=gini, splitter=best;, score=(train=0.981, test=0.773)
    total time=
    [CV 3/6] END criterion=gini, splitter=best;, score=(train=0.980, test=0.756)
    total time=
                  0.0s
    [CV 4/6] END criterion=gini, splitter=best;, score=(train=0.980, test=0.714)
```

```
[CV 5/6] END criterion=gini, splitter=best;, score=(train=0.983, test=0.771)
    total time=
    [CV 6/6] END criterion=gini, splitter=best;, score=(train=0.980, test=0.805)
    total time=
                  0.0s
    [CV 1/6] END criterion=gini, splitter=random;, score=(train=0.981, test=0.773)
    total time=
    [CV 2/6] END criterion=gini, splitter=random;, score=(train=0.981, test=0.748)
    total time=
                  0.0s
    [CV 3/6] END criterion=gini, splitter=random;, score=(train=0.980, test=0.765)
    total time=
                  0.0s
    [CV 4/6] END criterion=gini, splitter=random;, score=(train=0.980, test=0.798)
    total time=
                  0.0s
    [CV 5/6] END criterion=gini, splitter=random;, score=(train=0.983, test=0.763)
    total time=
    [CV 6/6] END criterion=gini, splitter=random;, score=(train=0.980, test=0.788)
    total time=
    [CV 1/6] END criterion=entropy, splitter=best;, score=(train=0.981, test=0.807)
    total time=
                  0.0s
    [CV 2/6] END criterion=entropy, splitter=best;, score=(train=0.981, test=0.782)
    total time=
    [CV 3/6] END criterion=entropy, splitter=best;, score=(train=0.980, test=0.756)
    total time=
                  0.0s
    [CV 4/6] END criterion=entropy, splitter=best;, score=(train=0.980, test=0.731)
    total time=
                  0.0s
    [CV 5/6] END criterion=entropy, splitter=best;, score=(train=0.983, test=0.780)
    total time=
                  0.0s
    [CV 6/6] END criterion=entropy, splitter=best;, score=(train=0.980, test=0.797)
    total time=
                  0.0s
    [CV 1/6] END criterion=entropy, splitter=random;, score=(train=0.981,
    test=0.798) total time=
                              0.0s
    [CV 2/6] END criterion=entropy, splitter=random;, score=(train=0.981,
    test=0.782) total time=
                              0.0s
    [CV 3/6] END criterion=entropy, splitter=random;, score=(train=0.980,
    test=0.756) total time=
                              0.0s
    [CV 4/6] END criterion=entropy, splitter=random;, score=(train=0.980,
    test=0.798) total time=
                              0.0s
    [CV 5/6] END criterion=entropy, splitter=random;, score=(train=0.983,
    test=0.788) total time=
                              0.0s
    [CV 6/6] END criterion=entropy, splitter=random;, score=(train=0.980,
    test=0.797) total time=
                              0.0s
    DecisionTreeClassifier(criterion='entropy', splitter='random') best
    hyperparameters are: {'criterion': 'entropy', 'splitter': 'random'} with the
    accuracy of: 0.79
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
```

```
train_sizes, train_scores, test_scores, =__
→learning curve(DecisionTreeClassifier(), X valid, y valid, train_sizes=np.
\hookrightarrowlinspace(.1, 1, 5))
train scores mean = np.mean(train scores, axis=1)
train_scores_std = np.std(train_scores, axis=1)
test scores mean = np.mean(test scores, axis=1)
test_scores_std = np.std(test_scores, axis=1)
y_pred = grid.best_estimator_.predict(X_valid)
cls_rep=classification_report(y_valid,y_pred)
print(cls_rep)
axes[0].fill_between(train_sizes, train_scores_mean - train_scores_std,
                    train_scores_mean + train_scores_std, alpha=0.1, color="r")
axes[0].fill_between(train_sizes, test_scores_mean - test_scores_std,
                    test_scores_mean + test_scores_std, alpha=0.1, color="g")
axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_
⇔score")
axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",_
→label="Cross-validation score")
axes[0].legend(loc="best")
axes[0].set_title('Learning Curve | Decision Tree')
cnf_matrix = confusion_matrix(y_valid, y_pred, labels=[1,0])
sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g', __
\rightarrowax=axes[1])
axes[1].set_xlabel('Predicted Value')
axes[1].set_ylabel('True Value')
axes[1].set_title('Confusuin Matrix - Decision Tree Model')
logit_roc_auc = roc_auc_score(y_valid, grid.predict(X_valid))
fpr, tpr, thresholds = roc_curve(y_valid, grid.predict_proba(X_valid)[:,1],_
→pos_label=1)
axes[2].plot(fpr, tpr, label='Decision Tree (area = %0.2f)' % logit_roc_auc)
axes[2].plot([0, 1], [0, 1], 'r--')
axes[2].set_xlim([0.0, 1.0])
axes[2].set_ylim([0.0, 1.05])
axes[2].set_xlabel('False Positive Rate')
axes[2].set_ylabel('True Positive Rate')
axes[2].set_title('Receiver operating characteristic')
axes[2].legend(loc="lower right")
plt.show()
```

precision recall f1-score support

0.0	0.81	0.84	0.82	110
1.0	0.72	0.68	0.70	69
accuracy			0.78	179
macro avg	0.77	0.76	0.76	179
weighted avg	0.77	0.78	0.78	179



in the graph above you can see the Learning curve, Confusion matrix and ROC Curve for the most optimum model of Decision Tree.

#### 10 Random Forest

```
[]: from sklearn.ensemble import RandomForestClassifier
[]: model = RandomForestClassifier(n_estimators=1300, criterion='entropy',__
      →min_samples_split=4, bootstrap=True)
[ ]: params = {
         'max_depth': np.arange(2, 15, 1)
     grid = GridSearchCV(model, param_grid=params, return_train_score=True, cv=5,_
      →verbose=3)
     grid.fit(X_train,y_train)
     print(f'{grid.best_estimator_} best hyperparameters are: {grid.best_params_}_
      →with the accuracy of: {grid.best_score_:.2f}')
    Fitting 5 folds for each of 13 candidates, totalling 65 fits
    [CV 1/5] END ...max_depth=2;, score=(train=0.789, test=0.839) total time=
                                                                                2.2s
    [CV 2/5] END ...max_depth=2;, score=(train=0.805, test=0.748) total time=
                                                                                2.3s
    [CV 3/5] END ...max_depth=2;, score=(train=0.802, test=0.761) total time=
                                                                                2.0s
    [CV 4/5] END ...max_depth=2;, score=(train=0.791, test=0.803) total time=
                                                                                1.8s
    [CV 5/5] END ...max_depth=2;, score=(train=0.788, test=0.831) total time=
                                                                                2.1s
    [CV 1/5] END ...max_depth=3;, score=(train=0.826, test=0.846) total time=
                                                                                2.1s
```

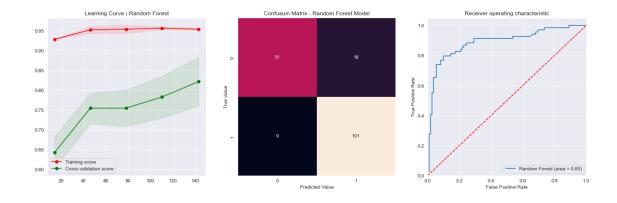
```
[CV 2/5] END ...max depth=3;, score=(train=0.826, test=0.755) total time=
                                                                            2.2s
[CV 3/5] END ...max_depth=3;, score=(train=0.826, test=0.768) total time=
                                                                            2.2s
[CV 4/5] END ...max_depth=3;, score=(train=0.818, test=0.824) total time=
                                                                            2.3s
[CV 5/5] END ...max_depth=3;, score=(train=0.818, test=0.838) total time=
                                                                            2.0s
[CV 1/5] END ...max depth=4;, score=(train=0.835, test=0.853) total time=
                                                                            2.3s
[CV 2/5] END ...max_depth=4;, score=(train=0.831, test=0.776) total time=
                                                                            2.1s
[CV 3/5] END ...max depth=4;, score=(train=0.846, test=0.796) total time=
                                                                            2.4s
[CV 4/5] END ...max_depth=4;, score=(train=0.833, test=0.824) total time=
                                                                            2.2s
[CV 5/5] END ...max depth=4;, score=(train=0.835, test=0.845) total time=
                                                                            2.4s
[CV 1/5] END ...max_depth=5;, score=(train=0.849, test=0.846) total time=
                                                                            2.3s
[CV 2/5] END ...max_depth=5;, score=(train=0.854, test=0.790) total time=
                                                                            2.3s
[CV 3/5] END ...max_depth=5;, score=(train=0.860, test=0.810) total time=
                                                                            2.2s
[CV 4/5] END ...max depth=5;, score=(train=0.861, test=0.831) total time=
                                                                            2.4s
[CV 5/5] END ...max_depth=5;, score=(train=0.849, test=0.859) total time=
                                                                            2.3s
[CV 1/5] END ...max_depth=6;, score=(train=0.868, test=0.832) total time=
                                                                            2.6s
[CV 2/5] END ...max depth=6;, score=(train=0.868, test=0.797) total time=
                                                                            2.3s
[CV 3/5] END ...max_depth=6;, score=(train=0.865, test=0.803) total time=
                                                                            2.4s
[CV 4/5] END ...max_depth=6;, score=(train=0.874, test=0.838) total time=
                                                                            2.3s
[CV 5/5] END ...max_depth=6;, score=(train=0.870, test=0.859) total time=
                                                                            2.4s
[CV 1/5] END ...max depth=7;, score=(train=0.884, test=0.825) total time=
                                                                            2.4s
[CV 2/5] END ...max depth=7;, score=(train=0.907, test=0.804) total time=
                                                                            2.8s
[CV 3/5] END ...max_depth=7;, score=(train=0.895, test=0.810) total time=
                                                                            2.4s
[CV 4/5] END ...max_depth=7;, score=(train=0.898, test=0.838) total time=
                                                                            2.6s
[CV 5/5] END ...max_depth=7;, score=(train=0.895, test=0.845) total time=
                                                                            2.4s
[CV 1/5] END ...max_depth=8;, score=(train=0.909, test=0.825) total time=
                                                                            2.7s
[CV 2/5] END ...max depth=8;, score=(train=0.923, test=0.818) total time=
                                                                            2.8s
[CV 3/5] END ...max depth=8;, score=(train=0.909, test=0.810) total time=
                                                                            2.6s
[CV 4/5] END ...max depth=8;, score=(train=0.926, test=0.852) total time=
                                                                            2.5s
[CV 5/5] END ...max depth=8;, score=(train=0.919, test=0.831) total time=
                                                                            2.7s
[CV 1/5] END ...max_depth=9;, score=(train=0.921, test=0.846) total time=
                                                                            2.6s
[CV 2/5] END ...max_depth=9;, score=(train=0.937, test=0.811) total time=
                                                                            2.8s
[CV 3/5] END ...max_depth=9;, score=(train=0.928, test=0.803) total time=
                                                                            3.0s
[CV 4/5] END ...max depth=9;, score=(train=0.932, test=0.852) total time=
                                                                            2.6s
[CV 5/5] END ...max_depth=9;, score=(train=0.925, test=0.838) total time=
                                                                            2.7s
[CV 1/5] END ..max depth=10;, score=(train=0.931, test=0.853) total time=
                                                                              2.8s
[CV 2/5] END ..max_depth=10;, score=(train=0.938, test=0.818) total time=
                                                                              2.5s
[CV 3/5] END ..max depth=10;, score=(train=0.933, test=0.796) total time=
                                                                              2.5s
[CV 4/5] END ..max_depth=10;, score=(train=0.937, test=0.845) total time=
                                                                              2.6s
[CV 5/5] END ..max_depth=10;, score=(train=0.926, test=0.838) total time=
                                                                              2.6s
[CV 1/5] END ..max_depth=11;, score=(train=0.938, test=0.846) total time=
                                                                              2.4s
[CV 2/5] END ..max_depth=11;, score=(train=0.944, test=0.818) total time=
                                                                              2.6s
[CV 3/5] END ..max_depth=11;, score=(train=0.932, test=0.803) total time=
                                                                              2.7s
[CV 4/5] END ..max_depth=11;, score=(train=0.946, test=0.845) total time=
                                                                              2.6s
[CV 5/5] END ..max_depth=11;, score=(train=0.932, test=0.838) total time=
                                                                              2.4s
[CV 1/5] END ..max_depth=12;, score=(train=0.946, test=0.839) total time=
                                                                              2.5s
[CV 2/5] END ..max_depth=12;, score=(train=0.947, test=0.818) total time=
                                                                              2.3s
[CV 3/5] END ..max_depth=12;, score=(train=0.937, test=0.796) total time=
                                                                              2.5s
[CV 4/5] END ..max_depth=12;, score=(train=0.944, test=0.859) total time=
                                                                              2.6s
```

```
[CV 1/5] END ..max_depth=13;, score=(train=0.946, test=0.832) total time=
                                                                                 2.6s
    [CV 2/5] END ..max_depth=13;, score=(train=0.946, test=0.818) total time=
                                                                                 2.5s
    [CV 3/5] END ..max_depth=13;, score=(train=0.940, test=0.796) total time=
                                                                                 2.3s
    [CV 4/5] END ..max depth=13;, score=(train=0.949, test=0.859) total time=
                                                                                 2.7s
    [CV 5/5] END ..max_depth=13;, score=(train=0.939, test=0.845) total time=
                                                                                 2.3s
    [CV 1/5] END ..max depth=14;, score=(train=0.947, test=0.832) total time=
                                                                                 2.5s
    [CV 2/5] END ..max_depth=14;, score=(train=0.956, test=0.804) total time=
                                                                                 2.5s
    [CV 3/5] END ..max depth=14;, score=(train=0.947, test=0.789) total time=
                                                                                 2.3s
    [CV 4/5] END ..max_depth=14;, score=(train=0.956, test=0.859) total time=
                                                                                 2.6s
    [CV 5/5] END ..max_depth=14;, score=(train=0.942, test=0.845) total time=
                                                                                 2.5s
    RandomForestClassifier(criterion='entropy', max_depth=13, min_samples_split=4,
                           n_estimators=1300) best hyperparameters are:
    {'max_depth': 13} with the accuracy of: 0.83
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
     train_sizes, train_scores, test_scores, = learning_curve(grid.best_estimator_,_
     →X_valid, y_valid, train_sizes=np.linspace(.1, 1, 5))
     train scores mean = np.mean(train scores, axis=1)
     train_scores_std = np.std(train_scores, axis=1)
     test_scores_mean = np.mean(test_scores, axis=1)
     test_scores_std = np.std(test_scores, axis=1)
     y pred = grid.best estimator .predict(X valid)
     cls_rep=classification_report(y_valid,y_pred)
     print(cls_rep)
     axes[0].fill_between(train_sizes, train_scores_mean - train_scores_std,
                         train_scores_mean + train_scores_std, alpha=0.1, color="r")
     axes[0].fill_between(train_sizes, test_scores_mean - test_scores_std,
                         test_scores_mean + test_scores_std, alpha=0.1, color="g")
     axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_
     ⇔score")
     axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",_
     →label="Cross-validation score")
     axes[0].legend(loc="best")
     axes[0].set title('Learning Curve | Random Forest')
     cnf matrix = confusion matrix(y valid, y pred, labels=[1,0])
     sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g',__
     \rightarrowax=axes[1])
     axes[1].set_xlabel('Predicted Value')
     axes[1].set_ylabel('True Value')
     axes[1].set_title('Confusuin Matrix - Random Forest Model')
     logit_roc_auc = roc_auc_score(y_valid, grid.predict(X_valid))
```

[CV 5/5] END ..max\_depth=12;, score=(train=0.933, test=0.838) total time=

2.5s

	precision	recall	f1-score	support
0.0	0.85	0.92	0.88	110
1.0	0.85	0.74	0.79	69
accuracy			0.85	179
macro avg	0.85	0.83	0.84	179
weighted avg	0.85	0.85	0.85	179



in the graph above you can see the Learning curve, Confusion matrix and ROC Curve for the most optimum model of Decision Tree.

#### 11 XGBoost

```
[]: from xgboost import XGBClassifier

[]: params = {
    'booster': ['gbtree', 'gblinear', 'dart'],
    'eta': np.arange(0.3, 1, 0.3),
    'subsample': np.arange(0.25,1.25,0.25),
```

```
Fitting 5 folds for each of 72 candidates, totalling 360 fits
[CV 1/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.25;,
score=(train=0.905, test=0.811) total time=
                                              0.0s
[CV 2/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.25;,
score=(train=0.921, test=0.776) total time=
                                              0.0s
[CV 3/5] END booster=gbtree, eta=0.3, refresh leaf=0, subsample=0.25;,
score=(train=0.905, test=0.768) total time=
[CV 4/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.25;,
score=(train=0.916, test=0.859) total time=
                                              0.0s
[CV 5/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.25;,
score=(train=0.902, test=0.817) total time=
                                              0.0s
[CV 1/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.5;,
score=(train=0.953, test=0.839) total time=
                                              0.0s
[CV 2/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.5;,
score=(train=0.965, test=0.776) total time=
[CV 3/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.5;,
score=(train=0.953, test=0.761) total time=
                                              0.1s
[CV 4/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.5;,
score=(train=0.947, test=0.859) total time=
                                              0.0s
[CV 5/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.5;,
score=(train=0.953, test=0.803) total time=
[CV 1/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.75;,
score=(train=0.968, test=0.846) total time=
                                              0.1s
[CV 2/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.75;,
                                              0.1s
score=(train=0.970, test=0.790) total time=
[CV 3/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.75;,
score=(train=0.961, test=0.782) total time=
                                              0.1s
[CV 4/5] END booster=gbtree, eta=0.3, refresh leaf=0, subsample=0.75;,
score=(train=0.968, test=0.838) total time=
[CV 5/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=0.75;,
score=(train=0.972, test=0.810) total time=
                                              0.1s
[CV 1/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=1.0;,
score=(train=0.970, test=0.825) total time=
                                              0.1s
[CV 2/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=1.0;,
score=(train=0.974, test=0.783) total time=
[CV 3/5] END booster=gbtree, eta=0.3, refresh leaf=0, subsample=1.0;,
score=(train=0.965, test=0.739) total time=
                                              0.0s
[CV 4/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=1.0;,
score=(train=0.968, test=0.838) total time=
                                              0.0s
[CV 5/5] END booster=gbtree, eta=0.3, refresh_leaf=0, subsample=1.0;,
```

```
score=(train=0.965, test=0.817) total time=
                                              0.0s
[CV 1/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.25;,
score=(train=0.905, test=0.811) total time=
                                              0.0s
[CV 2/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.25;,
score=(train=0.921, test=0.776) total time=
                                              0.0s
[CV 3/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.25;,
score=(train=0.905, test=0.768) total time=
[CV 4/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.25;,
score=(train=0.916, test=0.859) total time=
                                              0.0s
[CV 5/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.25;,
score=(train=0.902, test=0.817) total time=
                                              0.0s
[CV 1/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.5;,
score=(train=0.953, test=0.839) total time=
                                              0.0s
[CV 2/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.5;,
score=(train=0.965, test=0.776) total time=
[CV 3/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.5;,
score=(train=0.953, test=0.761) total time=
                                              0.1s
[CV 4/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.5;,
score=(train=0.947, test=0.859) total time=
                                              0.0s
[CV 5/5] END booster=gbtree, eta=0.3, refresh leaf=1, subsample=0.5;,
score=(train=0.953, test=0.803) total time=
[CV 1/5] END booster=gbtree, eta=0.3, refresh leaf=1, subsample=0.75;,
score=(train=0.968, test=0.846) total time=
                                              0.1s
[CV 2/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.75;,
score=(train=0.970, test=0.790) total time=
                                              0.1s
[CV 3/5] END booster=gbtree, eta=0.3, refresh leaf=1, subsample=0.75;,
score=(train=0.961, test=0.782) total time=
                                              0.1s
[CV 4/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.75;,
score=(train=0.968, test=0.838) total time=
[CV 5/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=0.75;,
score=(train=0.972, test=0.810) total time=
                                              0.1s
[CV 1/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=1.0;,
score=(train=0.970, test=0.825) total time=
                                              0.0s
[CV 2/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=1.0;,
score=(train=0.974, test=0.783) total time=
                                              0.0s
[CV 3/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=1.0;,
score=(train=0.965, test=0.739) total time=
[CV 4/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=1.0;,
score=(train=0.968, test=0.838) total time=
                                              0.1s
[CV 5/5] END booster=gbtree, eta=0.3, refresh_leaf=1, subsample=1.0;,
score=(train=0.965, test=0.817) total time=
                                              0.1s
[CV 1/5] END booster=gbtree, eta=0.6, refresh leaf=0, subsample=0.25;,
score=(train=0.923, test=0.818) total time=
[CV 2/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=0.25;,
score=(train=0.919, test=0.769) total time=
                                              0.0s
[CV 3/5] END booster=gbtree, eta=0.6, refresh leaf=0, subsample=0.25;,
score=(train=0.886, test=0.775) total time=
                                              0.0s
[CV 4/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=0.25;,
```

```
score=(train=0.904, test=0.810) total time=
                                              0.1s
[CV 5/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=0.25;,
score=(train=0.895, test=0.754) total time=
                                              0.1s
[CV 1/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=0.5;,
score=(train=0.961, test=0.804) total time=
                                              0.0s
[CV 2/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=0.5;,
score=(train=0.967, test=0.769) total time=
[CV 3/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=0.5;,
score=(train=0.960, test=0.718) total time=
                                              0.1s
[CV 4/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=0.5;,
score=(train=0.961, test=0.796) total time=
                                              0.1s
[CV 5/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=0.5;,
score=(train=0.958, test=0.831) total time=
[CV 1/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=0.75;,
score=(train=0.977, test=0.818) total time=
                                              0.1s
[CV 2/5] END booster=gbtree, eta=0.6, refresh leaf=0, subsample=0.75;,
score=(train=0.979, test=0.769) total time=
                                              0.0s
[CV 3/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=0.75;,
score=(train=0.967, test=0.775) total time=
                                              0.1s
[CV 4/5] END booster=gbtree, eta=0.6, refresh leaf=0, subsample=0.75;,
score=(train=0.979, test=0.803) total time=
[CV 5/5] END booster=gbtree, eta=0.6, refresh leaf=0, subsample=0.75;,
score=(train=0.974, test=0.810) total time=
                                              0.1s
[CV 1/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=1.0;,
score=(train=0.977, test=0.825) total time=
                                              0.1s
[CV 2/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=1.0;,
score=(train=0.982, test=0.804) total time=
                                              0.1s
[CV 3/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=1.0;,
score=(train=0.974, test=0.725) total time=
[CV 4/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=1.0;,
score=(train=0.979, test=0.824) total time=
                                              0.0s
[CV 5/5] END booster=gbtree, eta=0.6, refresh_leaf=0, subsample=1.0;,
score=(train=0.975, test=0.810) total time=
                                              0.0s
[CV 1/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.25;,
score=(train=0.923, test=0.818) total time=
                                              0.0s
[CV 2/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.25;,
score=(train=0.919, test=0.769) total time=
[CV 3/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.25;,
score=(train=0.886, test=0.775) total time=
                                              0.0s
[CV 4/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.25;,
score=(train=0.904, test=0.810) total time=
                                              0.0s
[CV 5/5] END booster=gbtree, eta=0.6, refresh leaf=1, subsample=0.25;,
score=(train=0.895, test=0.754) total time=
[CV 1/5] END booster=gbtree, eta=0.6, refresh leaf=1, subsample=0.5;,
score=(train=0.961, test=0.804) total time=
                                              0.0s
[CV 2/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.5;,
score=(train=0.967, test=0.769) total time=
                                              0.0s
[CV 3/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.5;,
```

```
score=(train=0.960, test=0.718) total time=
                                              0.0s
[CV 4/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.5;,
score=(train=0.961, test=0.796) total time=
                                              0.0s
[CV 5/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.5;,
score=(train=0.958, test=0.831) total time=
                                              0.0s
[CV 1/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.75;,
score=(train=0.977, test=0.818) total time=
[CV 2/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.75;,
score=(train=0.979, test=0.769) total time=
                                              0.0s
[CV 3/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.75;,
score=(train=0.967, test=0.775) total time=
                                              0.0s
[CV 4/5] END booster=gbtree, eta=0.6, refresh leaf=1, subsample=0.75;,
score=(train=0.979, test=0.803) total time=
                                              0.0s
[CV 5/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=0.75;,
score=(train=0.974, test=0.810) total time=
                                              0.0s
[CV 1/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=1.0;,
score=(train=0.977, test=0.825) total time=
                                              0.0s
[CV 2/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=1.0;,
score=(train=0.982, test=0.804) total time=
                                              0.0s
[CV 3/5] END booster=gbtree, eta=0.6, refresh leaf=1, subsample=1.0;,
score=(train=0.974, test=0.725) total time=
[CV 4/5] END booster=gbtree, eta=0.6, refresh leaf=1, subsample=1.0;,
score=(train=0.979, test=0.824) total time=
                                             0.0s
[CV 5/5] END booster=gbtree, eta=0.6, refresh_leaf=1, subsample=1.0;,
score=(train=0.975, test=0.810) total time=
[CV 1/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=0,
subsample=0.25;, score=(train=0.907, test=0.769) total time=
[CV 2/5] END booster=gbtree, eta=0.8999999999999, refresh_leaf=0,
subsample=0.25;, score=(train=0.891, test=0.741) total time=
[CV 3/5] END booster=gbtree, eta=0.8999999999999, refresh_leaf=0,
subsample=0.25;, score=(train=0.875, test=0.697) total time=
                                                               0.0s
[CV 4/5] END booster=gbtree, eta=0.8999999999999, refresh_leaf=0,
subsample=0.25;, score=(train=0.877, test=0.754) total time=
[CV 5/5] END booster=gbtree, eta=0.8999999999999, refresh_leaf=0,
subsample=0.25;, score=(train=0.874, test=0.810) total time=
[CV 1/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=0,
subsample=0.5;, score=(train=0.963, test=0.818) total time=
[CV 2/5] END booster=gbtree, eta=0.8999999999999, refresh_leaf=0,
subsample=0.5;, score=(train=0.970, test=0.755) total time=
[CV 3/5] END booster=gbtree, eta=0.8999999999999, refresh_leaf=0,
subsample=0.5;, score=(train=0.958, test=0.768) total time=
[CV 4/5] END booster=gbtree, eta=0.8999999999999, refresh_leaf=0,
subsample=0.5;, score=(train=0.967, test=0.817) total time=
[CV 5/5] END booster=gbtree, eta=0.8999999999999, refresh_leaf=0,
subsample=0.5;, score=(train=0.958, test=0.824) total time=
[CV 1/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=0,
subsample=0.75;, score=(train=0.977, test=0.839) total time=
[CV 2/5] END booster=gbtree, eta=0.8999999999999, refresh_leaf=0,
```

subsample=0.75;, score=(train=0.982, test=0.783) total time= [CV 3/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=0, subsample=0.75;, score=(train=0.967, test=0.775) total time= 0.0s [CV 4/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=0, subsample=0.75;, score=(train=0.979, test=0.810) total time= [CV 5/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=0, subsample=0.75;, score=(train=0.975, test=0.789) total time= [CV 1/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=0, subsample=1.0;, score=(train=0.977, test=0.839) total time= [CV 2/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=0, subsample=1.0;, score=(train=0.984, test=0.811) total time= 0.0s [CV 3/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=0, subsample=1.0;, score=(train=0.972, test=0.718) total time= [CV 4/5] END booster=gbtree, eta=0.89999999999999, refresh\_leaf=0, subsample=1.0;, score=(train=0.981, test=0.845) total time= 0.0s [CV 5/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=0, subsample=1.0;, score=(train=0.977, test=0.803) total time= 0.0s [CV 1/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=1, subsample=0.25;, score=(train=0.907, test=0.769) total time= [CV 2/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=1, subsample=0.25;, score=(train=0.891, test=0.741) total time= [CV 3/5] END booster=gbtree, eta=0.89999999999999, refresh leaf=1, subsample=0.25;, score=(train=0.875, test=0.697) total time= [CV 4/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=1, subsample=0.25;, score=(train=0.877, test=0.754) total time= 0.0s [CV 5/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=1, subsample=0.25;, score=(train=0.874, test=0.810) total time= [CV 1/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=1, subsample=0.5;, score=(train=0.963, test=0.818) total time= [CV 2/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=1, subsample=0.5;, score=(train=0.970, test=0.755) total time= 0.0s [CV 3/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=1, subsample=0.5;, score=(train=0.958, test=0.768) total time= 0.0s [CV 4/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=1, subsample=0.5;, score=(train=0.967, test=0.817) total time= [CV 5/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=1, subsample=0.5;, score=(train=0.958, test=0.824) total time= [CV 1/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=1, subsample=0.75;, score=(train=0.977, test=0.839) total time= [CV 2/5] END booster=gbtree, eta=0.8999999999999, refresh\_leaf=1, subsample=0.75;, score=(train=0.982, test=0.783) total time= [CV 3/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=1, subsample=0.75;, score=(train=0.967, test=0.775) total time= [CV 4/5] END booster=gbtree, eta=0.89999999999999, refresh\_leaf=1, subsample=0.75;, score=(train=0.979, test=0.810) total time= 0.0s [CV 5/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=1, subsample=0.75;, score=(train=0.975, test=0.789) total time= [CV 1/5] END booster=gbtree, eta=0.8999999999999, refresh leaf=1,

subsample=1.0;, score=(train=0.977, test=0.839) total time= 0.0s
[CV 2/5] END booster=gbtree, eta=0.8999999999999999, refresh\_leaf=1,
subsample=1.0;, score=(train=0.984, test=0.811) total time= 0.0s
[CV 3/5] END booster=gbtree, eta=0.8999999999999999, refresh\_leaf=1,
subsample=1.0;, score=(train=0.972, test=0.718) total time= 0.0s
[CV 4/5] END booster=gbtree, eta=0.89999999999999, refresh\_leaf=1,
subsample=1.0;, score=(train=0.981, test=0.845) total time= 0.0s
[CV 5/5] END booster=gbtree, eta=0.89999999999999, refresh\_leaf=1,
subsample=1.0;, score=(train=0.977, test=0.803) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh\_leaf, subsample } might not be used.

This may not be accurate due to some parameters are only used in language bindings but

passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases.

[CV 1/5] END booster=gblinear, eta=0.3, refresh\_leaf=0, subsample=0.25;, score=(train=0.810, test=0.832) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh\_leaf, subsample } might not be used.

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passed down to XGBoost core. Or some parameters are not used but slip through this

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[CV 2/5] END booster=gblinear, eta=0.3, refresh\_leaf=0, subsample=0.25;, score=(train=0.824, test=0.769) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh\_leaf, subsample } might not be used.

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verification. Please open an issue if you find above cases.

[CV 3/5] END booster=gblinear, eta=0.3, refresh\_leaf=0, subsample=0.25;, score=(train=0.825, test=0.761) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh\_leaf, subsample } might not be used.

passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases.

```
[CV 4/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.25;, score=(train=0.809, test=0.810) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

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```
[CV 5/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.25;, score=(train=0.812, test=0.831) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

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```
[CV 1/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.5;, score=(train=0.810, test=0.832) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

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```
[CV 2/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.5;, score=(train=0.824, test=0.769) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases.

```
[CV 3/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.5;, score=(train=0.825, test=0.761) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

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```
[CV 4/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.5;, score=(train=0.809, test=0.810) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

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```
[CV 5/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.5;, score=(train=0.812, test=0.831) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

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```
[CV 1/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.75;, score=(train=0.810, test=0.832) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
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verification. Please open an issue if you find above cases.

```
[CV 2/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.75;, score=(train=0.824, test=0.769) total time= 0.0s
[02:18:22] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

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```
[CV 3/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.75;, score=(train=0.825, test=0.761) total time= 0.0s
[02:18:23] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
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verification. Please open an issue if you find above cases.

```
[CV 4/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.75;, score=(train=0.809, test=0.810) total time= 0.0s
[02:18:23] WARNING: ..\src\learner.cc:541:
Parameters: { refresh leaf, subsample } might not be used.
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This may not be accurate due to some parameters are only used in language bindings but

passed down to XGBoost core. Or some parameters are not used but slip through this

```
[CV 5/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=0.75;, score=(train=0.812, test=0.831) total time= 0.0s
[02:18:23] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
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passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases.

```
[CV 1/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=1.0;, score=(train=0.810, test=0.832) total time= 0.0s
[02:18:23] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
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This may not be accurate due to some parameters are only used in language bindings but

passed down to XGBoost core. Or some parameters are not used but slip through this

verification. Please open an issue if you find above cases.

```
[CV 2/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=1.0;, score=(train=0.824, test=0.769) total time= 0.0s
[02:18:23] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

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verification. Please open an issue if you find above cases.

```
[CV 3/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=1.0;, score=(train=0.825, test=0.761) total time= 0.0s
[02:18:23] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

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passed down to XGBoost core. Or some parameters are not used but slip through this

```
[CV 4/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=1.0;, score=(train=0.809, test=0.810) total time= 0.0s
[02:18:23] WARNING: ..\src\learner.cc:541:
Parameters: { refresh_leaf, subsample } might not be used.
```

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[CV 5/5] END booster=gblinear, eta=0.3, refresh_leaf=0, subsample=1.0;, score=(train=0.812, test=0.831) total time= 0.0s
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[CV 2/5] END booster=gblinear, eta=0.3, refresh_leaf=1, subsample=0.25;, score=(train=0.824, test=0.769) total time= 0.0s
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[CV 5/5] END booster=gblinear, eta=0.6, refresh_leaf=1, subsample=0.75;, score=(train=0.812, test=0.831) total time= 0.0s
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[CV 3/5] END booster=gblinear, eta=0.6, refresh_leaf=1, subsample=1.0;, score=(train=0.825, test=0.761) total time= 0.0s
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subsample=1.0;, score=(train=0.812, test=0.831) total time=
[CV 1/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.25;,
score=(train=0.900, test=0.825) total time=
                                              0.0s
[CV 2/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.25;,
score=(train=0.914, test=0.783) total time=
[CV 3/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.25;,
score=(train=0.916, test=0.739) total time=
[CV 4/5] END booster=dart, eta=0.3, refresh leaf=0, subsample=0.25;,
score=(train=0.911, test=0.838) total time=
                                              0.1s
[CV 5/5] END booster=dart, eta=0.3, refresh leaf=0, subsample=0.25;,
score=(train=0.911, test=0.838) total time=
                                              0.0s
[CV 1/5] END booster=dart, eta=0.3, refresh leaf=0, subsample=0.5;,
score=(train=0.953, test=0.839) total time=
[CV 2/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.5;,
score=(train=0.965, test=0.783) total time=
[CV 3/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.5;,
score=(train=0.951, test=0.768) total time=
                                              0.1s
[CV 4/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.5;,
score=(train=0.963, test=0.803) total time=
[CV 5/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.5;,
score=(train=0.947, test=0.817) total time=
[CV 1/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.75;,
score=(train=0.970, test=0.818) total time=
                                            0.1s
[CV 2/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.75;,
score=(train=0.979, test=0.790) total time=
                                              0.1s
[CV 3/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.75;,
score=(train=0.968, test=0.768) total time=
[CV 4/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.75;,
score=(train=0.972, test=0.852) total time=
[CV 5/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=0.75;,
score=(train=0.968, test=0.817) total time=
[CV 1/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=1.0;,
score=(train=0.970, test=0.825) total time=
                                              0.1s
[CV 2/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=1.0;,
score=(train=0.974, test=0.783) total time=
[CV 3/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=1.0;,
score=(train=0.965, test=0.739) total time=
                                             0.1s
[CV 4/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=1.0;,
score=(train=0.968, test=0.838) total time=
                                              0.1s
[CV 5/5] END booster=dart, eta=0.3, refresh_leaf=0, subsample=1.0;,
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score=(train=0.965, test=0.817) total time=
[CV 1/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=0.25;,
score=(train=0.900, test=0.825) total time=
                                              0.1s
[CV 2/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=0.25;,
score=(train=0.914, test=0.783) total time=
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                                              0.1s
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                                              0.1s
[CV 1/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=0.5;,
score=(train=0.953, test=0.839) total time=
[CV 2/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=0.5;,
score=(train=0.965, test=0.783) total time=
[CV 3/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=0.5;,
score=(train=0.951, test=0.768) total time=
                                            0.1s
[CV 4/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=0.5;,
score=(train=0.963, test=0.803) total time=
                                              0.1s
[CV 5/5] END booster=dart, eta=0.3, refresh leaf=1, subsample=0.5;,
score=(train=0.947, test=0.817) total time=
[CV 1/5] END booster=dart, eta=0.3, refresh leaf=1, subsample=0.75;,
score=(train=0.970, test=0.818) total time=
                                              0.1s
[CV 2/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=0.75;,
score=(train=0.979, test=0.790) total time=
                                              0.1s
[CV 3/5] END booster=dart, eta=0.3, refresh leaf=1, subsample=0.75;,
score=(train=0.968, test=0.768) total time=
                                              0.1s
[CV 4/5] END booster=dart, eta=0.3, refresh leaf=1, subsample=0.75;,
score=(train=0.972, test=0.852) total time=
[CV 5/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=0.75;,
score=(train=0.968, test=0.817) total time=
                                            0.1s
[CV 1/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=1.0;,
score=(train=0.970, test=0.825) total time=
                                              0.1s
[CV 2/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=1.0;,
score=(train=0.974, test=0.783) total time=
[CV 3/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=1.0;,
score=(train=0.965, test=0.739) total time=
[CV 4/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=1.0;,
score=(train=0.968, test=0.838) total time=
[CV 5/5] END booster=dart, eta=0.3, refresh_leaf=1, subsample=1.0;,
score=(train=0.965, test=0.817) total time=
                                              0.1s
[CV 1/5] END booster=dart, eta=0.6, refresh leaf=0, subsample=0.25;,
score=(train=0.907, test=0.797) total time=
[CV 2/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=0.25;,
score=(train=0.924, test=0.748) total time=
                                             0.0s
[CV 3/5] END booster=dart, eta=0.6, refresh leaf=0, subsample=0.25;,
score=(train=0.921, test=0.711) total time=
                                              0.0s
[CV 4/5] END booster=dart, eta=0.6, refresh leaf=0, subsample=0.25;,
```

```
score=(train=0.907, test=0.824) total time=
[CV 5/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=0.25;,
score=(train=0.893, test=0.803) total time=
                                              0.0s
[CV 1/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=0.5;,
score=(train=0.956, test=0.818) total time=
                                              0.1s
[CV 2/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=0.5;,
score=(train=0.963, test=0.755) total time=
[CV 3/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=0.5;,
score=(train=0.960, test=0.761) total time=
                                              0.1s
[CV 4/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=0.5;,
score=(train=0.963, test=0.803) total time=
                                              0.1s
[CV 5/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=0.5;,
score=(train=0.960, test=0.810) total time=
[CV 1/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=0.75;,
score=(train=0.977, test=0.811) total time=
[CV 2/5] END booster=dart, eta=0.6, refresh leaf=0, subsample=0.75;,
score=(train=0.982, test=0.762) total time=
                                              0.1s
[CV 3/5] END booster=dart, eta=0.6, refresh leaf=0, subsample=0.75;,
score=(train=0.972, test=0.768) total time=
                                              0.1s
[CV 4/5] END booster=dart, eta=0.6, refresh leaf=0, subsample=0.75;,
score=(train=0.977, test=0.831) total time=
[CV 5/5] END booster=dart, eta=0.6, refresh leaf=0, subsample=0.75;,
score=(train=0.975, test=0.824) total time=
[CV 1/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=1.0;,
score=(train=0.977, test=0.825) total time=
                                              0.1s
[CV 2/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=1.0;,
score=(train=0.982, test=0.804) total time=
[CV 3/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=1.0;,
score=(train=0.974, test=0.725) total time=
[CV 4/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=1.0;,
score=(train=0.979, test=0.824) total time=
                                            0.1s
[CV 5/5] END booster=dart, eta=0.6, refresh_leaf=0, subsample=1.0;,
score=(train=0.975, test=0.810) total time=
                                              0.1s
[CV 1/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.25;,
score=(train=0.907, test=0.797) total time=
[CV 2/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.25;,
score=(train=0.924, test=0.748) total time=
[CV 3/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.25;,
score=(train=0.921, test=0.711) total time=
[CV 4/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.25;,
score=(train=0.907, test=0.824) total time=
                                              0.1s
[CV 5/5] END booster=dart, eta=0.6, refresh leaf=1, subsample=0.25;,
score=(train=0.893, test=0.803) total time=
[CV 1/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.5;,
score=(train=0.956, test=0.818) total time=
                                             0.1s
[CV 2/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.5;,
score=(train=0.963, test=0.755) total time=
                                              0.1s
[CV 3/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.5;,
```

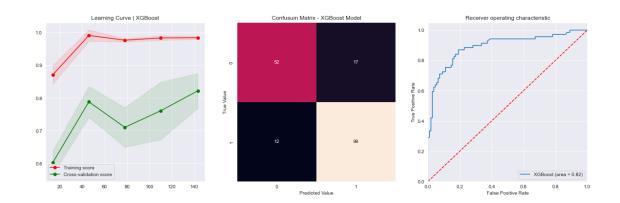
```
score=(train=0.960, test=0.761) total time=
[CV 4/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.5;,
score=(train=0.963, test=0.803) total time=
                                             0.1s
[CV 5/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.5;,
score=(train=0.960, test=0.810) total time=
[CV 1/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.75;,
score=(train=0.977, test=0.811) total time=
[CV 2/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.75;,
score=(train=0.982, test=0.762) total time=
                                             0.1s
[CV 3/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.75;,
score=(train=0.972, test=0.768) total time=
                                              0.1s
[CV 4/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.75;,
score=(train=0.977, test=0.831) total time=
[CV 5/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=0.75;,
score=(train=0.975, test=0.824) total time=
[CV 1/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=1.0;,
score=(train=0.977, test=0.825) total time=
                                             0.1s
[CV 2/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=1.0;,
score=(train=0.982, test=0.804) total time=
                                              0.1s
[CV 3/5] END booster=dart, eta=0.6, refresh leaf=1, subsample=1.0;,
score=(train=0.974, test=0.725) total time=
[CV 4/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=1.0;,
score=(train=0.979, test=0.824) total time=
                                             0.1s
[CV 5/5] END booster=dart, eta=0.6, refresh_leaf=1, subsample=1.0;,
score=(train=0.975, test=0.810) total time=
[CV 1/5] END booster=dart, eta=0.89999999999999, refresh_leaf=0,
subsample=0.25;, score=(train=0.870, test=0.804) total time=
[CV 2/5] END booster=dart, eta=0.89999999999999, refresh_leaf=0,
subsample=0.25;, score=(train=0.895, test=0.769) total time=
[CV 3/5] END booster=dart, eta=0.8999999999999, refresh_leaf=0,
subsample=0.25;, score=(train=0.895, test=0.711) total time=
[CV 4/5] END booster=dart, eta=0.8999999999999, refresh_leaf=0,
subsample=0.25;, score=(train=0.888, test=0.824) total time=
[CV 5/5] END booster=dart, eta=0.8999999999999, refresh_leaf=0,
subsample=0.25;, score=(train=0.882, test=0.817) total time=
[CV 1/5] END booster=dart, eta=0.89999999999999, refresh_leaf=0,
subsample=0.5;, score=(train=0.960, test=0.832) total time=
[CV 2/5] END booster=dart, eta=0.89999999999999, refresh_leaf=0,
subsample=0.5;, score=(train=0.963, test=0.755) total time=
[CV 3/5] END booster=dart, eta=0.89999999999999, refresh_leaf=0,
subsample=0.5;, score=(train=0.961, test=0.739) total time=
[CV 4/5] END booster=dart, eta=0.89999999999999, refresh_leaf=0,
subsample=0.5;, score=(train=0.963, test=0.810) total time=
[CV 5/5] END booster=dart, eta=0.89999999999999, refresh_leaf=0,
subsample=0.5;, score=(train=0.958, test=0.754) total time=
[CV 1/5] END booster=dart, eta=0.89999999999999, refresh_leaf=0,
subsample=0.75;, score=(train=0.975, test=0.846) total time=
[CV 2/5] END booster=dart, eta=0.89999999999999, refresh_leaf=0,
```

subsample=0.75;, score=(train=0.981, test=0.762) total time= [CV 3/5] END booster=dart, eta=0.8999999999999, refresh\_leaf=0, subsample=0.75;, score=(train=0.972, test=0.761) total time= 0.1s [CV 4/5] END booster=dart, eta=0.8999999999999, refresh\_leaf=0, subsample=0.75;, score=(train=0.979, test=0.810) total time= [CV 5/5] END booster=dart, eta=0.8999999999999, refresh\_leaf=0, subsample=0.75;, score=(train=0.975, test=0.803) total time= [CV 1/5] END booster=dart, eta=0.89999999999999, refresh\_leaf=0, subsample=1.0;, score=(train=0.977, test=0.839) total time= [CV 2/5] END booster=dart, eta=0.89999999999999, refresh\_leaf=0, subsample=1.0;, score=(train=0.984, test=0.811) total time= 0.1s[CV 3/5] END booster=dart, eta=0.89999999999999, refresh\_leaf=0, subsample=1.0;, score=(train=0.972, test=0.718) total time= [CV 4/5] END booster=dart, eta=0.89999999999999, refresh\_leaf=0, subsample=1.0;, score=(train=0.981, test=0.845) total time= [CV 5/5] END booster=dart, eta=0.89999999999999, refresh\_leaf=0, subsample=1.0;, score=(train=0.977, test=0.803) total time= 0.1s [CV 1/5] END booster=dart, eta=0.89999999999999999, refresh\_leaf=1, subsample=0.25;, score=(train=0.870, test=0.804) total time= [CV 2/5] END booster=dart, eta=0.899999999999999999, refresh leaf=1, subsample=0.25;, score=(train=0.895, test=0.769) total time= [CV 3/5] END booster=dart, eta=0.899999999999999999, refresh leaf=1, subsample=0.25;, score=(train=0.895, test=0.711) total time= [CV 4/5] END booster=dart, eta=0.89999999999999, refresh\_leaf=1, subsample=0.25;, score=(train=0.888, test=0.824) total time= 0.0s[CV 5/5] END booster=dart, eta=0.89999999999999999, refresh\_leaf=1, subsample=0.25;, score=(train=0.882, test=0.817) total time= [CV 1/5] END booster=dart, eta=0.89999999999999999, refresh\_leaf=1, subsample=0.5;, score=(train=0.960, test=0.832) total time= [CV 2/5] END booster=dart, eta=0.8999999999999, refresh\_leaf=1, subsample=0.5;, score=(train=0.963, test=0.755) total time= 0.1s[CV 3/5] END booster=dart, eta=0.8999999999999, refresh\_leaf=1, subsample=0.5;, score=(train=0.961, test=0.739) total time= 0.1s[CV 4/5] END booster=dart, eta=0.8999999999999, refresh\_leaf=1, subsample=0.5;, score=(train=0.963, test=0.810) total time= [CV 5/5] END booster=dart, eta=0.89999999999999, refresh\_leaf=1, subsample=0.5;, score=(train=0.958, test=0.754) total time= [CV 1/5] END booster=dart, eta=0.89999999999999, refresh\_leaf=1, subsample=0.75;, score=(train=0.975, test=0.846) total time= 0.1s[CV 2/5] END booster=dart, eta=0.89999999999999, refresh\_leaf=1, subsample=0.75;, score=(train=0.981, test=0.762) total time= [CV 3/5] END booster=dart, eta=0.89999999999999999, refresh\_leaf=1, subsample=0.75;, score=(train=0.972, test=0.761) total time= [CV 4/5] END booster=dart, eta=0.89999999999999, refresh\_leaf=1, subsample=0.75;, score=(train=0.979, test=0.810) total time= [CV 5/5] END booster=dart, eta=0.899999999999999999, refresh\_leaf=1, subsample=0.75;, score=(train=0.975, test=0.803) total time= [CV 1/5] END booster=dart, eta=0.89999999999999999, refresh\_leaf=1,

```
subsample=1.0;, score=(train=0.977, test=0.839) total time=
    [CV 2/5] END booster=dart, eta=0.89999999999999, refresh_leaf=1,
    subsample=1.0;, score=(train=0.984, test=0.811) total time=
                                                                  0.1s
    [CV 3/5] END booster=dart, eta=0.89999999999999, refresh leaf=1,
    subsample=1.0;, score=(train=0.972, test=0.718) total time=
    [CV 4/5] END booster=dart, eta=0.89999999999999, refresh leaf=1,
    subsample=1.0;, score=(train=0.981, test=0.845) total time=
    [CV 5/5] END booster=dart, eta=0.8999999999999, refresh_leaf=1,
    subsample=1.0;, score=(train=0.977, test=0.803) total time=
    XGBClassifier(base_score=0.5, booster='gbtree', colsample_bylevel=1,
                  colsample_bynode=1, colsample_bytree=1, eta=0.3,
                  eval_metric='error', gamma=0, gpu_id=-1, importance_type='gain',
                  interaction_constraints='', learning_rate=0.300000012,
                  max_delta_step=0, max_depth=6, min_child_weight=1, missing=nan,
                  monotone_constraints='()', n_estimators=100, n_jobs=8,
                  num_parallel_tree=1, random_state=0, refresh_leaf=0, reg_alpha=0,
                  reg_lambda=1, scale_pos_weight=1, subsample=0.75,
                  tree_method='exact', validate_parameters=1, verbosity=None) best
    hyperparameters are: {'booster': 'gbtree', 'eta': 0.3, 'refresh_leaf': 0,
    'subsample': 0.75} with the accuracy of: 0.81
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
     train_sizes, train_scores, test_scores, =__
     →learning_curve(XGBClassifier(eval_metric='error'), X_valid, y_valid, __
     →train_sizes=np.linspace(.1, 1, 5))
     train_scores_mean = np.mean(train_scores, axis=1)
     train_scores_std = np.std(train_scores, axis=1)
     test_scores_mean = np.mean(test_scores, axis=1)
     test_scores_std = np.std(test_scores, axis=1)
     y_pred = grid.best_estimator_.predict(X_valid)
     cls_rep=classification_report(y_valid,y_pred)
     print(cls_rep)
     axes[0].fill_between(train_sizes, train_scores_mean - train_scores_std,
                         train_scores_mean + train_scores_std, alpha=0.1, color="r")
     axes[0].fill_between(train_sizes, test_scores_mean - test_scores_std,
                         test_scores_mean + test_scores_std, alpha=0.1, color="g")
     axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_
     ⇒score")
     axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",_
     →label="Cross-validation score")
     axes[0].legend(loc="best")
     axes[0].set_title('Learning Curve | XGBoost')
     cnf_matrix = confusion_matrix(y_valid, y_pred, labels=[1,0])
```

```
sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g', __
\rightarrowax=axes[1])
axes[1].set_xlabel('Predicted Value')
axes[1].set_ylabel('True Value')
axes[1].set_title('Confusuin Matrix - XGBoost Model')
logit_roc_auc = roc_auc_score(y_valid, grid.predict(X_valid))
fpr, tpr, thresholds = roc_curve(y_valid, grid.predict_proba(X_valid)[:,1],__
→pos_label=1)
axes[2].plot(fpr, tpr, label='XGBoost (area = %0.2f)' % logit_roc_auc)
axes[2].plot([0, 1], [0, 1], 'r--')
axes[2].set_xlim([0.0, 1.0])
axes[2].set_ylim([0.0, 1.05])
axes[2].set_xlabel('False Positive Rate')
axes[2].set_ylabel('True Positive Rate')
axes[2].set_title('Receiver operating characteristic')
axes[2].legend(loc="lower right")
plt.show()
```

	precision	recall	f1-score	support
0.0	0.85	0.89	0.87	110
1.0	0.81	0.75	0.78	69
a coura cu			0.84	179
accuracy				
macro avg	0.83	0.82	0.83	179
weighted avg	0.84	0.84	0.84	179



## 12 Light GBM

```
[]: from lightgbm import LGBMClassifier

[]: params = {
```

Fitting 5 folds for each of 300 candidates, totalling 1500 fits [CV 1/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.25;, score=(train=0.980, test=0.752) total time= 1.3s [CV 2/5] END boosting type=gbdt, n estimators=1000, num leaves=20, reg lambda=0.25;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.25;, score=(train=0.982, test=0.720) total time= 1.5s [CV 4/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.25;, score=(train=0.982, test=0.774) total time= 0.7s [CV 5/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.25;, score=(train=0.978, test=0.871) total time= 0.7s[CV 1/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.5;, score=(train=0.980, test=0.768) total time= [CV 2/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.5;, score=(train=0.986, test=0.840) total time= 0.7s [CV 3/5] END boosting type=gbdt, n estimators=1000, num leaves=20, reg\_lambda=0.5;, score=(train=0.982, test=0.696) total time= 0.7s [CV 4/5] END boosting type=gbdt, n estimators=1000, num leaves=20, reg\_lambda=0.5;, score=(train=0.982, test=0.798) total time= [CV 5/5] END boosting type=gbdt, n estimators=1000, num leaves=20, reg\_lambda=0.5;, score=(train=0.978, test=0.871) total time= [CV 1/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.75;, score=(train=0.980, test=0.768) total time= 0.9s [CV 2/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.75;, score=(train=0.986, test=0.856) total time= 0.8s [CV 3/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.75;, score=(train=0.982, test=0.688) total time= [CV 4/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.75;, score=(train=0.982, test=0.766) total time= 1.0s [CV 5/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20, reg\_lambda=0.75;, score=(train=0.978, test=0.871) total time= [CV 1/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=20,

```
reg_lambda=1.0;, score=(train=0.980, test=0.760) total time=
                                                               0.7s
[CV 2/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=20,
reg_lambda=1.0;, score=(train=0.986, test=0.840) total time=
                                                               0.7s
[CV 3/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=20,
reg lambda=1.0;, score=(train=0.982, test=0.688) total time=
                                                               0.7s
[CV 4/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=20,
reg lambda=1.0;, score=(train=0.982, test=0.782) total time=
[CV 5/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=20,
reg_lambda=1.0;, score=(train=0.978, test=0.871) total time=
[CV 1/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=40,
reg_lambda=0.25;, score=(train=0.980, test=0.768) total time=
                                                                 0.9s
[CV 2/5] END boosting type=gbdt, n estimators=1000, num leaves=40,
reg_lambda=0.25;, score=(train=0.986, test=0.840) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=40,
reg_lambda=0.25;, score=(train=0.982, test=0.712) total time=
                                                                 0.7s
[CV 4/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=40,
reg_lambda=0.25;, score=(train=0.982, test=0.766) total time=
                                                                 0.7s
[CV 5/5] END boosting type=gbdt, n estimators=1000, num leaves=40,
reg_lambda=0.25;, score=(train=0.978, test=0.871) total time=
                                                                 0.7s
[CV 1/5] END boosting type=gbdt, n estimators=1000, num leaves=40,
reg_lambda=0.5;, score=(train=0.980, test=0.776) total time=
[CV 2/5] END boosting type=gbdt, n estimators=1000, num leaves=40,
reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=40,
reg_lambda=0.5;, score=(train=0.982, test=0.696) total time=
                                                               1.0s
[CV 4/5] END boosting type=gbdt, n estimators=1000, num leaves=40,
reg_lambda=0.5;, score=(train=0.982, test=0.782) total time=
[CV 5/5] END boosting type=gbdt, n estimators=1000, num leaves=40,
reg_lambda=0.5;, score=(train=0.978, test=0.863) total time=
[CV 1/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=40,
reg_lambda=0.75;, score=(train=0.980, test=0.784) total time=
                                                                 0.7s
[CV 2/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=40,
reg_lambda=0.75;, score=(train=0.986, test=0.840) total time=
                                                                 0.8s
[CV 3/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=40,
reg lambda=0.75;, score=(train=0.982, test=0.688) total time=
[CV 4/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=40,
reg lambda=0.75;, score=(train=0.982, test=0.790) total time=
[CV 5/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=40,
reg_lambda=0.75;, score=(train=0.978, test=0.855) total time=
                                                                 1.1s
[CV 1/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=40,
reg_lambda=1.0;, score=(train=0.980, test=0.760) total time=
                                                               0.8s
[CV 2/5] END boosting type=gbdt, n estimators=1000, num leaves=40,
reg_lambda=1.0;, score=(train=0.986, test=0.832) total time=
                                                               0.8s
[CV 3/5] END boosting type=gbdt, n estimators=1000, num leaves=40,
reg_lambda=1.0;, score=(train=0.982, test=0.688) total time=
                                                               0.8s
[CV 4/5] END boosting type=gbdt, n estimators=1000, num leaves=40,
reg_lambda=1.0;, score=(train=0.982, test=0.798) total time=
[CV 5/5] END boosting type=gbdt, n estimators=1000, num leaves=40,
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reg_lambda=1.0;, score=(train=0.978, test=0.863) total time=
                                                               0.9s
[CV 1/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg_lambda=0.25;, score=(train=0.980, test=0.768) total time=
                                                                 1.2s
[CV 2/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg lambda=0.25;, score=(train=0.986, test=0.840) total time=
                                                                 0.8s
[CV 3/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg lambda=0.25;, score=(train=0.982, test=0.712) total time=
[CV 4/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg lambda=0.25;, score=(train=0.982, test=0.766) total time=
                                                                 0.9s
[CV 5/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg_lambda=0.25;, score=(train=0.978, test=0.871) total time=
                                                                 0.9s
[CV 1/5] END boosting type=gbdt, n estimators=1000, num leaves=60,
reg_lambda=0.5;, score=(train=0.980, test=0.776) total time=
                                                               0.7s
[CV 2/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
                                                               0.7s
[CV 3/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg_lambda=0.5;, score=(train=0.982, test=0.696) total time=
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[CV 4/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
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[CV 5/5] END boosting type=gbdt, n estimators=1000, num leaves=60,
reg_lambda=0.5;, score=(train=0.978, test=0.863) total time=
[CV 1/5] END boosting type=gbdt, n estimators=1000, num leaves=60,
reg_lambda=0.75;, score=(train=0.980, test=0.784) total time=
[CV 2/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg_lambda=0.75;, score=(train=0.986, test=0.840) total time=
                                                                 0.8s
[CV 3/5] END boosting type=gbdt, n estimators=1000, num leaves=60,
reg_lambda=0.75;, score=(train=0.982, test=0.688) total time=
                                                                 1.0s
[CV 4/5] END boosting type=gbdt, n estimators=1000, num leaves=60,
reg_lambda=0.75;, score=(train=0.982, test=0.790) total time=
                                                                 0.8s
[CV 5/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg_lambda=0.75;, score=(train=0.978, test=0.855) total time=
                                                                 0.6s
[CV 1/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg_lambda=1.0;, score=(train=0.980, test=0.760) total time=
                                                               0.8s
[CV 2/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg lambda=1.0;, score=(train=0.986, test=0.832) total time=
                                                               0.7s
[CV 3/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
reg lambda=1.0;, score=(train=0.982, test=0.688) total time=
[CV 4/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
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                                                               0.7s
[CV 5/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=60,
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[CV 1/5] END boosting type=gbdt, n estimators=1000, num leaves=80,
reg_lambda=0.25;, score=(train=0.980, test=0.768) total time=
[CV 2/5] END boosting type=gbdt, n estimators=1000, num leaves=80,
reg_lambda=0.25;, score=(train=0.986, test=0.840) total time=
                                                                 0.7s
[CV 3/5] END boosting type=gbdt, n estimators=1000, num leaves=80,
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[CV 4/5] END boosting type=gbdt, n estimators=1000, num leaves=80,
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reg_lambda=0.25;, score=(train=0.982, test=0.766) total time=
                                                                 0.6s
[CV 5/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=80,
reg_lambda=0.25;, score=(train=0.978, test=0.871) total time=
                                                                0.6s
[CV 1/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=80,
reg lambda=0.5;, score=(train=0.980, test=0.776) total time=
                                                               0.6s
[CV 2/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=80,
reg lambda=0.5;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=80,
reg_lambda=0.5;, score=(train=0.982, test=0.696) total time=
                                                               0.6s
[CV 4/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=80,
reg_lambda=0.5;, score=(train=0.982, test=0.782) total time=
                                                               0.6s
[CV 5/5] END boosting type=gbdt, n estimators=1000, num leaves=80,
reg_lambda=0.5;, score=(train=0.978, test=0.863) total time=
                                                               0.7s
[CV 1/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=80,
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                                                                 0.6s
[CV 2/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=80,
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                                                                 0.7s
[CV 3/5] END boosting type=gbdt, n estimators=1000, num leaves=80,
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                                                                 0.6s
[CV 4/5] END boosting type=gbdt, n estimators=1000, num leaves=80,
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[CV 5/5] END boosting type=gbdt, n estimators=1000, num leaves=80,
reg_lambda=0.75;, score=(train=0.978, test=0.855) total time=
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                                                               0.7s
[CV 2/5] END boosting type=gbdt, n estimators=1000, num leaves=80,
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                                                               0.6s
[CV 3/5] END boosting type=gbdt, n estimators=1000, num leaves=80,
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                                                               0.6s
[CV 4/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=80,
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                                                               0.6s
[CV 5/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=80,
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                                                               0.6s
[CV 1/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=100,
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[CV 2/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=100,
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[CV 1/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=100,
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[CV 2/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=100,
reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1000, num_leaves=100,
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reg\_lambda=0.5;, score=(train=0.982, test=0.696) total time= [CV 4/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.982, test=0.782) total time= 0.6s [CV 5/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg lambda=0.5;, score=(train=0.978, test=0.863) total time= [CV 1/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg lambda=0.75;, score=(train=0.980, test=0.784) total time= [CV 2/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg lambda=0.75;, score=(train=0.986, test=0.840) total time= [CV 3/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.982, test=0.688) total time= 0.6s [CV 4/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.982, test=0.790) total time= [CV 5/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.978, test=0.855) total time= [CV 1/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.980, test=0.760) total time= 0.6s [CV 2/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.986, test=0.832) total time= 0.6s [CV 3/5] END boosting type=gbdt, n estimators=1000, num leaves=100, reg\_lambda=1.0;, score=(train=0.982, test=0.688) total time= [CV 4/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.982, test=0.798) total time= [CV 5/5] END boosting\_type=gbdt, n\_estimators=1000, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.978, test=0.863) total time= 0.6s [CV 1/5] END boosting type=gbdt, n estimators=1100, num leaves=20, reg\_lambda=0.25;, score=(train=0.980, test=0.752) total time= [CV 2/5] END boosting type=gbdt, n estimators=1100, num leaves=20, reg\_lambda=0.25;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=gbdt, n\_estimators=1100, num\_leaves=20, reg\_lambda=0.25;, score=(train=0.982, test=0.720) total time= 0.9s [CV 4/5] END boosting\_type=gbdt, n\_estimators=1100, num\_leaves=20, reg\_lambda=0.25;, score=(train=0.982, test=0.774) total time= 0.7s [CV 5/5] END boosting\_type=gbdt, n\_estimators=1100, num\_leaves=20, reg lambda=0.25;, score=(train=0.978, test=0.871) total time= [CV 1/5] END boosting\_type=gbdt, n\_estimators=1100, num\_leaves=20, reg lambda=0.5;, score=(train=0.980, test=0.768) total time= [CV 2/5] END boosting\_type=gbdt, n\_estimators=1100, num\_leaves=20, reg\_lambda=0.5;, score=(train=0.986, test=0.840) total time= 0.7s [CV 3/5] END boosting\_type=gbdt, n\_estimators=1100, num\_leaves=20, reg\_lambda=0.5;, score=(train=0.982, test=0.696) total time= 0.6s [CV 4/5] END boosting type=gbdt, n estimators=1100, num leaves=20, reg\_lambda=0.5;, score=(train=0.982, test=0.798) total time= 0.7s [CV 5/5] END boosting\_type=gbdt, n\_estimators=1100, num\_leaves=20, reg\_lambda=0.5;, score=(train=0.978, test=0.871) total time= 0.7s [CV 1/5] END boosting\_type=gbdt, n\_estimators=1100, num\_leaves=20, reg\_lambda=0.75;, score=(train=0.980, test=0.768) total time= [CV 2/5] END boosting type=gbdt, n estimators=1100, num leaves=20,

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reg_lambda=0.75;, score=(train=0.986, test=0.848) total time=
                                                                 0.7s
[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=20,
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                                                                 0.7s
[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=20,
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                                                                 0.7s
[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=20,
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[CV 1/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=20,
reg lambda=1.0;, score=(train=0.980, test=0.760) total time=
                                                               0.7s
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=20,
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                                                               0.7s
[CV 3/5] END boosting type=gbdt, n estimators=1100, num leaves=20,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=20,
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                                                               0.6s
[CV 5/5] END boosting type=gbdt, n estimators=1100, num leaves=20,
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                                                               0.7s
[CV 1/5] END boosting type=gbdt, n estimators=1100, num leaves=40,
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                                                                 0.8s
[CV 2/5] END boosting type=gbdt, n estimators=1100, num leaves=40,
reg lambda=0.25;, score=(train=0.986, test=0.840) total time=
[CV 3/5] END boosting type=gbdt, n estimators=1100, num leaves=40,
reg_lambda=0.25;, score=(train=0.982, test=0.712) total time=
[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
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                                                                 0.7s
[CV 5/5] END boosting type=gbdt, n estimators=1100, num leaves=40,
reg_lambda=0.25;, score=(train=0.978, test=0.871) total time=
[CV 1/5] END boosting type=gbdt, n estimators=1100, num leaves=40,
reg_lambda=0.5;, score=(train=0.980, test=0.776) total time=
                                                               0.7s
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
                                                               0.7s
[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
reg_lambda=0.5;, score=(train=0.982, test=0.704) total time=
                                                               0.6s
[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
reg lambda=0.5;, score=(train=0.982, test=0.782) total time=
                                                               0.7s
[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
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[CV 1/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
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                                                                 0.7s
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
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                                                                 0.7s
[CV 3/5] END boosting type=gbdt, n estimators=1100, num leaves=40,
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                                                                 0.6s
[CV 4/5] END boosting type=gbdt, n estimators=1100, num leaves=40,
reg_lambda=0.75;, score=(train=0.982, test=0.790) total time=
                                                                 0.7s
[CV 5/5] END boosting type=gbdt, n estimators=1100, num leaves=40,
reg_lambda=0.75;, score=(train=0.978, test=0.863) total time=
[CV 1/5] END boosting type=gbdt, n estimators=1100, num leaves=40,
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reg_lambda=1.0;, score=(train=0.980, test=0.760) total time=
                                                               0.7s
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
reg_lambda=1.0;, score=(train=0.986, test=0.832) total time=
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[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
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                                                               0.7s
[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
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[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=40,
reg_lambda=1.0;, score=(train=0.978, test=0.863) total time=
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[CV 1/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=60,
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[CV 2/5] END boosting type=gbdt, n estimators=1100, num leaves=60,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=60,
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[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=60,
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                                                                 0.7s
[CV 1/5] END boosting type=gbdt, n estimators=1100, num leaves=60,
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reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
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                                                               0.8s
[CV 4/5] END boosting type=gbdt, n estimators=1100, num leaves=60,
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[CV 5/5] END boosting type=gbdt, n estimators=1100, num leaves=60,
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                                                                 0.8s
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=60,
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                                                                 1.4s
[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=60,
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reg lambda=0.75;, score=(train=0.982, test=0.790) total time=
                                                                 1.7s
[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=60,
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                                                                 0.9s
[CV 1/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=60,
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[CV 2/5] END boosting type=gbdt, n estimators=1100, num leaves=60,
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[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=60,
reg_lambda=1.0;, score=(train=0.982, test=0.688) total time=
[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=60,
reg_lambda=1.0;, score=(train=0.982, test=0.798) total time=
[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=60,
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reg_lambda=1.0;, score=(train=0.978, test=0.863) total time=
[CV 1/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg_lambda=0.25;, score=(train=0.980, test=0.768) total time=
                                                                 1.3s
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg lambda=0.25;, score=(train=0.986, test=0.840) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg lambda=0.25;, score=(train=0.982, test=0.712) total time=
[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg lambda=0.25;, score=(train=0.982, test=0.766) total time=
                                                                 1.3s
[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg_lambda=0.25;, score=(train=0.978, test=0.871) total time=
                                                                 1.5s
[CV 1/5] END boosting type=gbdt, n estimators=1100, num leaves=80,
reg_lambda=0.5;, score=(train=0.980, test=0.776) total time=
                                                               1.5s
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg_lambda=0.5;, score=(train=0.982, test=0.704) total time=
                                                               1.3s
[CV 4/5] END boosting type=gbdt, n estimators=1100, num leaves=80,
reg_lambda=0.5;, score=(train=0.982, test=0.782) total time=
[CV 5/5] END boosting type=gbdt, n estimators=1100, num leaves=80,
reg_lambda=0.5;, score=(train=0.978, test=0.863) total time=
[CV 1/5] END boosting type=gbdt, n estimators=1100, num leaves=80,
reg_lambda=0.75;, score=(train=0.980, test=0.776) total time=
                                                                 1.4s
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg_lambda=0.75;, score=(train=0.986, test=0.840) total time=
                                                                 1.2s
[CV 3/5] END boosting type=gbdt, n estimators=1100, num leaves=80,
reg_lambda=0.75;, score=(train=0.982, test=0.688) total time=
                                                                 1.3s
[CV 4/5] END boosting type=gbdt, n estimators=1100, num leaves=80,
reg_lambda=0.75;, score=(train=0.982, test=0.790) total time=
                                                                 1.2s
[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg_lambda=0.75;, score=(train=0.978, test=0.863) total time=
                                                                 1.3s
[CV 1/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg_lambda=1.0;, score=(train=0.980, test=0.760) total time=
                                                               1.2s
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg lambda=1.0;, score=(train=0.986, test=0.832) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
reg lambda=1.0;, score=(train=0.982, test=0.688) total time=
[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
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                                                               1.1s
[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=80,
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[CV 1/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
reg_lambda=0.25;, score=(train=0.980, test=0.768) total time=
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reg_lambda=0.25;, score=(train=0.986, test=0.840) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
```

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reg_lambda=0.25;, score=(train=0.982, test=0.766) total time=
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[CV 1/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
reg lambda=0.5;, score=(train=0.980, test=0.776) total time=
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
reg lambda=0.5;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
reg_lambda=0.5;, score=(train=0.982, test=0.704) total time=
[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
reg_lambda=0.5;, score=(train=0.982, test=0.782) total time=
                                                               1.1s
[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
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reg_lambda=0.75;, score=(train=0.980, test=0.776) total time=
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[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
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reg_lambda=0.75;, score=(train=0.982, test=0.790) total time=
[CV 5/5] END boosting type=gbdt, n estimators=1100, num leaves=100,
reg_lambda=0.75;, score=(train=0.978, test=0.863) total time=
[CV 1/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
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                                                               1.1s
[CV 2/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
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[CV 3/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
reg_lambda=1.0;, score=(train=0.982, test=0.688) total time=
[CV 4/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
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                                                               1.1s
[CV 5/5] END boosting_type=gbdt, n_estimators=1100, num_leaves=100,
reg_lambda=1.0;, score=(train=0.978, test=0.863) total time=
                                                               1.1s
[CV 1/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
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[CV 2/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
reg lambda=0.25;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
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                                                                 1.2s
[CV 5/5] END boosting type=gbdt, n estimators=1200, num leaves=20,
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                                                                 1.2s
[CV 1/5] END boosting type=gbdt, n estimators=1200, num leaves=20,
reg_lambda=0.5;, score=(train=0.980, test=0.768) total time=
[CV 2/5] END boosting type=gbdt, n estimators=1200, num leaves=20,
reg_lambda=0.5;, score=(train=0.986, test=0.840) total time=
[CV 3/5] END boosting type=gbdt, n estimators=1200, num leaves=20,
```

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reg_lambda=0.5;, score=(train=0.982, test=0.696) total time=
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[CV 4/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
reg_lambda=0.5;, score=(train=0.982, test=0.806) total time=
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[CV 5/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
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[CV 1/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
reg lambda=0.75;, score=(train=0.980, test=0.768) total time=
[CV 2/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
reg lambda=0.75;, score=(train=0.986, test=0.848) total time=
                                                                 0.9s
[CV 3/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
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                                                                 0.9s
[CV 4/5] END boosting type=gbdt, n estimators=1200, num leaves=20,
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[CV 5/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
reg_lambda=0.75;, score=(train=0.978, test=0.871) total time=
                                                                 1.4s
[CV 1/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=20,
reg_lambda=1.0;, score=(train=0.980, test=0.760) total time=
                                                               1.0s
[CV 2/5] END boosting type=gbdt, n estimators=1200, num leaves=20,
reg_lambda=1.0;, score=(train=0.986, test=0.840) total time=
                                                               0.9s
[CV 3/5] END boosting type=gbdt, n estimators=1200, num leaves=20,
reg_lambda=1.0;, score=(train=0.982, test=0.688) total time=
[CV 4/5] END boosting type=gbdt, n estimators=1200, num leaves=20,
reg_lambda=1.0;, score=(train=0.982, test=0.782) total time=
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                                                               1.0s
[CV 1/5] END boosting type=gbdt, n estimators=1200, num leaves=40,
reg_lambda=0.25;, score=(train=0.980, test=0.768) total time=
[CV 2/5] END boosting type=gbdt, n estimators=1200, num leaves=40,
reg_lambda=0.25;, score=(train=0.986, test=0.840) total time=
                                                                 0.9s
[CV 3/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=40,
reg_lambda=0.25;, score=(train=0.982, test=0.712) total time=
                                                                 0.9s
[CV 4/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=40,
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                                                                 0.9s
[CV 5/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=40,
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[CV 1/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=40,
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                                                               1.0s
[CV 3/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=40,
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                                                               1.1s
[CV 4/5] END boosting type=gbdt, n estimators=1200, num leaves=40,
reg_lambda=0.5;, score=(train=0.982, test=0.782) total time=
                                                               1.2s
[CV 5/5] END boosting type=gbdt, n estimators=1200, num leaves=40,
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[CV 2/5] END boosting type=gbdt, n estimators=1200, num leaves=40,
```

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reg_lambda=0.75;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=40,
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[CV 2/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=40,
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[CV 2/5] END boosting type=gbdt, n estimators=1200, num leaves=60,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=60,
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[CV 5/5] END boosting type=gbdt, n estimators=1200, num leaves=60,
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reg_lambda=0.5;, score=(train=0.980, test=0.776) total time=
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[CV 4/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=60,
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[CV 3/5] END boosting type=gbdt, n estimators=1200, num leaves=60,
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[CV 4/5] END boosting type=gbdt, n estimators=1200, num leaves=60,
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[CV 1/5] END boosting type=gbdt, n estimators=1200, num leaves=60,
```

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[CV 4/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=60,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=80,
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[CV 4/5] END boosting type=gbdt, n estimators=1200, num leaves=80,
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[CV 2/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=80,
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[CV 3/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=80,
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[CV 5/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=80,
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[CV 2/5] END boosting type=gbdt, n estimators=1200, num leaves=80,
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                                                               1.0s
[CV 3/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=80,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=80,
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```

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[CV 1/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=100,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1200, num_leaves=100,
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[CV 3/5] END boosting type=gbdt, n estimators=1300, num leaves=40,
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                                                                 1.4s
[CV 2/5] END boosting type=gbdt, n estimators=1400, num leaves=40,
reg_lambda=0.25;, score=(train=0.986, test=0.840) total time=
                                                                 1.1s
[CV 3/5] END boosting type=gbdt, n estimators=1400, num leaves=40,
reg_lambda=0.25;, score=(train=0.982, test=0.712) total time=
[CV 4/5] END boosting type=gbdt, n estimators=1400, num leaves=40,
```

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reg_lambda=0.25;, score=(train=0.982, test=0.766) total time=
[CV 5/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=40,
reg_lambda=0.25;, score=(train=0.978, test=0.871) total time=
                                                                 1.3s
[CV 1/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=40,
reg lambda=0.5;, score=(train=0.980, test=0.776) total time=
[CV 2/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=40,
reg lambda=0.5;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=40,
reg_lambda=0.5;, score=(train=0.982, test=0.704) total time=
                                                               1.1s
[CV 4/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=40,
reg_lambda=0.5;, score=(train=0.982, test=0.782) total time=
                                                               1.2s
[CV 5/5] END boosting type=gbdt, n estimators=1400, num leaves=40,
reg_lambda=0.5;, score=(train=0.978, test=0.863) total time=
[CV 1/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=40,
reg_lambda=0.75;, score=(train=0.980, test=0.776) total time=
                                                                 1.2s
[CV 2/5] END boosting type=gbdt, n estimators=1400, num leaves=40,
reg_lambda=0.75;, score=(train=0.986, test=0.848) total time=
                                                                 1.1s
[CV 3/5] END boosting type=gbdt, n estimators=1400, num leaves=40,
reg_lambda=0.75;, score=(train=0.982, test=0.688) total time=
[CV 4/5] END boosting type=gbdt, n estimators=1400, num leaves=40,
reg_lambda=0.75;, score=(train=0.982, test=0.782) total time=
[CV 5/5] END boosting type=gbdt, n estimators=1400, num leaves=40,
reg_lambda=0.75;, score=(train=0.978, test=0.863) total time=
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reg_lambda=1.0;, score=(train=0.980, test=0.768) total time=
                                                               1.1s
[CV 2/5] END boosting type=gbdt, n estimators=1400, num leaves=40,
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[CV 3/5] END boosting type=gbdt, n estimators=1400, num leaves=40,
reg_lambda=1.0;, score=(train=0.982, test=0.688) total time=
[CV 4/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=40,
reg_lambda=1.0;, score=(train=0.982, test=0.774) total time=
                                                               1.1s
[CV 5/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=40,
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                                                               1.2s
[CV 1/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=60,
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reg lambda=0.25;, score=(train=0.986, test=0.840) total time=
[CV 3/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=60,
reg_lambda=0.25;, score=(train=0.982, test=0.712) total time=
                                                                 1.1s
[CV 4/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=60,
reg_lambda=0.25;, score=(train=0.982, test=0.766) total time=
                                                                 1.2s
[CV 5/5] END boosting type=gbdt, n estimators=1400, num leaves=60,
reg_lambda=0.25;, score=(train=0.978, test=0.871) total time=
                                                                 1.2s
[CV 1/5] END boosting type=gbdt, n estimators=1400, num leaves=60,
reg_lambda=0.5;, score=(train=0.980, test=0.776) total time=
[CV 2/5] END boosting type=gbdt, n estimators=1400, num leaves=60,
reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting type=gbdt, n estimators=1400, num leaves=60,
```

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reg_lambda=0.5;, score=(train=0.982, test=0.704) total time=
                                                               1.1s
[CV 4/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=60,
reg_lambda=0.5;, score=(train=0.982, test=0.782) total time=
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[CV 5/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=60,
reg lambda=0.5;, score=(train=0.978, test=0.863) total time=
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                                                                 1.2s
[CV 3/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=60,
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                                                                 1.4s
[CV 4/5] END boosting type=gbdt, n estimators=1400, num leaves=60,
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                                                                 1.1s
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[CV 2/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=60,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=60,
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                                                               1.2s
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[CV 2/5] END boosting type=gbdt, n estimators=1400, num leaves=80,
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[CV 3/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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                                                                 1.1s
[CV 4/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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                                                                 1.3s
[CV 5/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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                                                               1.1s
[CV 3/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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                                                               1.1s
[CV 4/5] END boosting type=gbdt, n estimators=1400, num leaves=80,
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                                                               1.4s
[CV 5/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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                                                               1.6s
[CV 1/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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[CV 2/5] END boosting type=gbdt, n estimators=1400, num leaves=80,
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reg_lambda=0.75;, score=(train=0.986, test=0.848) total time=
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                                                                 1.1s
[CV 4/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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[CV 5/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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[CV 1/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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                                                               1.1s
[CV 3/5] END boosting type=gbdt, n estimators=1400, num leaves=80,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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                                                               1.1s
[CV 5/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=80,
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                                                               1.2s
[CV 1/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=100,
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reg_lambda=0.25;, score=(train=0.986, test=0.840) total time=
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reg_lambda=0.25;, score=(train=0.982, test=0.766) total time=
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[CV 3/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=100,
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                                                               1.1s
[CV 4/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=100,
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[CV 3/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=100,
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[CV 4/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=100,
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[CV 1/5] END boosting_type=gbdt, n_estimators=1400, num_leaves=100,
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[CV 2/5] END boosting type=dart, n estimators=1000, num leaves=20,
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[CV 3/5] END boosting_type=dart, n_estimators=1000, num_leaves=20,
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                                                                 5.0s
[CV 4/5] END boosting type=dart, n estimators=1000, num leaves=20,
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                                                                 4.8s
[CV 5/5] END boosting type=dart, n estimators=1000, num leaves=20,
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[CV 1/5] END boosting type=dart, n estimators=1000, num leaves=20,
reg_lambda=0.5;, score=(train=0.980, test=0.760) total time=
[CV 2/5] END boosting type=dart, n estimators=1000, num leaves=20,
reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
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[CV 4/5] END boosting type=dart, n estimators=1000, num leaves=20,
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[CV 5/5] END boosting type=dart, n estimators=1000, num leaves=20,
reg_lambda=0.5;, score=(train=0.978, test=0.863) total time=
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[CV 2/5] END boosting_type=dart, n_estimators=1000, num_leaves=20,
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[CV 3/5] END boosting_type=dart, n_estimators=1000, num_leaves=20,
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reg lambda=0.75;, score=(train=0.982, test=0.798) total time=
[CV 5/5] END boosting_type=dart, n_estimators=1000, num_leaves=20,
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[CV 1/5] END boosting_type=dart, n_estimators=1000, num_leaves=20,
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[CV 3/5] END boosting type=dart, n estimators=1000, num leaves=20,
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[CV 4/5] END boosting type=dart, n estimators=1000, num leaves=20,
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[CV 5/5] END boosting type=dart, n estimators=1000, num leaves=20,
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reg_lambda=1.0;, score=(train=0.978, test=0.871) total time=
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[CV 2/5] END boosting_type=dart, n_estimators=1000, num_leaves=40,
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[CV 3/5] END boosting_type=dart, n_estimators=1000, num_leaves=40,
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[CV 5/5] END boosting_type=dart, n_estimators=1000, num_leaves=40,
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[CV 1/5] END boosting type=dart, n estimators=1000, num leaves=40,
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[CV 4/5] END boosting type=dart, n estimators=1000, num leaves=40,
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                                                               5.0s
[CV 5/5] END boosting type=dart, n estimators=1000, num leaves=40,
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reg_lambda=0.75;, score=(train=0.982, test=0.798) total time=
                                                                 4.7s
[CV 5/5] END boosting_type=dart, n_estimators=1000, num_leaves=40,
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                                                                 5.2s
[CV 1/5] END boosting_type=dart, n_estimators=1000, num_leaves=40,
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                                                               5.0s
[CV 2/5] END boosting_type=dart, n_estimators=1000, num_leaves=40,
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reg lambda=1.0;, score=(train=0.982, test=0.688) total time=
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                                                               4.8s
[CV 5/5] END boosting_type=dart, n_estimators=1000, num_leaves=40,
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                                                                 5.2s
[CV 2/5] END boosting type=dart, n estimators=1000, num leaves=60,
reg_lambda=0.25;, score=(train=0.986, test=0.848) total time=
                                                                 5.4s
[CV 3/5] END boosting type=dart, n estimators=1000, num leaves=60,
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[CV 4/5] END boosting type=dart, n estimators=1000, num leaves=60,
```

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[CV 5/5] END boosting type=dart, n estimators=1000, num leaves=60,
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[CV 3/5] END boosting type=dart, n estimators=1000, num leaves=60,
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[CV 4/5] END boosting type=dart, n estimators=1000, num leaves=60,
reg lambda=0.75;, score=(train=0.982, test=0.798) total time=
[CV 5/5] END boosting type=dart, n estimators=1000, num leaves=60,
reg_lambda=0.75;, score=(train=0.978, test=0.863) total time=
[CV 1/5] END boosting_type=dart, n_estimators=1000, num_leaves=60,
reg_lambda=1.0;, score=(train=0.980, test=0.776) total time=
                                                               4.8s
[CV 2/5] END boosting type=dart, n estimators=1000, num leaves=60,
reg_lambda=1.0;, score=(train=0.986, test=0.856) total time=
[CV 3/5] END boosting type=dart, n estimators=1000, num leaves=60,
reg_lambda=1.0;, score=(train=0.982, test=0.688) total time=
                                                               4.7s
[CV 4/5] END boosting_type=dart, n_estimators=1000, num_leaves=60,
reg_lambda=1.0;, score=(train=0.982, test=0.790) total time=
                                                               4.6s
[CV 5/5] END boosting_type=dart, n_estimators=1000, num_leaves=60,
reg_lambda=1.0;, score=(train=0.978, test=0.871) total time=
                                                               4.9s
[CV 1/5] END boosting_type=dart, n_estimators=1000, num_leaves=80,
reg lambda=0.25;, score=(train=0.980, test=0.760) total time=
[CV 2/5] END boosting_type=dart, n_estimators=1000, num_leaves=80,
reg lambda=0.25;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=dart, n_estimators=1000, num_leaves=80,
reg_lambda=0.25;, score=(train=0.982, test=0.704) total time=
                                                                 5.2s
[CV 4/5] END boosting_type=dart, n_estimators=1000, num_leaves=80,
reg_lambda=0.25;, score=(train=0.982, test=0.798) total time=
                                                                 4.9s
[CV 5/5] END boosting type=dart, n estimators=1000, num leaves=80,
reg_lambda=0.25;, score=(train=0.978, test=0.863) total time=
                                                                 5.0s
[CV 1/5] END boosting type=dart, n estimators=1000, num leaves=80,
reg_lambda=0.5;, score=(train=0.980, test=0.768) total time=
                                                               5.0s
[CV 2/5] END boosting type=dart, n estimators=1000, num leaves=80,
reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting type=dart, n estimators=1000, num leaves=80,
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reg_lambda=1.0;, score=(train=0.980, test=0.768) total time=
                                                               5.7s
[CV 2/5] END boosting_type=dart, n_estimators=1100, num_leaves=20,
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                                                               5.3s
[CV 3/5] END boosting_type=dart, n_estimators=1100, num_leaves=20,
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reg lambda=1.0;, score=(train=0.982, test=0.798) total time=
[CV 5/5] END boosting_type=dart, n_estimators=1100, num_leaves=20,
reg lambda=1.0;, score=(train=0.978, test=0.879) total time=
[CV 1/5] END boosting_type=dart, n_estimators=1100, num_leaves=40,
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                                                                 5.7s
[CV 2/5] END boosting type=dart, n estimators=1100, num leaves=40,
reg_lambda=0.25;, score=(train=0.986, test=0.848) total time=
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                                                                 5.5s
[CV 4/5] END boosting type=dart, n estimators=1100, num leaves=40,
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                                                                 5.7s
[CV 5/5] END boosting type=dart, n estimators=1100, num leaves=40,
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[CV 1/5] END boosting type=dart, n estimators=1100, num leaves=40,
reg_lambda=0.5;, score=(train=0.980, test=0.752) total time=
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reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
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                                                               5.4s
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                                                                 5.5s
[CV 2/5] END boosting_type=dart, n_estimators=1100, num_leaves=40,
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[CV 3/5] END boosting_type=dart, n_estimators=1100, num_leaves=40,
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[CV 4/5] END boosting_type=dart, n_estimators=1100, num_leaves=40,
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[CV 2/5] END boosting type=dart, n estimators=1100, num leaves=40,
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[CV 4/5] END boosting type=dart, n estimators=1100, num leaves=40,
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[CV 5/5] END boosting type=dart, n estimators=1100, num leaves=40,
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reg_lambda=1.0;, score=(train=0.978, test=0.879) total time=
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[CV 2/5] END boosting_type=dart, n_estimators=1100, num_leaves=60,
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[CV 5/5] END boosting_type=dart, n_estimators=1100, num_leaves=60,
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[CV 3/5] END boosting_type=dart, n_estimators=1100, num_leaves=60,
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[CV 5/5] END boosting type=dart, n estimators=1100, num leaves=60,
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reg_lambda=0.75;, score=(train=0.986, test=0.856) total time=
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[CV 3/5] END boosting type=dart, n estimators=1100, num leaves=60,
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[CV 4/5] END boosting type=dart, n estimators=1100, num leaves=60,
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[CV 5/5] END boosting_type=dart, n_estimators=1100, num_leaves=60,
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                                                                 5.8s
[CV 3/5] END boosting type=dart, n estimators=1100, num leaves=80,
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[CV 4/5] END boosting type=dart, n estimators=1100, num leaves=80,
```

reg\_lambda=0.25;, score=(train=0.982, test=0.798) total time= 5.5s [CV 5/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=80, reg\_lambda=0.25;, score=(train=0.978, test=0.863) total time= 5.6s [CV 1/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=80, reg lambda=0.5;, score=(train=0.980, test=0.752) total time= 5.7s [CV 2/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=80, reg lambda=0.5;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=80, reg lambda=0.5;, score=(train=0.982, test=0.688) total time= 5.6s [CV 4/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=80, reg\_lambda=0.5;, score=(train=0.982, test=0.798) total time= 5.6s [CV 5/5] END boosting type=dart, n estimators=1100, num leaves=80, reg\_lambda=0.5;, score=(train=0.978, test=0.863) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=80, reg\_lambda=0.75;, score=(train=0.980, test=0.776) total time= 5.8s [CV 2/5] END boosting type=dart, n estimators=1100, num leaves=80, reg\_lambda=0.75;, score=(train=0.986, test=0.856) total time= 5.6s [CV 3/5] END boosting type=dart, n estimators=1100, num leaves=80, reg\_lambda=0.75;, score=(train=0.982, test=0.704) total time= [CV 4/5] END boosting type=dart, n estimators=1100, num leaves=80, reg lambda=0.75;, score=(train=0.982, test=0.790) total time= [CV 5/5] END boosting type=dart, n estimators=1100, num leaves=80, reg\_lambda=0.75;, score=(train=0.978, test=0.871) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=80, reg\_lambda=1.0;, score=(train=0.980, test=0.776) total time= 5.4s [CV 2/5] END boosting type=dart, n estimators=1100, num leaves=80, reg\_lambda=1.0;, score=(train=0.986, test=0.856) total time= [CV 3/5] END boosting type=dart, n estimators=1100, num leaves=80, reg\_lambda=1.0;, score=(train=0.982, test=0.688) total time= 5.5s [CV 4/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=80, reg\_lambda=1.0;, score=(train=0.982, test=0.798) total time= 5.3s [CV 5/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=80, reg\_lambda=1.0;, score=(train=0.978, test=0.879) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=100, reg lambda=0.25;, score=(train=0.980, test=0.768) total time= [CV 2/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=100, reg lambda=0.25;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.982, test=0.704) total time= [CV 4/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.982, test=0.798) total time= [CV 5/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.978, test=0.863) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.980, test=0.752) total time= [CV 2/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1100, num\_leaves=100,

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[CV 5/5] END boosting_type=dart, n_estimators=1200, num_leaves=20,
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[CV 1/5] END boosting_type=dart, n_estimators=1200, num_leaves=20,
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[CV 2/5] END boosting_type=dart, n_estimators=1200, num_leaves=20,
reg_lambda=1.0;, score=(train=0.986, test=0.848) total time=
                                                               6.0s
[CV 3/5] END boosting type=dart, n estimators=1200, num leaves=20,
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reg_lambda=1.0;, score=(train=0.982, test=0.798) total time=
[CV 5/5] END boosting_type=dart, n_estimators=1200, num_leaves=20,
reg_lambda=1.0;, score=(train=0.978, test=0.871) total time=
                                                               6.1s
[CV 1/5] END boosting type=dart, n estimators=1200, num leaves=40,
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[CV 2/5] END boosting type=dart, n estimators=1200, num leaves=40,
reg_lambda=0.25;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting type=dart, n estimators=1200, num leaves=40,
reg_lambda=0.25;, score=(train=0.982, test=0.696) total time=
[CV 4/5] END boosting_type=dart, n_estimators=1200, num_leaves=40,
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                                                                 6.5s
[CV 5/5] END boosting type=dart, n estimators=1200, num leaves=40,
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[CV 1/5] END boosting type=dart, n estimators=1200, num leaves=40,
reg_lambda=0.5;, score=(train=0.980, test=0.760) total time=
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[CV 3/5] END boosting_type=dart, n_estimators=1200, num_leaves=40,
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[CV 4/5] END boosting_type=dart, n_estimators=1200, num_leaves=40,
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[CV 5/5] END boosting_type=dart, n_estimators=1200, num_leaves=40,
reg lambda=0.5;, score=(train=0.978, test=0.863) total time=
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[CV 3/5] END boosting type=dart, n estimators=1200, num leaves=40,
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                                                                 6.3s
[CV 4/5] END boosting type=dart, n estimators=1200, num leaves=40,
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                                                                 6.0s
[CV 5/5] END boosting type=dart, n estimators=1200, num leaves=40,
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[CV 1/5] END boosting type=dart, n estimators=1200, num leaves=40,
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reg_lambda=1.0;, score=(train=0.980, test=0.784) total time=
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[CV 4/5] END boosting_type=dart, n_estimators=1200, num_leaves=40,
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[CV 4/5] END boosting_type=dart, n_estimators=1200, num_leaves=60,
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[CV 5/5] END boosting_type=dart, n_estimators=1200, num_leaves=60,
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[CV 1/5] END boosting type=dart, n estimators=1200, num leaves=60,
reg_lambda=0.5;, score=(train=0.980, test=0.760) total time=
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reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=dart, n_estimators=1200, num_leaves=60,
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                                                               6.8s
[CV 4/5] END boosting type=dart, n estimators=1200, num leaves=60,
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[CV 2/5] END boosting_type=dart, n_estimators=1200, num_leaves=60,
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[CV 1/5] END boosting_type=dart, n_estimators=1200, num_leaves=60,
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[CV 2/5] END boosting type=dart, n estimators=1200, num leaves=60,
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[CV 3/5] END boosting type=dart, n estimators=1200, num leaves=60,
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[CV 4/5] END boosting_type=dart, n_estimators=1200, num_leaves=60,
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[CV 5/5] END boosting type=dart, n estimators=1200, num leaves=60,
```

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reg_lambda=1.0;, score=(train=0.978, test=0.871) total time=
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[CV 3/5] END boosting_type=dart, n_estimators=1200, num_leaves=80,
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[CV 3/5] END boosting_type=dart, n_estimators=1200, num_leaves=80,
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[CV 4/5] END boosting type=dart, n estimators=1200, num leaves=80,
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[CV 5/5] END boosting type=dart, n estimators=1200, num leaves=80,
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[CV 3/5] END boosting type=dart, n estimators=1200, num leaves=80,
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[CV 2/5] END boosting_type=dart, n_estimators=1200, num_leaves=80,
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[CV 4/5] END boosting_type=dart, n_estimators=1200, num_leaves=100,
```

reg\_lambda=0.25;, score=(train=0.982, test=0.790) total time= [CV 5/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.978, test=0.863) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg lambda=0.5;, score=(train=0.980, test=0.760) total time= [CV 2/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg lambda=0.5;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg lambda=0.5;, score=(train=0.982, test=0.696) total time= [CV 4/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.982, test=0.806) total time= 6.9s [CV 5/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.978, test=0.863) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.980, test=0.776) total time= [CV 2/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.986, test=0.856) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.982, test=0.704) total time= [CV 4/5] END boosting type=dart, n estimators=1200, num leaves=100, reg lambda=0.75;, score=(train=0.982, test=0.798) total time= [CV 5/5] END boosting type=dart, n estimators=1200, num leaves=100, reg\_lambda=0.75;, score=(train=0.978, test=0.871) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.980, test=0.784) total time= [CV 2/5] END boosting type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.986, test=0.856) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.982, test=0.688) total time= [CV 4/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.982, test=0.798) total time= 7.3s [CV 5/5] END boosting\_type=dart, n\_estimators=1200, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.978, test=0.871) total time= 7.2s [CV 1/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=20, reg lambda=0.25;, score=(train=0.980, test=0.752) total time= [CV 2/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=20, reg lambda=0.25;, score=(train=0.986, test=0.840) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=20, reg\_lambda=0.25;, score=(train=0.982, test=0.704) total time= 7.4s [CV 4/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=20, reg\_lambda=0.25;, score=(train=0.982, test=0.798) total time= 7.3s [CV 5/5] END boosting type=dart, n estimators=1300, num leaves=20, reg\_lambda=0.25;, score=(train=0.978, test=0.863) total time= [CV 1/5] END boosting type=dart, n estimators=1300, num leaves=20, reg\_lambda=0.5;, score=(train=0.980, test=0.744) total time= [CV 2/5] END boosting type=dart, n estimators=1300, num leaves=20, reg\_lambda=0.5;, score=(train=0.986, test=0.840) total time= [CV 3/5] END boosting type=dart, n estimators=1300, num leaves=20,

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reg_lambda=0.5;, score=(train=0.982, test=0.704) total time=
                                                               6.9s
[CV 4/5] END boosting_type=dart, n_estimators=1300, num_leaves=20,
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                                                               7.0s
[CV 5/5] END boosting_type=dart, n_estimators=1300, num_leaves=20,
reg lambda=0.5;, score=(train=0.978, test=0.863) total time=
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[CV 1/5] END boosting_type=dart, n_estimators=1300, num_leaves=20,
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[CV 2/5] END boosting_type=dart, n_estimators=1300, num_leaves=20,
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                                                                 6.9s
[CV 3/5] END boosting_type=dart, n_estimators=1300, num_leaves=20,
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                                                                 6.8s
[CV 1/5] END boosting_type=dart, n_estimators=1300, num_leaves=20,
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                                                               7.1s
[CV 2/5] END boosting type=dart, n estimators=1300, num leaves=20,
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                                                               6.7s
[CV 3/5] END boosting type=dart, n estimators=1300, num leaves=20,
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[CV 4/5] END boosting type=dart, n estimators=1300, num leaves=20,
reg_lambda=1.0;, score=(train=0.982, test=0.790) total time=
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                                                               6.9s
[CV 1/5] END boosting type=dart, n estimators=1300, num leaves=40,
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[CV 2/5] END boosting type=dart, n estimators=1300, num leaves=40,
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[CV 3/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
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                                                                 7.0s
[CV 4/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
reg_lambda=0.25;, score=(train=0.982, test=0.790) total time=
                                                                 7.0s
[CV 5/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
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[CV 1/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
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                                                               7.1s
[CV 3/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
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[CV 4/5] END boosting type=dart, n estimators=1300, num leaves=40,
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                                                               7.0s
[CV 5/5] END boosting type=dart, n estimators=1300, num leaves=40,
reg_lambda=0.5;, score=(train=0.978, test=0.863) total time=
[CV 1/5] END boosting type=dart, n estimators=1300, num leaves=40,
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[CV 2/5] END boosting type=dart, n estimators=1300, num leaves=40,
```

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reg_lambda=0.75;, score=(train=0.986, test=0.856) total time=
                                                                 7.3s
[CV 3/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
                                                                 7.5s
reg_lambda=0.75;, score=(train=0.982, test=0.704) total time=
[CV 4/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
reg lambda=0.75;, score=(train=0.982, test=0.790) total time=
                                                                 7.1s
[CV 5/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
reg lambda=0.75;, score=(train=0.978, test=0.871) total time=
[CV 1/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
reg lambda=1.0;, score=(train=0.980, test=0.776) total time=
[CV 2/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
reg_lambda=1.0;, score=(train=0.986, test=0.848) total time=
                                                               7.1s
[CV 3/5] END boosting type=dart, n estimators=1300, num leaves=40,
reg_lambda=1.0;, score=(train=0.982, test=0.688) total time=
[CV 4/5] END boosting type=dart, n estimators=1300, num leaves=40,
reg_lambda=1.0;, score=(train=0.982, test=0.790) total time=
[CV 5/5] END boosting_type=dart, n_estimators=1300, num_leaves=40,
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                                                               7.3s
[CV 1/5] END boosting type=dart, n estimators=1300, num leaves=60,
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[CV 2/5] END boosting type=dart, n estimators=1300, num leaves=60,
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                                                                 7.0s
[CV 4/5] END boosting type=dart, n estimators=1300, num leaves=60,
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                                                                 7.1s
[CV 5/5] END boosting type=dart, n estimators=1300, num leaves=60,
reg_lambda=0.25;, score=(train=0.978, test=0.879) total time=
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[CV 1/5] END boosting type=dart, n estimators=1300, num leaves=60,
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                                                               7.1s
[CV 3/5] END boosting_type=dart, n_estimators=1300, num_leaves=60,
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                                                               7.1s
[CV 4/5] END boosting_type=dart, n_estimators=1300, num_leaves=60,
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[CV 5/5] END boosting_type=dart, n_estimators=1300, num_leaves=60,
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[CV 3/5] END boosting type=dart, n estimators=1300, num leaves=60,
reg_lambda=0.75;, score=(train=0.982, test=0.704) total time=
                                                                 7.1s
[CV 4/5] END boosting type=dart, n estimators=1300, num leaves=60,
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                                                                 6.8s
[CV 5/5] END boosting type=dart, n estimators=1300, num leaves=60,
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[CV 1/5] END boosting type=dart, n estimators=1300, num leaves=60,
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reg_lambda=1.0;, score=(train=0.980, test=0.776) total time=
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[CV 2/5] END boosting_type=dart, n_estimators=1300, num_leaves=60,
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                                                               7.0s
[CV 3/5] END boosting_type=dart, n_estimators=1300, num_leaves=60,
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                                                               7.0s
[CV 4/5] END boosting_type=dart, n_estimators=1300, num_leaves=60,
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[CV 5/5] END boosting_type=dart, n_estimators=1300, num_leaves=60,
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[CV 3/5] END boosting type=dart, n estimators=1300, num leaves=80,
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[CV 4/5] END boosting type=dart, n estimators=1300, num leaves=80,
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[CV 5/5] END boosting type=dart, n estimators=1300, num leaves=80,
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[CV 1/5] END boosting type=dart, n estimators=1300, num leaves=80,
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[CV 1/5] END boosting_type=dart, n_estimators=1300, num_leaves=80,
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[CV 2/5] END boosting type=dart, n estimators=1300, num leaves=80,
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                                                               6.8s
[CV 3/5] END boosting type=dart, n estimators=1300, num leaves=80,
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[CV 4/5] END boosting_type=dart, n_estimators=1300, num_leaves=80,
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                                                               6.7s
[CV 5/5] END boosting type=dart, n estimators=1300, num leaves=80,
```

reg\_lambda=1.0;, score=(train=0.978, test=0.871) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.980, test=0.752) total time= 7.0s [CV 2/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg lambda=0.25;, score=(train=0.986, test=0.848) total time= 7.2s [CV 3/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg lambda=0.25;, score=(train=0.982, test=0.720) total time= [CV 4/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg lambda=0.25;, score=(train=0.982, test=0.790) total time= [CV 5/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.978, test=0.879) total time= 7.3s [CV 1/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.980, test=0.760) total time= [CV 2/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.982, test=0.688) total time= 7.0s [CV 4/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.982, test=0.798) total time= [CV 5/5] END boosting type=dart, n estimators=1300, num leaves=100, reg\_lambda=0.5;, score=(train=0.978, test=0.863) total time= [CV 1/5] END boosting type=dart, n estimators=1300, num leaves=100, reg\_lambda=0.75;, score=(train=0.980, test=0.776) total time= [CV 2/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.986, test=0.856) total time= 6.8s [CV 3/5] END boosting type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.982, test=0.704) total time= [CV 4/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.982, test=0.790) total time= [CV 5/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.978, test=0.871) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.980, test=0.776) total time= [CV 2/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg lambda=1.0;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg lambda=1.0;, score=(train=0.982, test=0.688) total time= [CV 4/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.982, test=0.790) total time= [CV 5/5] END boosting\_type=dart, n\_estimators=1300, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.978, test=0.871) total time= [CV 1/5] END boosting type=dart, n estimators=1400, num leaves=20, reg\_lambda=0.25;, score=(train=0.980, test=0.744) total time= 7.5s [CV 2/5] END boosting type=dart, n estimators=1400, num leaves=20, reg\_lambda=0.25;, score=(train=0.986, test=0.840) total time= 7.8s [CV 3/5] END boosting type=dart, n estimators=1400, num leaves=20, reg\_lambda=0.25;, score=(train=0.982, test=0.704) total time= [CV 4/5] END boosting type=dart, n estimators=1400, num leaves=20,

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reg_lambda=0.25;, score=(train=0.982, test=0.806) total time=
                                                                 7.8s
[CV 5/5] END boosting_type=dart, n_estimators=1400, num_leaves=20,
                                                                7.5s
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[CV 2/5] END boosting_type=dart, n_estimators=1400, num_leaves=20,
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[CV 3/5] END boosting_type=dart, n_estimators=1400, num_leaves=20,
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[CV 4/5] END boosting_type=dart, n_estimators=1400, num_leaves=20,
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                                                               7.5s
[CV 5/5] END boosting type=dart, n estimators=1400, num leaves=20,
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[CV 2/5] END boosting type=dart, n estimators=1400, num leaves=20,
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                                                                 7.5s
[CV 3/5] END boosting type=dart, n estimators=1400, num leaves=20,
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                                                               7.5s
[CV 2/5] END boosting type=dart, n estimators=1400, num leaves=20,
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[CV 3/5] END boosting type=dart, n estimators=1400, num leaves=20,
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                                                               7.5s
[CV 4/5] END boosting_type=dart, n_estimators=1400, num_leaves=20,
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                                                               7.8s
[CV 5/5] END boosting_type=dart, n_estimators=1400, num_leaves=20,
reg_lambda=1.0;, score=(train=0.978, test=0.871) total time=
                                                               7.5s
[CV 1/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
reg lambda=0.25;, score=(train=0.980, test=0.752) total time=
[CV 2/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
reg lambda=0.25;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
reg_lambda=0.25;, score=(train=0.982, test=0.712) total time=
                                                                 7.9s
[CV 4/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
reg_lambda=0.25;, score=(train=0.982, test=0.790) total time=
                                                                 7.5s
[CV 5/5] END boosting type=dart, n estimators=1400, num leaves=40,
reg_lambda=0.25;, score=(train=0.978, test=0.879) total time=
                                                                 7.8s
[CV 1/5] END boosting type=dart, n estimators=1400, num leaves=40,
reg_lambda=0.5;, score=(train=0.980, test=0.752) total time=
[CV 2/5] END boosting type=dart, n estimators=1400, num leaves=40,
reg_lambda=0.5;, score=(train=0.986, test=0.848) total time=
[CV 3/5] END boosting type=dart, n estimators=1400, num leaves=40,
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reg_lambda=0.5;, score=(train=0.982, test=0.696) total time=
                                                               7.5s
[CV 4/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
reg_lambda=0.5;, score=(train=0.982, test=0.806) total time=
                                                               7.7s
[CV 5/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
reg lambda=0.5;, score=(train=0.978, test=0.863) total time=
                                                               7.5s
[CV 1/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
reg lambda=0.75;, score=(train=0.980, test=0.776) total time=
[CV 2/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
reg lambda=0.75;, score=(train=0.986, test=0.848) total time=
                                                                 7.4s
[CV 3/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
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[CV 4/5] END boosting type=dart, n estimators=1400, num leaves=40,
reg_lambda=0.75;, score=(train=0.982, test=0.790) total time=
[CV 5/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
reg_lambda=0.75;, score=(train=0.978, test=0.871) total time=
                                                                 7.8s
[CV 1/5] END boosting_type=dart, n_estimators=1400, num_leaves=40,
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                                                               7.5s
[CV 2/5] END boosting type=dart, n estimators=1400, num leaves=40,
reg_lambda=1.0;, score=(train=0.986, test=0.840) total time=
                                                               7.8s
[CV 3/5] END boosting type=dart, n estimators=1400, num leaves=40,
reg_lambda=1.0;, score=(train=0.982, test=0.680) total time=
[CV 4/5] END boosting type=dart, n estimators=1400, num leaves=40,
reg_lambda=1.0;, score=(train=0.982, test=0.790) total time=
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                                                               7.4s
[CV 1/5] END boosting type=dart, n estimators=1400, num leaves=60,
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                                                                 7.8s
[CV 2/5] END boosting type=dart, n estimators=1400, num leaves=60,
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reg_lambda=0.25;, score=(train=0.982, test=0.712) total time=
                                                                 7.7s
[CV 4/5] END boosting_type=dart, n_estimators=1400, num_leaves=60,
reg_lambda=0.25;, score=(train=0.982, test=0.790) total time=
                                                                 7.5s
[CV 5/5] END boosting_type=dart, n_estimators=1400, num_leaves=60,
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[CV 3/5] END boosting_type=dart, n_estimators=1400, num_leaves=60,
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                                                               7.7s
[CV 4/5] END boosting type=dart, n estimators=1400, num leaves=60,
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[CV 5/5] END boosting type=dart, n estimators=1400, num leaves=60,
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[CV 2/5] END boosting type=dart, n estimators=1400, num leaves=60,
```

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reg_lambda=0.75;, score=(train=0.986, test=0.848) total time=
                                                                 7.7s
[CV 3/5] END boosting_type=dart, n_estimators=1400, num_leaves=60,
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[CV 4/5] END boosting_type=dart, n_estimators=1400, num_leaves=60,
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[CV 5/5] END boosting_type=dart, n_estimators=1400, num_leaves=60,
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[CV 5/5] END boosting type=dart, n estimators=1400, num leaves=80,
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[CV 2/5] END boosting_type=dart, n_estimators=1400, num_leaves=80,
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[CV 3/5] END boosting_type=dart, n_estimators=1400, num_leaves=80,
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[CV 4/5] END boosting_type=dart, n_estimators=1400, num_leaves=80,
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[CV 2/5] END boosting_type=dart, n_estimators=1400, num_leaves=80,
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                                                                 7.4s
[CV 3/5] END boosting type=dart, n estimators=1400, num leaves=80,
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[CV 4/5] END boosting type=dart, n estimators=1400, num leaves=80,
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[CV 5/5] END boosting type=dart, n estimators=1400, num leaves=80,
reg_lambda=0.75;, score=(train=0.978, test=0.871) total time=
[CV 1/5] END boosting type=dart, n estimators=1400, num leaves=80,
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reg\_lambda=1.0;, score=(train=0.980, test=0.768) total time= 7.6s [CV 2/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=80, reg\_lambda=1.0;, score=(train=0.986, test=0.840) total time= 7.4s [CV 3/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=80, reg lambda=1.0;, score=(train=0.982, test=0.680) total time= 7.5s [CV 4/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=80, reg lambda=1.0;, score=(train=0.982, test=0.790) total time= [CV 5/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=80, reg lambda=1.0;, score=(train=0.978, test=0.863) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.980, test=0.752) total time= 8.4s [CV 2/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.982, test=0.712) total time= [CV 4/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.982, test=0.790) total time= [CV 5/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.25;, score=(train=0.978, test=0.879) total time= [CV 1/5] END boosting type=dart, n estimators=1400, num leaves=100, reg\_lambda=0.5;, score=(train=0.980, test=0.752) total time= [CV 2/5] END boosting type=dart, n estimators=1400, num leaves=100, reg\_lambda=0.5;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.982, test=0.696) total time= [CV 4/5] END boosting type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.982, test=0.806) total time= [CV 5/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.5;, score=(train=0.978, test=0.863) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.980, test=0.776) total time= [CV 2/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.986, test=0.848) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg lambda=0.75;, score=(train=0.982, test=0.704) total time= [CV 4/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg lambda=0.75;, score=(train=0.982, test=0.790) total time= [CV 5/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=0.75;, score=(train=0.978, test=0.871) total time= [CV 1/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.980, test=0.768) total time= [CV 2/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.986, test=0.840) total time= [CV 3/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.982, test=0.680) total time= [CV 4/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100, reg\_lambda=1.0;, score=(train=0.982, test=0.790) total time= [CV 5/5] END boosting\_type=dart, n\_estimators=1400, num\_leaves=100,

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[CV 3/5] END boosting_type=goss, n_estimators=1000, num_leaves=20,
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[CV 4/5] END boosting_type=goss, n_estimators=1000, num_leaves=20,
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                                                                0.7s
[CV 5/5] END boosting_type=goss, n_estimators=1000, num_leaves=20,
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[CV 3/5] END boosting_type=goss, n_estimators=1000, num_leaves=20,
reg_lambda=0.5;, score=(train=0.972, test=0.720) total time=
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[CV 4/5] END boosting type=goss, n estimators=1000, num leaves=20,
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[CV 5/5] END boosting type=goss, n estimators=1000, num leaves=20,
reg_lambda=0.5;, score=(train=0.962, test=0.823) total time=
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[CV 4/5] END boosting type=goss, n estimators=1000, num leaves=40,
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[CV 5/5] END boosting_type=goss, n_estimators=1000, num_leaves=40,
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[CV 1/5] END boosting_type=goss, n_estimators=1000, num_leaves=60,
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reg_lambda=0.5;, score=(train=0.972, test=0.720) total time=
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[CV 3/5] END boosting_type=goss, n_estimators=1000, num_leaves=60,
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[CV 1/5] END boosting_type=goss, n_estimators=1100, num_leaves=100,
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[CV 2/5] END boosting_type=goss, n_estimators=1100, num_leaves=100,
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[CV 5/5] END boosting type=goss, n estimators=1200, num leaves=20,
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[CV 5/5] END boosting_type=goss, n_estimators=1200, num_leaves=60,
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[CV 4/5] END boosting type=goss, n estimators=1200, num leaves=60,
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[CV 1/5] END boosting_type=goss, n_estimators=1300, num_leaves=20,
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[CV 2/5] END boosting type=goss, n estimators=1300, num leaves=20,
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[CV 5/5] END boosting_type=goss, n_estimators=1300, num_leaves=20,
reg lambda=0.75;, score=(train=0.964, test=0.831) total time=
[CV 1/5] END boosting_type=goss, n_estimators=1300, num_leaves=20,
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[CV 2/5] END boosting_type=goss, n_estimators=1300, num_leaves=20,
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[CV 3/5] END boosting type=goss, n estimators=1300, num leaves=20,
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[CV 4/5] END boosting_type=goss, n_estimators=1300, num_leaves=20,
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[CV 1/5] END boosting type=goss, n estimators=1300, num leaves=40,
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[CV 2/5] END boosting type=goss, n estimators=1300, num leaves=40,
reg lambda=0.25;, score=(train=0.980, test=0.800) total time=
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reg_lambda=0.25;, score=(train=0.974, test=0.736) total time=
[CV 4/5] END boosting_type=goss, n_estimators=1300, num_leaves=40,
reg_lambda=0.25;, score=(train=0.968, test=0.798) total time=
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[CV 5/5] END boosting type=goss, n estimators=1300, num leaves=40,
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[CV 4/5] END boosting_type=goss, n_estimators=1300, num_leaves=40,
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[CV 1/5] END boosting type=goss, n estimators=1300, num leaves=40,
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[CV 3/5] END boosting_type=goss, n_estimators=1300, num_leaves=40,
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[CV 5/5] END boosting type=goss, n estimators=1300, num leaves=60,
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[CV 5/5] END boosting type=goss, n estimators=1300, num leaves=60,
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reg_lambda=1.0;, score=(train=0.960, test=0.823) total time=
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[CV 3/5] END boosting type=goss, n estimators=1400, num leaves=20,
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[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=40,
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[CV 2/5] END boosting type=goss, n estimators=1400, num leaves=40,
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[CV 3/5] END boosting type=goss, n estimators=1400, num leaves=40,
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reg_lambda=0.25;, score=(train=0.980, test=0.792) total time=
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg_lambda=0.25;, score=(train=0.974, test=0.736) total time=
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg_lambda=0.25;, score=(train=0.970, test=0.790) total time=
                                                                 0.6s
[CV 5/5] END boosting type=goss, n estimators=1400, num leaves=60,
reg_lambda=0.25;, score=(train=0.966, test=0.839) total time=
[CV 1/5] END boosting type=goss, n estimators=1400, num leaves=60,
reg_lambda=0.5;, score=(train=0.972, test=0.752) total time=
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg_lambda=0.5;, score=(train=0.978, test=0.800) total time=
                                                               0.6s
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg_lambda=0.5;, score=(train=0.972, test=0.696) total time=
                                                               0.6s
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg lambda=0.5;, score=(train=0.970, test=0.782) total time=
[CV 5/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg lambda=0.5;, score=(train=0.964, test=0.806) total time=
[CV 1/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg_lambda=0.75;, score=(train=0.972, test=0.752) total time=
                                                                 0.6s
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg_lambda=0.75;, score=(train=0.978, test=0.776) total time=
                                                                 0.6s
[CV 3/5] END boosting type=goss, n estimators=1400, num leaves=60,
reg_lambda=0.75;, score=(train=0.970, test=0.720) total time=
                                                                 0.5s
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg_lambda=0.75;, score=(train=0.972, test=0.790) total time=
                                                                 0.6s
[CV 5/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg_lambda=0.75;, score=(train=0.966, test=0.823) total time=
[CV 1/5] END boosting type=goss, n estimators=1400, num leaves=60,
```

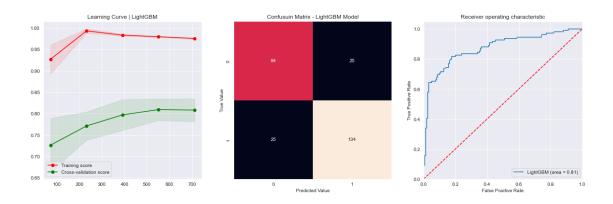
```
reg_lambda=1.0;, score=(train=0.970, test=0.768) total time=
                                                               0.6s
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg_lambda=1.0;, score=(train=0.976, test=0.800) total time=
                                                               0.6s
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg lambda=1.0;, score=(train=0.974, test=0.744) total time=
                                                               0.7s
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg lambda=1.0;, score=(train=0.970, test=0.782) total time=
[CV 5/5] END boosting_type=goss, n_estimators=1400, num_leaves=60,
reg_lambda=1.0;, score=(train=0.962, test=0.823) total time=
[CV 1/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=0.25;, score=(train=0.972, test=0.752) total time=
                                                                 0.6s
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=0.25;, score=(train=0.980, test=0.792) total time=
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=0.25;, score=(train=0.974, test=0.736) total time=
                                                                 0.6s
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=0.25;, score=(train=0.970, test=0.790) total time=
                                                                 0.6s
[CV 5/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=0.25;, score=(train=0.966, test=0.839) total time=
                                                                 0.6s
[CV 1/5] END boosting type=goss, n estimators=1400, num leaves=80,
reg_lambda=0.5;, score=(train=0.972, test=0.752) total time=
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=0.5;, score=(train=0.978, test=0.800) total time=
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=0.5;, score=(train=0.972, test=0.696) total time=
                                                               0.6s
[CV 4/5] END boosting type=goss, n estimators=1400, num leaves=80,
reg_lambda=0.5;, score=(train=0.970, test=0.782) total time=
                                                               0.7s
[CV 5/5] END boosting type=goss, n estimators=1400, num leaves=80,
reg_lambda=0.5;, score=(train=0.964, test=0.806) total time=
                                                               0.7s
[CV 1/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=0.75;, score=(train=0.972, test=0.752) total time=
                                                                 0.6s
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=0.75;, score=(train=0.978, test=0.776) total time=
                                                                 0.6s
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg lambda=0.75;, score=(train=0.970, test=0.720) total time=
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg lambda=0.75;, score=(train=0.972, test=0.790) total time=
[CV 5/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=0.75;, score=(train=0.966, test=0.823) total time=
                                                                 0.6s
[CV 1/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=1.0;, score=(train=0.970, test=0.768) total time=
                                                               0.6s
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=1.0;, score=(train=0.976, test=0.800) total time=
                                                               0.6s
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=1.0;, score=(train=0.974, test=0.744) total time=
                                                               0.6s
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=80,
reg_lambda=1.0;, score=(train=0.970, test=0.782) total time=
                                                               0.7s
[CV 5/5] END boosting type=goss, n estimators=1400, num leaves=80,
```

```
reg_lambda=1.0;, score=(train=0.962, test=0.823) total time=
[CV 1/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.25;, score=(train=0.972, test=0.752) total time=
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg lambda=0.25;, score=(train=0.980, test=0.792) total time=
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg lambda=0.25;, score=(train=0.974, test=0.736) total time=
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg lambda=0.25;, score=(train=0.970, test=0.790) total time=
[CV 5/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.25;, score=(train=0.966, test=0.839) total time=
                                                                0.6s
[CV 1/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.5;, score=(train=0.972, test=0.752) total time=
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.5;, score=(train=0.978, test=0.800) total time=
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.5;, score=(train=0.972, test=0.696) total time=
                                                               0.8s
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.5;, score=(train=0.970, test=0.782) total time=
[CV 5/5] END boosting type=goss, n estimators=1400, num leaves=100,
reg_lambda=0.5;, score=(train=0.964, test=0.806) total time=
[CV 1/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.75;, score=(train=0.972, test=0.752) total time=
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.75;, score=(train=0.978, test=0.776) total time=
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.75;, score=(train=0.970, test=0.720) total time=
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.75;, score=(train=0.972, test=0.790) total time=
[CV 5/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=0.75;, score=(train=0.966, test=0.823) total time=
[CV 1/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=1.0;, score=(train=0.970, test=0.768) total time=
[CV 2/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg lambda=1.0;, score=(train=0.976, test=0.800) total time=
[CV 3/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg lambda=1.0;, score=(train=0.974, test=0.744) total time=
[CV 4/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=1.0;, score=(train=0.970, test=0.782) total time=
[CV 5/5] END boosting_type=goss, n_estimators=1400, num_leaves=100,
reg_lambda=1.0;, score=(train=0.962, test=0.823) total time=
LGBMClassifier(boosting_type='dart', learning_rate=0.3, n_estimators=1000,
               num_leaves=40, reg_lambda=0.75) best hyperparameters are:
{'boosting_type': 'dart', 'n_estimators': 1000, 'num_leaves': 40, 'reg_lambda':
0.75} with the accuracy of: 0.80
```

```
[]: # saving this version of model
     filename = f'Light GBM v1.0.pkl'
     pickle.dump(grid,open(f'{filename}', 'wb'))
     print(f'Model {filename} saved successfully!')
    Model Light GBM v1.0.pkl saved successfully!
[]: grid = pickle.load(open('Light GBM v1.0.pkl', 'rb'))
[]: LGBMClassifier(boosting type='dart', learning_rate=0.3, n_estimators=1000,
                    num_leaves=40, reg_lambda=0.75)
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
     train_sizes, train_scores, test_scores, = learning_curve(grid.best_estimator_,_
     →X_valid, y_valid, train_sizes=np.linspace(.1, 1, 5))
     train_scores_mean = np.mean(train_scores, axis=1)
     train_scores_std = np.std(train_scores, axis=1)
     test_scores_mean = np.mean(test_scores, axis=1)
     test_scores_std = np.std(test_scores, axis=1)
     y pred = grid.best estimator .predict(X valid)
     cls_rep=classification_report(y_valid,y_pred)
     print(cls rep)
     axes[0].fill_between(train_sizes, train_scores_mean - train_scores_std,
                         train_scores_mean + train_scores_std, alpha=0.1, color="r")
     axes[0].fill_between(train_sizes, test_scores mean - test_scores std,
                         test_scores_mean + test_scores_std, alpha=0.1, color="g")
     axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_"
     axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",_
     →label="Cross-validation score")
     axes[0].legend(loc="best")
     axes[0].set_title('Learning Curve | LightGBM')
     cnf_matrix = confusion_matrix(y_valid, y_pred, labels=[1,0])
     sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g',__
     \rightarrowax=axes[1])
     axes[1].set xlabel('Predicted Value')
     axes[1].set_ylabel('True Value')
     axes[1].set_title('Confusuin Matrix - LightGBM Model')
     logit_roc_auc = roc_auc_score(y_valid, grid.predict(X_valid))
     fpr, tpr, thresholds = roc_curve(y_valid, grid.predict_proba(X_valid)[:,1],__
     →pos_label=1)
     axes[2].plot(fpr, tpr, label='LightGBM (area = %0.2f)' % logit_roc_auc)
```

```
axes[2].plot([0, 1], [0, 1],'r--')
axes[2].set_xlim([0.0, 1.0])
axes[2].set_ylim([0.0, 1.05])
axes[2].set_xlabel('False Positive Rate')
axes[2].set_ylabel('True Positive Rate')
axes[2].set_title('Receiver operating characteristic')
axes[2].legend(loc="lower right")
plt.show()
```

	precision	recall	f1-score	support
0.0	0.84	0.84	0.84	159
1.0	0.77	0.77	0.77	109
accuracy			0.81	268
macro avg	0.81	0.81	0.81	268
weighted avg	0.81	0.81	0.81	268



```
[]: params = {
    'max_depth': np.arange(2, 11, 1),
    # 'min_data_in_leaf': np.arange(30, 55, 5),
    'extra_trees': [True, False],
    # 'max_bin': np.arange(50, 300, 50),
    'reg_alpha': np.arange(0.25, 1.25, 0.25)
}
grid = GridSearchCV(model, param_grid=params, return_train_score=True, cv=5, userbose=3)
grid.fit(X_train,y_train)
```

```
Fitting 5 folds for each of 72 candidates, totalling 360 fits
[CV 1/5] END extra_trees=True, max_depth=2, reg_alpha=0.25;, score=(train=0.882,
test=0.832) total time=
                          2.0s
[CV 2/5] END extra_trees=True, max_depth=2, reg_alpha=0.25;, score=(train=0.886,
test=0.856) total time=
                          1.5s
[CV 3/5] END extra_trees=True, max_depth=2, reg_alpha=0.25;, score=(train=0.902,
test=0.808) total time=
                          1.4s
[CV 4/5] END extra_trees=True, max_depth=2, reg_alpha=0.25;, score=(train=0.902,
test=0.798) total time=
                          1.7s
[CV 5/5] END extra_trees=True, max_depth=2, reg_alpha=0.25;, score=(train=0.874,
test=0.879) total time=
                          1.4s
[CV 1/5] END extra_trees=True, max_depth=2, reg_alpha=0.5;, score=(train=0.869,
                          1.5s
test=0.832) total time=
[CV 2/5] END extra_trees=True, max_depth=2, reg_alpha=0.5;, score=(train=0.871,
test=0.864) total time=
                          1.5s
[CV 3/5] END extra_trees=True, max_depth=2, reg_alpha=0.5;, score=(train=0.886,
test=0.792) total time=
                          1.4s
[CV 4/5] END extra_trees=True, max_depth=2, reg_alpha=0.5;, score=(train=0.882,
test=0.798) total time=
                          1.5s
[CV 5/5] END extra_trees=True, max_depth=2, reg_alpha=0.5;, score=(train=0.874,
test=0.879) total time=
                          1.6s
[CV 1/5] END extra_trees=True, max_depth=2, reg_alpha=0.75;, score=(train=0.861,
test=0.824) total time=
[CV 2/5] END extra_trees=True, max_depth=2, reg_alpha=0.75;, score=(train=0.865,
test=0.872) total time=
                          1.7s
[CV 3/5] END extra_trees=True, max_depth=2, reg_alpha=0.75;, score=(train=0.892,
test=0.808) total time=
                          1.4s
[CV 4/5] END extra_trees=True, max_depth=2, reg_alpha=0.75;, score=(train=0.882,
test=0.798) total time=
                          1.5s
[CV 5/5] END extra_trees=True, max_depth=2, reg_alpha=0.75;, score=(train=0.872,
test=0.863) total time=
                          1.5s
[CV 1/5] END extra_trees=True, max_depth=2, reg_alpha=1.0;, score=(train=0.851,
test=0.832) total time=
                          1.5s
[CV 2/5] END extra_trees=True, max_depth=2, reg_alpha=1.0;, score=(train=0.865,
test=0.864) total time=
                          1.6s
[CV 3/5] END extra_trees=True, max_depth=2, reg_alpha=1.0;, score=(train=0.886,
test=0.800) total time=
[CV 4/5] END extra_trees=True, max_depth=2, reg_alpha=1.0;, score=(train=0.884,
test=0.790) total time=
                          1.5s
[CV 5/5] END extra_trees=True, max_depth=2, reg_alpha=1.0;, score=(train=0.868,
test=0.847) total time=
                          1.7s
[CV 1/5] END extra_trees=True, max_depth=3, reg_alpha=0.25;, score=(train=0.884,
test=0.856) total time=
                          2.2s
[CV 2/5] END extra_trees=True, max_depth=3, reg_alpha=0.25;, score=(train=0.896,
test=0.848) total time=
                          2.0s
```

```
[CV 3/5] END extra_trees=True, max_depth=3, reg_alpha=0.25;, score=(train=0.912,
                          2.3s
test=0.776) total time=
[CV 4/5] END extra_trees=True, max_depth=3, reg_alpha=0.25;, score=(train=0.908,
test=0.798) total time=
                          2.9s
[CV 5/5] END extra_trees=True, max_depth=3, reg_alpha=0.25;, score=(train=0.900,
test=0.887) total time=
                          2.5s
[CV 1/5] END extra_trees=True, max_depth=3, reg_alpha=0.5;, score=(train=0.873,
test=0.840) total time=
                          1.8s
[CV 2/5] END extra_trees=True, max_depth=3, reg_alpha=0.5;, score=(train=0.886,
test=0.848) total time=
                          1.9s
[CV 3/5] END extra_trees=True, max_depth=3, reg_alpha=0.5;, score=(train=0.904,
test=0.800) total time=
                          2.2s
[CV 4/5] END extra_trees=True, max_depth=3, reg_alpha=0.5;, score=(train=0.886,
test=0.815) total time=
                          2.0s
[CV 5/5] END extra_trees=True, max_depth=3, reg_alpha=0.5;, score=(train=0.880,
test=0.871) total time=
                          1.9s
[CV 1/5] END extra_trees=True, max_depth=3, reg_alpha=0.75;, score=(train=0.867,
test=0.816) total time=
                          1.8s
[CV 2/5] END extra_trees=True, max_depth=3, reg_alpha=0.75;, score=(train=0.873,
test=0.864) total time=
                          1.8s
[CV 3/5] END extra_trees=True, max_depth=3, reg_alpha=0.75;, score=(train=0.894,
test=0.768) total time=
                          2.4s
[CV 4/5] END extra_trees=True, max_depth=3, reg_alpha=0.75;, score=(train=0.886,
test=0.790) total time=
                          1.9s
[CV 5/5] END extra_trees=True, max_depth=3, reg_alpha=0.75;, score=(train=0.874,
test=0.863) total time=
                          2.0s
[CV 1/5] END extra_trees=True, max_depth=3, reg_alpha=1.0;, score=(train=0.865,
test=0.824) total time=
                          2.2s
[CV 2/5] END extra_trees=True, max_depth=3, reg_alpha=1.0;, score=(train=0.869,
test=0.872) total time=
                          1.7s
[CV 3/5] END extra_trees=True, max_depth=3, reg_alpha=1.0;, score=(train=0.888,
test=0.784) total time=
                          1.8s
[CV 4/5] END extra_trees=True, max_depth=3, reg_alpha=1.0;, score=(train=0.882,
test=0.806) total time=
                          1.9s
[CV 5/5] END extra_trees=True, max_depth=3, reg_alpha=1.0;, score=(train=0.872,
test=0.863) total time=
                          2.0s
[CV 1/5] END extra_trees=True, max_depth=4, reg_alpha=0.25;, score=(train=0.890,
test=0.848) total time=
                          2.4s
[CV 2/5] END extra_trees=True, max_depth=4, reg_alpha=0.25;, score=(train=0.902,
test=0.848) total time=
                          2.4s
[CV 3/5] END extra_trees=True, max_depth=4, reg_alpha=0.25;, score=(train=0.916,
test=0.776) total time=
                          2.3s
[CV 4/5] END extra_trees=True, max_depth=4, reg_alpha=0.25;, score=(train=0.902,
test=0.798) total time=
                          2.2s
[CV 5/5] END extra_trees=True, max_depth=4, reg_alpha=0.25;, score=(train=0.896,
test=0.879) total time=
                          2.2s
[CV 1/5] END extra_trees=True, max_depth=4, reg_alpha=0.5;, score=(train=0.873,
test=0.848) total time=
                          2.0s
```

```
[CV 2/5] END extra_trees=True, max_depth=4, reg_alpha=0.5;, score=(train=0.886,
                          2.0s
test=0.864) total time=
[CV 3/5] END extra_trees=True, max_depth=4, reg_alpha=0.5;, score=(train=0.900,
test=0.776) total time=
                          1.9s
[CV 4/5] END extra_trees=True, max_depth=4, reg_alpha=0.5;, score=(train=0.896,
test=0.798) total time=
                          2.3s
[CV 5/5] END extra_trees=True, max_depth=4, reg_alpha=0.5;, score=(train=0.882,
test=0.871) total time=
                          2.0s
[CV 1/5] END extra_trees=True, max_depth=4, reg_alpha=0.75;, score=(train=0.871,
test=0.840) total time=
                          1.9s
[CV 2/5] END extra_trees=True, max_depth=4, reg_alpha=0.75;, score=(train=0.876,
test=0.848) total time=
                          1.9s
[CV 3/5] END extra_trees=True, max_depth=4, reg_alpha=0.75;, score=(train=0.894,
test=0.792) total time=
                          1.9s
[CV 4/5] END extra_trees=True, max_depth=4, reg_alpha=0.75;, score=(train=0.888,
test=0.798) total time=
                          1.9s
[CV 5/5] END extra_trees=True, max_depth=4, reg_alpha=0.75;, score=(train=0.876,
test=0.871) total time=
                          1.9s
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test=0.832) total time=
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[CV 2/5] END extra_trees=True, max_depth=4, reg_alpha=1.0;, score=(train=0.878,
test=0.864) total time=
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test=0.792) total time=
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test=0.798) total time=
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test=0.871) total time=
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```

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test=0.806) total time=
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```

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[CV 5/5] END extra_trees=True, max_depth=6, reg_alpha=0.75;, score=(train=0.876,
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[CV 4/5] END extra_trees=True, max_depth=7, reg_alpha=0.75;, score=(train=0.890,
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score=(train=0.942, test=0.848) total time=
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test=0.798) total time=
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test=0.903) total time=
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score=(train=0.934, test=0.776) total time=
[CV 4/5] END extra_trees=False, max_depth=3, reg_alpha=0.75;,
score=(train=0.928, test=0.790) total time=
                                              2.3s
```

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[CV 5/5] END extra_trees=False, max_depth=3, reg_alpha=0.75;,
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test=0.856) total time=
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test=0.824) total time=
                          2.2s
[CV 3/5] END extra_trees=False, max_depth=3, reg_alpha=1.0;, score=(train=0.922,
test=0.776) total time=
                          2.4s
[CV 4/5] END extra_trees=False, max_depth=3, reg_alpha=1.0;, score=(train=0.920,
test=0.798) total time=
                          2.1s
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test=0.887) total time=
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test=0.816) total time=
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test=0.688) total time=
                          3.0s
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test=0.790) total time=
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test=0.887) total time=
                          3.1s
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                                              2.4s
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                                              3.5s
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test=0.800) total time=
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test=0.856) total time=
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test=0.712) total time=
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test=0.887) total time=
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test=0.856) total time=
                          3.0s
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test=0.840) total time=
                          3.3s
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test=0.728) total time=
                          2.8s
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test=0.782) total time=
                          2.9s
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test=0.887) total time=
                          3.4s
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[CV 2/5] END extra_trees=False, max_depth=6, reg_alpha=0.25;,
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```
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test=0.800) total time=
                          3.5s
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                          3.5s
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test=0.704) total time=
                          3.1s
[CV 4/5] END extra_trees=False, max_depth=6, reg_alpha=0.5;, score=(train=0.960,
test=0.798) total time=
                          3.3s
[CV 5/5] END extra_trees=False, max_depth=6, reg_alpha=0.5;, score=(train=0.952,
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test=0.790) total time=
                          2.9s
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test=0.879) total time=
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test=0.800) total time=
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```
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                          3.6s
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test=0.766) total time=
                          3.9s
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test=0.879) total time=
                          3.9s
```

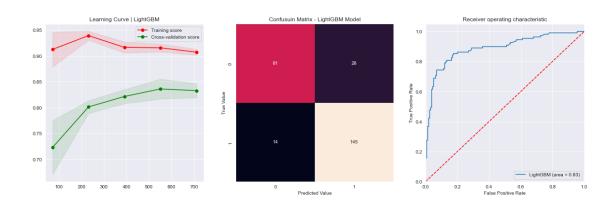
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                          3.2s
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test=0.790) total time=
                          3.2s
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                          3.4s
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                                              4.1s
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```

```
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                          2.9s
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                          3.1s
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                                              3.6s
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                                              3.6s
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                                              3.8s
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score=(train=0.952, test=0.887) total time=
                                              3.8s
[CV 1/5] END extra trees=False, max_depth=10, reg_alpha=0.75;,
score=(train=0.938, test=0.824) total time=
                                              3.6s
[CV 2/5] END extra trees=False, max depth=10, reg alpha=0.75;
score=(train=0.942, test=0.848) total time=
                                              3.3s
[CV 3/5] END extra_trees=False, max_depth=10, reg_alpha=0.75;,
score=(train=0.944, test=0.720) total time=
[CV 4/5] END extra_trees=False, max_depth=10, reg_alpha=0.75;,
score=(train=0.946, test=0.790) total time=
                                              3.4s
[CV 5/5] END extra_trees=False, max_depth=10, reg_alpha=0.75;,
score=(train=0.936, test=0.887) total time=
                                              3.7s
[CV 1/5] END extra_trees=False, max_depth=10, reg_alpha=1.0;,
score=(train=0.922, test=0.848) total time=
                                              3.3s
[CV 2/5] END extra_trees=False, max_depth=10, reg_alpha=1.0;,
score=(train=0.922, test=0.840) total time=
[CV 3/5] END extra_trees=False, max_depth=10, reg_alpha=1.0;,
score=(train=0.938, test=0.744) total time=
                                              3.0s
```

```
[CV 4/5] END extra_trees=False, max_depth=10, reg_alpha=1.0;,
    score=(train=0.928, test=0.774) total time=
    [CV 5/5] END extra_trees=False, max_depth=10, reg_alpha=1.0;,
    score=(train=0.920, test=0.887) total time=
                                                  3.7s
    LGBMClassifier(boosting type='dart', extra trees=False, learning rate=0.3,
                   max_depth=2, n_estimators=1000, num_leaves=40,
                   objective='binary', reg alpha=0.25, reg lambda=0.75) best
    hyperparameters are: {'extra_trees': False, 'max_depth': 2, 'reg_alpha': 0.25}
    with the accuracy of: 0.84
[]: # saving this version of model
     filename = f'Light GBM v2.0.pkl'
     pickle.dump(grid,open(f'{filename}', 'wb'))
     print(f'Model {filename} saved successfully!')
    Model Light GBM v2.0.pkl saved successfully!
[]: grid = pickle.load(open('Light GBM v2.0.pkl', 'rb'))
     grid.best_estimator_
[]: LGBMClassifier(boosting_type='dart', extra_trees=False, learning_rate=0.3,
                    max_depth=2, n_estimators=1000, num_leaves=40,
                    objective='binary', reg_alpha=0.25, reg_lambda=0.75)
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
     train_sizes, train_scores, test_scores, = learning_curve(grid.best_estimator_,_
     →X_valid, y_valid, train_sizes=np.linspace(.1, 1, 5))
     train_scores_mean = np.mean(train_scores, axis=1)
     train_scores_std = np.std(train_scores, axis=1)
     test_scores_mean = np.mean(test_scores, axis=1)
     test_scores_std = np.std(test_scores, axis=1)
     y_pred = grid.best_estimator_.predict(X_valid)
     cls_rep=classification_report(y_valid,y_pred)
     print(cls_rep)
     axes[0].fill between(train sizes, train scores mean - train scores std,
                         train_scores_mean + train_scores_std, alpha=0.1, color="r")
     axes[0].fill_between(train_sizes, test_scores_mean - test_scores_std,
                         test_scores_mean + test_scores_std, alpha=0.1, color="g")
     axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_"
     ⇔score")
     axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",__
     →label="Cross-validation score")
     axes[0].legend(loc="best")
     axes[0].set_title('Learning Curve | LightGBM')
```

```
cnf_matrix = confusion_matrix(y_valid, y_pred, labels=[1,0])
sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g',__
\rightarrowax=axes[1])
axes[1].set_xlabel('Predicted Value')
axes[1].set_ylabel('True Value')
axes[1].set_title('Confusuin Matrix - LightGBM Model')
logit_roc_auc = roc_auc_score(y_valid, grid.predict(X_valid))
fpr, tpr, thresholds = roc_curve(y_valid, grid.predict_proba(X_valid)[:,1],__
→pos_label=1)
axes[2].plot(fpr, tpr, label='LightGBM (area = %0.2f)' % logit_roc_auc)
axes[2].plot([0, 1], [0, 1], 'r--')
axes[2].set_xlim([0.0, 1.0])
axes[2].set_ylim([0.0, 1.05])
axes[2].set_xlabel('False Positive Rate')
axes[2].set_ylabel('True Positive Rate')
axes[2].set_title('Receiver operating characteristic')
axes[2].legend(loc="lower right")
plt.show()
```

	precision	recall	f1-score	support
0.0		0.91	0.87 0.79	159 109
1.0	0.65	0.74	0.19	109
accuracy	7		0.84	268
macro avg	g 0.85	0.83	0.83	268
weighted ave	0.84	0.84	0.84	268



```
[]: model = LGBMClassifier(boosting_type='dart', extra_trees=False, learning_rate=0.

→3, max_depth=2, n_estimators=1000, num_leaves=40,

objective='binary', reg_alpha=0.25, reg_lambda=0.75)
```

```
[ ]: params = {
         'min_child_samples': np.arange(30, 55, 5),
         'max_bin': np.arange(50, 300, 50)
     grid = GridSearchCV(model, param_grid=params, return_train_score=True, cv=5,_
     →verbose=3)
     grid.fit(X_train,y_train)
     print(f'{grid.best_estimator_} with the accuracy of: {grid.best_score_:.2f}')
    Fitting 5 folds for each of 25 candidates, totalling 125 fits
    [CV 1/5] END max_bin=50, min_child_samples=30;, score=(train=0.894, test=0.856)
                  1.9s
    total time=
    [CV 2/5] END max_bin=50, min_child_samples=30;, score=(train=0.908, test=0.848)
    total time=
                  1.4s
    [CV 3/5] END max_bin=50, min_child_samples=30;, score=(train=0.916, test=0.792)
                  1.4s
    total time=
    [CV 4/5] END max_bin=50, min_child_samples=30;, score=(train=0.910, test=0.798)
    total time=
    [CV 5/5] END max_bin=50, min_child_samples=30;, score=(train=0.898, test=0.887)
    total time=
                  1.7s
    [CV 1/5] END max_bin=50, min_child_samples=35;, score=(train=0.882, test=0.824)
    total time=
                  1.4s
    [CV 2/5] END max_bin=50, min_child_samples=35;, score=(train=0.896, test=0.832)
    total time=
    [CV 3/5] END max_bin=50, min_child_samples=35;, score=(train=0.914, test=0.800)
    total time=
    [CV 4/5] END max_bin=50, min_child_samples=35;, score=(train=0.908, test=0.806)
    total time=
                  1.8s
    [CV 5/5] END max_bin=50, min_child_samples=35;, score=(train=0.896, test=0.855)
                  1.5s
    total time=
    [CV 1/5] END max_bin=50, min_child_samples=40;, score=(train=0.878, test=0.800)
    total time=
    [CV 2/5] END max_bin=50, min_child_samples=40;, score=(train=0.890, test=0.840)
    total time=
    [CV 3/5] END max_bin=50, min_child_samples=40;, score=(train=0.918, test=0.792)
    total time=
                  1.5s
    [CV 4/5] END max_bin=50, min_child_samples=40;, score=(train=0.904, test=0.790)
    total time=
                  1.7s
    [CV 5/5] END max_bin=50, min_child_samples=40;, score=(train=0.888, test=0.855)
    total time=
    [CV 1/5] END max_bin=50, min_child_samples=45;, score=(train=0.876, test=0.824)
    total time=
                  1.5s
    [CV 2/5] END max_bin=50, min_child_samples=45;, score=(train=0.892, test=0.832)
    total time=
                  1.5s
    [CV 3/5] END max_bin=50, min_child_samples=45;, score=(train=0.906, test=0.792)
    total time=
    [CV 4/5] END max_bin=50, min_child_samples=45;, score=(train=0.910, test=0.782)
    total time=
                  1.6s
```

```
[CV 5/5] END max_bin=50, min_child_samples=45;, score=(train=0.886, test=0.863)
total time=
              1.5s
[CV 1/5] END max_bin=50, min_child_samples=50;, score=(train=0.880, test=0.848)
total time=
              1.7s
[CV 2/5] END max bin=50, min child samples=50;, score=(train=0.888, test=0.832)
total time=
[CV 3/5] END max bin=50, min child samples=50;, score=(train=0.908, test=0.792)
total time=
              1.6s
[CV 4/5] END max_bin=50, min_child_samples=50;, score=(train=0.912, test=0.782)
              1.8s
total time=
[CV 5/5] END max_bin=50, min_child_samples=50;, score=(train=0.890, test=0.863)
total time=
              1.6s
[CV 1/5] END max_bin=100, min_child_samples=30;, score=(train=0.892, test=0.856)
total time=
[CV 2/5] END max_bin=100, min_child_samples=30;, score=(train=0.906, test=0.856)
total time=
[CV 3/5] END max_bin=100, min_child_samples=30;, score=(train=0.928, test=0.808)
total time=
              1.7s
[CV 4/5] END max_bin=100, min_child_samples=30;, score=(train=0.914, test=0.798)
total time=
              1.6s
[CV 5/5] END max_bin=100, min_child_samples=30;, score=(train=0.900, test=0.871)
total time=
              1.8s
[CV 1/5] END max_bin=100, min_child_samples=35;, score=(train=0.882, test=0.832)
total time=
              1.7s
[CV 2/5] END max_bin=100, min_child_samples=35;, score=(train=0.896, test=0.840)
total time=
              2.0s
[CV 3/5] END max bin=100, min child samples=35;, score=(train=0.922, test=0.816)
total time=
              2.2s
[CV 4/5] END max bin=100, min child samples=35;, score=(train=0.908, test=0.790)
total time=
[CV 5/5] END max bin=100, min child samples=35;, score=(train=0.900, test=0.847)
total time=
[CV 1/5] END max_bin=100, min_child_samples=40;, score=(train=0.876, test=0.808)
total time=
              2.2s
[CV 2/5] END max bin=100, min child samples=40;, score=(train=0.900, test=0.824)
total time=
              1.9s
[CV 3/5] END max_bin=100, min_child_samples=40;, score=(train=0.916, test=0.816)
total time=
[CV 4/5] END max_bin=100, min_child_samples=40;, score=(train=0.910, test=0.790)
total time=
              1.9s
[CV 5/5] END max_bin=100, min_child_samples=40;, score=(train=0.884, test=0.839)
total time=
              1.9s
[CV 1/5] END max_bin=100, min_child_samples=45;, score=(train=0.882, test=0.848)
total time=
[CV 2/5] END max_bin=100, min_child_samples=45;, score=(train=0.888, test=0.840)
total time=
[CV 3/5] END max_bin=100, min_child_samples=45;, score=(train=0.912, test=0.824)
total time=
              2.5s
```

```
[CV 4/5] END max bin=100, min child samples=45;, score=(train=0.906, test=0.790)
total time=
              1.6s
[CV 5/5] END max_bin=100, min_child_samples=45;, score=(train=0.886, test=0.855)
total time=
              1.8s
[CV 1/5] END max_bin=100, min_child_samples=50;, score=(train=0.878, test=0.848)
total time=
[CV 2/5] END max bin=100, min child samples=50;, score=(train=0.890, test=0.840)
total time=
              1.8s
[CV 3/5] END max_bin=100, min_child_samples=50;, score=(train=0.916, test=0.808)
total time=
              1.6s
[CV 4/5] END max bin=100, min child samples=50;, score=(train=0.904, test=0.782)
total time=
              1.7s
[CV 5/5] END max_bin=100, min_child_samples=50;, score=(train=0.884, test=0.855)
total time=
[CV 1/5] END max_bin=150, min_child_samples=30;, score=(train=0.892, test=0.856)
total time=
              1.8s
[CV 2/5] END max_bin=150, min_child_samples=30;, score=(train=0.906, test=0.856)
total time=
              1.8s
[CV 3/5] END max_bin=150, min_child_samples=30;, score=(train=0.928, test=0.808)
total time=
              1.8s
[CV 4/5] END max_bin=150, min_child_samples=30;, score=(train=0.914, test=0.798)
total time=
              1.7s
[CV 5/5] END max_bin=150, min_child_samples=30;, score=(train=0.900, test=0.871)
total time=
              2.0s
[CV 1/5] END max_bin=150, min_child_samples=35;, score=(train=0.882, test=0.832)
              1.7s
total time=
[CV 2/5] END max bin=150, min child samples=35;, score=(train=0.896, test=0.840)
total time=
              2.5s
[CV 3/5] END max bin=150, min child samples=35;, score=(train=0.922, test=0.816)
total time=
[CV 4/5] END max bin=150, min child samples=35;, score=(train=0.908, test=0.790)
total time=
              1.7s
[CV 5/5] END max_bin=150, min_child_samples=35;, score=(train=0.900, test=0.847)
total time=
              1.7s
[CV 1/5] END max bin=150, min child samples=40;, score=(train=0.876, test=0.808)
total time=
              1.6s
[CV 2/5] END max_bin=150, min_child_samples=40;, score=(train=0.900, test=0.824)
total time=
              1.7s
[CV 3/5] END max_bin=150, min_child_samples=40;, score=(train=0.916, test=0.816)
              2.0s
total time=
[CV 4/5] END max_bin=150, min_child_samples=40;, score=(train=0.910, test=0.790)
total time=
              1.7s
[CV 5/5] END max_bin=150, min_child_samples=40;, score=(train=0.884, test=0.839)
total time=
[CV 1/5] END max_bin=150, min_child_samples=45;, score=(train=0.882, test=0.848)
total time=
[CV 2/5] END max_bin=150, min_child_samples=45;, score=(train=0.888, test=0.840)
total time=
              1.9s
```

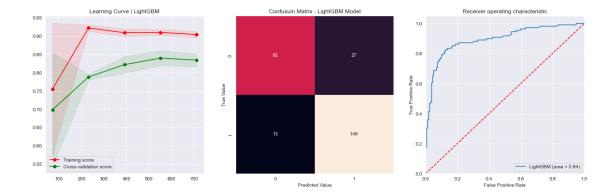
```
[CV 3/5] END max bin=150, min child samples=45;, score=(train=0.912, test=0.824)
total time=
              1.8s
[CV 4/5] END max_bin=150, min_child_samples=45;, score=(train=0.906, test=0.790)
total time=
              1.9s
[CV 5/5] END max_bin=150, min_child_samples=45;, score=(train=0.886, test=0.855)
total time=
              1.5s
[CV 1/5] END max bin=150, min child samples=50;, score=(train=0.878, test=0.848)
total time=
              1.4s
[CV 2/5] END max_bin=150, min_child_samples=50;, score=(train=0.890, test=0.840)
total time=
              1.6s
[CV 3/5] END max_bin=150, min_child_samples=50;, score=(train=0.916, test=0.808)
total time=
              1.6s
[CV 4/5] END max_bin=150, min_child_samples=50;, score=(train=0.904, test=0.782)
total time=
[CV 5/5] END max_bin=150, min_child_samples=50;, score=(train=0.884, test=0.855)
total time=
              1.4s
[CV 1/5] END max_bin=200, min_child_samples=30;, score=(train=0.892, test=0.856)
total time=
              1.7s
[CV 2/5] END max_bin=200, min_child_samples=30;, score=(train=0.906, test=0.856)
total time=
              1.7s
[CV 3/5] END max_bin=200, min_child_samples=30;, score=(train=0.928, test=0.808)
total time=
              1.6s
[CV 4/5] END max_bin=200, min_child_samples=30;, score=(train=0.914, test=0.798)
total time=
              1.7s
[CV 5/5] END max_bin=200, min_child_samples=30;, score=(train=0.900, test=0.871)
total time=
              1.8s
[CV 1/5] END max bin=200, min child samples=35;, score=(train=0.882, test=0.832)
total time=
              1.9s
[CV 2/5] END max bin=200, min child samples=35;, score=(train=0.896, test=0.840)
total time=
[CV 3/5] END max bin=200, min child samples=35;, score=(train=0.922, test=0.816)
total time=
[CV 4/5] END max_bin=200, min_child_samples=35;, score=(train=0.908, test=0.790)
total time=
              1.6s
[CV 5/5] END max bin=200, min child samples=35;, score=(train=0.900, test=0.847)
total time=
              1.6s
[CV 1/5] END max_bin=200, min_child_samples=40;, score=(train=0.876, test=0.808)
total time=
[CV 2/5] END max_bin=200, min_child_samples=40;, score=(train=0.900, test=0.824)
              1.4s
total time=
[CV 3/5] END max_bin=200, min_child_samples=40;, score=(train=0.916, test=0.816)
total time=
              1.7s
[CV 4/5] END max_bin=200, min_child_samples=40;, score=(train=0.910, test=0.790)
total time=
[CV 5/5] END max_bin=200, min_child_samples=40;, score=(train=0.884, test=0.839)
total time=
[CV 1/5] END max_bin=200, min_child_samples=45;, score=(train=0.882, test=0.848)
total time=
              1.6s
```

```
[CV 2/5] END max bin=200, min child samples=45;, score=(train=0.888, test=0.840)
total time=
              1.5s
[CV 3/5] END max_bin=200, min_child_samples=45;, score=(train=0.912, test=0.824)
total time=
              1.8s
[CV 4/5] END max_bin=200, min_child_samples=45;, score=(train=0.906, test=0.790)
total time=
[CV 5/5] END max bin=200, min child samples=45;, score=(train=0.886, test=0.855)
total time=
              1.4s
[CV 1/5] END max_bin=200, min_child_samples=50;, score=(train=0.878, test=0.848)
total time=
              1.7s
[CV 2/5] END max bin=200, min child samples=50;, score=(train=0.890, test=0.840)
total time=
              1.5s
[CV 3/5] END max bin=200, min child samples=50;, score=(train=0.916, test=0.808)
total time=
[CV 4/5] END max_bin=200, min_child_samples=50;, score=(train=0.904, test=0.782)
total time=
              1.4s
[CV 5/5] END max_bin=200, min_child_samples=50;, score=(train=0.884, test=0.855)
total time=
              1.6s
[CV 1/5] END max_bin=250, min_child_samples=30;, score=(train=0.892, test=0.856)
total time=
              1.6s
[CV 2/5] END max_bin=250, min_child_samples=30;, score=(train=0.906, test=0.856)
total time=
              1.4s
[CV 3/5] END max_bin=250, min_child_samples=30;, score=(train=0.928, test=0.808)
total time=
              1.9s
[CV 4/5] END max_bin=250, min_child_samples=30;, score=(train=0.914, test=0.798)
total time=
              1.6s
[CV 5/5] END max bin=250, min child samples=30;, score=(train=0.900, test=0.871)
total time=
              1.5s
[CV 1/5] END max bin=250, min child samples=35;, score=(train=0.882, test=0.832)
total time=
[CV 2/5] END max bin=250, min child samples=35;, score=(train=0.896, test=0.840)
total time=
[CV 3/5] END max_bin=250, min_child_samples=35;, score=(train=0.922, test=0.816)
total time=
[CV 4/5] END max bin=250, min child samples=35;, score=(train=0.908, test=0.790)
total time=
              1.4s
[CV 5/5] END max_bin=250, min_child_samples=35;, score=(train=0.900, test=0.847)
total time=
[CV 1/5] END max_bin=250, min_child_samples=40;, score=(train=0.876, test=0.808)
              1.4s
total time=
[CV 2/5] END max_bin=250, min_child_samples=40;, score=(train=0.900, test=0.824)
total time=
              1.4s
[CV 3/5] END max_bin=250, min_child_samples=40;, score=(train=0.916, test=0.816)
total time=
[CV 4/5] END max_bin=250, min_child_samples=40;, score=(train=0.910, test=0.790)
total time=
[CV 5/5] END max_bin=250, min_child_samples=40;, score=(train=0.884, test=0.839)
total time=
              1.5s
```

```
[CV 1/5] END max bin=250, min child samples=45;, score=(train=0.882, test=0.848)
    total time=
                  1.4s
    [CV 2/5] END max_bin=250, min_child_samples=45;, score=(train=0.888, test=0.840)
    total time=
    [CV 3/5] END max bin=250, min child samples=45;, score=(train=0.912, test=0.824)
    total time=
    [CV 4/5] END max bin=250, min child samples=45;, score=(train=0.906, test=0.790)
    total time=
    [CV 5/5] END max bin=250, min child samples=45;, score=(train=0.886, test=0.855)
    total time=
                  1.5s
    [CV 1/5] END max_bin=250, min_child_samples=50;, score=(train=0.878, test=0.848)
    total time=
    [CV 2/5] END max_bin=250, min_child_samples=50;, score=(train=0.890, test=0.840)
    total time=
    [CV 3/5] END max_bin=250, min_child_samples=50;, score=(train=0.916, test=0.808)
    total time=
    [CV 4/5] END max_bin=250, min_child_samples=50;, score=(train=0.904, test=0.782)
    total time=
    [CV 5/5] END max_bin=250, min_child_samples=50;, score=(train=0.884, test=0.855)
    total time=
    LGBMClassifier(boosting_type='dart', extra_trees=False, learning_rate=0.3,
                   max_bin=100, max_depth=2, min_child_samples=30,
                   n_estimators=1000, num_leaves=40, objective='binary',
                   reg_alpha=0.25, reg_lambda=0.75) with the accuracy of: 0.84
[]: # saving this version of model
     filename = f'Light GBM v3.0.pkl'
     pickle.dump(grid,open(f'{filename}', 'wb'))
     print(f'Model {filename} saved successfully!')
    Model Light GBM v3.0.pkl saved successfully!
[]: grid = pickle.load(open('Light GBM v3.0.pkl', 'rb'))
     grid.best_estimator_
[]: LGBMClassifier(boosting type='dart', extra trees=False, learning rate=0.3,
                    max_bin=100, max_depth=2, min_child_samples=30,
                    n_estimators=1000, num_leaves=40, objective='binary',
                    reg_alpha=0.25, reg_lambda=0.75)
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
     train_sizes, train_scores, test_scores, = learning_curve(grid.best_estimator_,_
     →X_valid, y_valid, train_sizes=np.linspace(.1, 1, 5))
     train_scores_mean = np.mean(train_scores, axis=1)
     train_scores_std = np.std(train_scores, axis=1)
     test_scores_mean = np.mean(test_scores, axis=1)
     test_scores_std = np.std(test_scores, axis=1)
```

```
y_pred = grid.best_estimator_.predict(X_valid)
cls_rep=classification_report(y_valid,y_pred)
print(cls_rep)
axes[0].fill_between(train_sizes, train_scores_mean - train_scores_std,
                    train_scores_mean + train_scores_std, alpha=0.1, color="r")
axes[0].fill_between(train_sizes, test_scores_mean - test_scores_std,
                    test_scores_mean + test_scores_std, alpha=0.1, color="g")
axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_"
⇔score")
axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",_
→label="Cross-validation score")
axes[0].legend(loc="best")
axes[0].set_title('Learning Curve | LightGBM')
cnf_matrix = confusion_matrix(y_valid, y_pred, labels=[1,0])
sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g',__
\rightarrowax=axes[1])
axes[1].set_xlabel('Predicted Value')
axes[1].set_ylabel('True Value')
axes[1].set_title('Confusuin Matrix - LightGBM Model')
logit_roc_auc = roc_auc_score(y_valid, grid.predict(X_valid))
fpr, tpr, thresholds = roc_curve(y_valid, grid.predict_proba(X_valid)[:,1],__
→pos_label=1)
axes[2].plot(fpr, tpr, label='LightGBM (area = %0.2f)' % logit_roc_auc)
axes[2].plot([0, 1], [0, 1], 'r--')
axes[2].set_xlim([0.0, 1.0])
axes[2].set_ylim([0.0, 1.05])
axes[2].set_xlabel('False Positive Rate')
axes[2].set_ylabel('True Positive Rate')
axes[2].set title('Receiver operating characteristic')
axes[2].legend(loc="lower right")
plt.show()
```

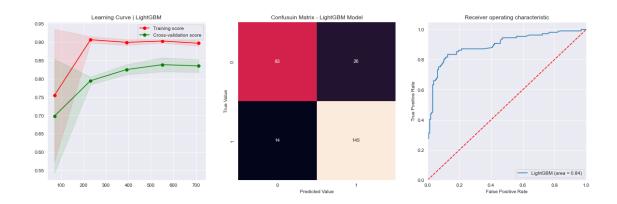
support	f1-score	recall	precision	
159	0.88	0.92	0.84	0.0
109	0.80	0.75	0.86	1.0
268	0.85			accuracy
268	0.84	0.84	0.85	macro avg
268	0.85	0.85	0.85	weighted avg



```
[]: model = LGBMClassifier(boosting_type='dart', extra_trees=False, learning_rate=0.
      ⇒3,
                    max_bin=100, max_depth=2, min_child_samples=30,_u
      →min_child_weight=.00001,
                    n_estimators=1000, objective='binary',
                    reg_alpha=0.25, reg_lambda=0.75)
[ ]: params = {
         'num_leaves': np.arange(2, 5, 1)
     grid = GridSearchCV(model, param_grid=params, return_train_score=True, cv=5,_
     →verbose=3)
     grid.fit(X_train,y_train)
     print(f'{grid.best_estimator_} with the accuracy of: {grid.best_score_:.2f}')
    Fitting 5 folds for each of 3 candidates, totalling 15 fits
    [CV 1/5] END ..num leaves=2;, score=(train=0.823, test=0.816) total time=
                                                                                 1.3s
    [CV 2/5] END ..num_leaves=2;, score=(train=0.827, test=0.848) total time=
                                                                                 0.9s
    [CV 3/5] END ..num_leaves=2;, score=(train=0.851, test=0.792) total time=
                                                                                 1.0s
    [CV 4/5] END ..num_leaves=2;, score=(train=0.856, test=0.806) total time=
                                                                                 1.1s
    [CV 5/5] END ..num leaves=2;, score=(train=0.844, test=0.806) total time=
                                                                                 0.9s
    [CV 1/5] END ..num_leaves=3;, score=(train=0.882, test=0.872) total time=
                                                                                 1.2s
    [CV 2/5] END ..num_leaves=3;, score=(train=0.900, test=0.864) total time=
                                                                                 1.3s
    [CV 3/5] END ..num_leaves=3;, score=(train=0.912, test=0.808) total time=
                                                                                 2.2s
    [CV 4/5] END ..num_leaves=3;, score=(train=0.906, test=0.815) total time=
                                                                                 1.4s
    [CV 5/5] END ..num leaves=3;, score=(train=0.896, test=0.871) total time=
                                                                                 1.5s
    [CV 1/5] END ..num_leaves=4;, score=(train=0.892, test=0.856) total time=
                                                                                 1.7s
    [CV 2/5] END ..num_leaves=4;, score=(train=0.906, test=0.856) total time=
                                                                                 1.5s
    [CV 3/5] END ..num_leaves=4;, score=(train=0.928, test=0.808) total time=
                                                                                 1.6s
    [CV 4/5] END ..num leaves=4;, score=(train=0.914, test=0.798) total time=
                                                                                 1.7s
    [CV 5/5] END ..num_leaves=4;, score=(train=0.900, test=0.871) total time=
                                                                                 1.5s
    LGBMClassifier(boosting type='dart', extra trees=False, learning rate=0.3,
                   max_bin=100, max_depth=2, min_child_samples=30,
                   min_child_weight=1e-05, n_estimators=1000, num_leaves=3,
```

```
objective='binary', reg_alpha=0.25, reg_lambda=0.75) with the
    accuracy of: 0.85
[]: # saving this version of model
     filename = f'Light GBM v4.0.pkl'
     pickle.dump(grid,open(f'{filename}', 'wb'))
     print(f'Model {filename} saved successfully!')
    Model Light GBM v4.0.pkl saved successfully!
[]: grid = pickle.load(open('Light GBM v4.0.pkl', 'rb'))
     grid.best_estimator_
[]: LGBMClassifier(boosting type='dart', extra trees=False, learning_rate=0.3,
                    max_bin=100, max_depth=2, min_child_samples=30,
                    min_child_weight=1e-05, n_estimators=1000, num_leaves=3,
                    objective='binary', reg_alpha=0.25, reg_lambda=0.75)
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
     train_sizes, train_scores, test_scores, = learning_curve(grid.best_estimator_,u
     →X_valid, y_valid, train_sizes=np.linspace(.1, 1, 5))
     train scores mean = np.mean(train scores, axis=1)
     train scores std = np.std(train scores, axis=1)
     test_scores_mean = np.mean(test_scores, axis=1)
     test_scores_std = np.std(test_scores, axis=1)
     y_pred = grid.best_estimator_.predict(X_valid)
     cls_rep=classification_report(y_valid,y_pred)
     print(cls_rep)
     axes[0].fill_between(train_sizes, train_scores_mean - train_scores_std,
                         train_scores_mean + train_scores_std, alpha=0.1, color="r")
     axes[0].fill_between(train_sizes, test_scores mean - test_scores std,
                         test_scores_mean + test_scores_std, alpha=0.1, color="g")
     axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_
     ⇔score")
     axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",_
     →label="Cross-validation score")
     axes[0].legend(loc="best")
     axes[0].set_title('Learning Curve | LightGBM')
     cnf_matrix = confusion_matrix(y_valid, y_pred, labels=[1,0])
     sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g',__
     \rightarrowax=axes[1])
     axes[1].set_xlabel('Predicted Value')
     axes[1].set_ylabel('True Value')
     axes[1].set_title('Confusuin Matrix - LightGBM Model')
```

	precision	recall	f1-score	support
0.0	0.85	0.91	0.88	159
1.0	0.86	0.76	0.81	109
2 COURT CH			0.85	268
accuracy macro avg	0.85	0.84	0.84	268
weighted avg	0.85	0.85	0.85	268



```
[]: model = LGBMClassifier(boosting_type='dart', extra_trees=False, learning_rate=0.

→3,

max_depth=2, min_child_weight=.00001, max_bin=60,

n_estimators=1000, objective='binary', num_leaves=3,

→path_smooth=5,

reg_alpha=0.25, reg_lambda=0.75)
```

```
[ ]: params = {
         'min_child_samples': np.arange(5, 35, 5)
     grid = GridSearchCV(model, param_grid=params, return_train_score=True, cv=5,__
     →verbose=3)
     grid.fit(X_train,y_train)
     print(f'{grid.best_estimator_} with the accuracy of: {grid.best_score_:.2f}')
    Fitting 5 folds for each of 6 candidates, totalling 30 fits
    [CV 1/5] END min_child_samples=5;, score=(train=0.890, test=0.848) total time=
    [CV 2/5] END min_child_samples=5;, score=(train=0.904, test=0.856) total time=
    [CV 3/5] END min child samples=5;, score=(train=0.926, test=0.800) total time=
    1.3s
    [CV 4/5] END min child samples=5;, score=(train=0.908, test=0.774) total time=
    1.7s
    [CV 5/5] END min_child_samples=5;, score=(train=0.904, test=0.863) total time=
    2.0s
    [CV 1/5] END min_child_samples=10;, score=(train=0.892, test=0.856) total time=
    1.3s
    [CV 2/5] END min_child_samples=10;, score=(train=0.910, test=0.864) total time=
    [CV 3/5] END min_child_samples=10;, score=(train=0.922, test=0.800) total time=
    1.7s
    [CV 4/5] END min_child_samples=10;, score=(train=0.902, test=0.798) total time=
    [CV 5/5] END min_child_samples=10;, score=(train=0.900, test=0.863) total time=
    [CV 1/5] END min_child_samples=15;, score=(train=0.892, test=0.856) total time=
    1.5s
    [CV 2/5] END min child samples=15;, score=(train=0.908, test=0.856) total time=
    1.4s
    [CV 3/5] END min child samples=15;, score=(train=0.914, test=0.792) total time=
    2.0s
    [CV 4/5] END min_child_samples=15;, score=(train=0.912, test=0.806) total time=
    [CV 5/5] END min_child_samples=15;, score=(train=0.896, test=0.863) total time=
    1.8s
    [CV 1/5] END min_child_samples=20;, score=(train=0.896, test=0.848) total time=
    [CV 2/5] END min_child_samples=20;, score=(train=0.902, test=0.864) total time=
    [CV 3/5] END min child samples=20;, score=(train=0.916, test=0.784) total time=
    1.5s
    [CV 4/5] END min_child_samples=20;, score=(train=0.916, test=0.815) total time=
    1.4s
    [CV 5/5] END min_child_samples=20;, score=(train=0.902, test=0.863) total time=
```

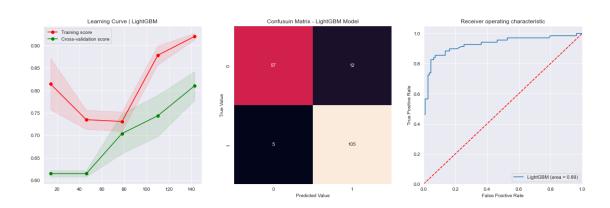
```
[CV 1/5] END min_child_samples=25;, score=(train=0.884, test=0.872) total time=
    1.5s
    [CV 2/5] END min_child_samples=25;, score=(train=0.900, test=0.848) total time=
    [CV 3/5] END min child samples=25;, score=(train=0.912, test=0.792) total time=
    [CV 4/5] END min child samples=25;, score=(train=0.906, test=0.815) total time=
    [CV 5/5] END min child samples=25;, score=(train=0.896, test=0.863) total time=
    1.8s
    [CV 1/5] END min_child_samples=30;, score=(train=0.884, test=0.864) total time=
    [CV 2/5] END min_child_samples=30;, score=(train=0.892, test=0.864) total time=
    [CV 3/5] END min_child_samples=30;, score=(train=0.912, test=0.808) total time=
    1.6s
    [CV 4/5] END min_child_samples=30;, score=(train=0.902, test=0.798) total time=
    [CV 5/5] END min child samples=30;, score=(train=0.898, test=0.871) total time=
    LGBMClassifier(boosting_type='dart', extra_trees=False, learning_rate=0.3,
                   max_bin=60, max_depth=2, min_child_samples=30,
                   min_child_weight=1e-05, n_estimators=1000, num_leaves=3,
                   objective='binary', path_smooth=5, reg_alpha=0.25,
                   reg_lambda=0.75) with the accuracy of: 0.84
[]: # saving this version of model
     filename = f'Light GBM v5.0.pkl'
     pickle.dump(grid,open(f'{filename}', 'wb'))
     print(f'Model {filename} saved successfully!')
    Model Light GBM v5.0.pkl saved successfully!
[]: grid = pickle.load(open('Light GBM v5.0.pkl', 'rb'))
     grid.best_estimator_
[]: LGBMClassifier(boosting type='dart', extra trees=False, learning rate=0.3,
                    max_bin=60, max_depth=2, min_child_samples=30,
                    min_child_weight=1e-05, n_estimators=1000, num_leaves=3,
                    objective='binary', path_smooth=5, reg_alpha=0.25,
                    reg_lambda=0.75)
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
     train sizes, train scores, test scores, = learning curve(grid.best estimator, ,,
     →X_valid, y_valid, train_sizes=np.linspace(.1, 1, 5))
     train_scores_mean = np.mean(train_scores, axis=1)
     train_scores_std = np.std(train_scores, axis=1)
```

1.4s

```
test_scores_mean = np.mean(test_scores, axis=1)
test_scores_std = np.std(test_scores, axis=1)
y_pred = grid.best_estimator_.predict(X_valid)
cls_rep=classification_report(y_valid,y_pred)
print(cls_rep)
axes[0].fill_between(train_sizes, train_scores_mean - train_scores_std,
                    train_scores_mean + train_scores_std, alpha=0.1, color="r")
axes[0].fill_between(train_sizes, test_scores_mean - test_scores_std,
                    test_scores_mean + test_scores_std, alpha=0.1, color="g")
axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_"
→score")
axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",__
→label="Cross-validation score")
axes[0].legend(loc="best")
axes[0].set_title('Learning Curve | LightGBM')
cnf_matrix = confusion_matrix(y_valid, y_pred, labels=[1,0])
sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g',__
\rightarrowax=axes[1])
axes[1].set xlabel('Predicted Value')
axes[1].set_ylabel('True Value')
axes[1].set_title('Confusuin Matrix - LightGBM Model')
logit_roc_auc = roc_auc_score(y_valid, grid.predict(X_valid))
fpr, tpr, thresholds = roc_curve(y_valid, grid.predict_proba(X_valid)[:,1],__
→pos_label=1)
axes[2].plot(fpr, tpr, label='LightGBM (area = %0.2f)' % logit_roc_auc)
axes[2].plot([0, 1], [0, 1], 'r--')
axes[2].set_xlim([0.0, 1.0])
axes[2].set ylim([0.0, 1.05])
axes[2].set_xlabel('False Positive Rate')
axes[2].set ylabel('True Positive Rate')
axes[2].set_title('Receiver operating characteristic')
axes[2].legend(loc="lower right")
plt.show()
```

support	f1-score	recall	precision	
110	0.93	0.95	0.90	0.0
69	0.87	0.83	0.92	1.0
179	0.91			accuracy
179	0.90	0.89	0.91	macro avg

weighted avg 0.91 0.91 0.90 179



## 13 SGD Classifier

```
[]: from sklearn.linear_model import SGDClassifier
```

Fitting 5 folds for each of 864 candidates, totalling 4320 fits
[CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.712, test=0.713) total time= 0.0s
[CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.707, test=0.720) total time= 0.0s
[CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.391, test=0.423) total time= 0.0s
[CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.696, test=0.613) total time= 0.0s
[CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.414, test=0.437) total time= 0.0s
[CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge,

penalty=12, shuffle=False;, score=(train=0.622, test=0.622) total time= 0.0s [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.712, test=0.720) total time= 0.0s [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.693, test=0.711) total time= 0.0s [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.653, test=0.648) total time= [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.687, test=0.776) total time= 0.0s [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.775, test=0.748) total time= [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.725, test=0.746) total time= [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.819, test=0.732) total time= 0.0s [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.411, test=0.423) total time= 0.0s [CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.649, test=0.657) total time= [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.735, test=0.720) total time= [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.732, test=0.718) total time= 0.0s [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.737, test=0.683) total time= [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.618, test=0.620) total time= [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.425, test=0.490) total time=

[CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.673, test=0.685) total time= 0.0s

[CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.625, test=0.613) total time= 0.0s

[CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s

[CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.723, test=0.754) total time= 0.0s

[CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.735, test=0.776) total time=0.0s

[CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge,

penalty=elasticnet, shuffle=False;, score=(train=0.699, test=0.706) total time= 0.0s [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.728, test=0.746) total time= 0.0s [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.630, test=0.627) total time= 0.0s [CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.692, test=0.713) total time= [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.736, test=0.727) total time= [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.784, test=0.796) total time= 0.0s [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.772, test=0.634) total time= 0.0s [CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.781, test=0.803) total time= [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.715, test=0.769) total time= [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.654, test=0.671) total time= 0.0s [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.718, test=0.725) total time= 0.0s [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.723, test=0.704) total time= 0.0s [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.757, test=0.685) total time= [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.740, test=0.725) total time= [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.708, test=0.713) total time= 0.0s [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.780, test=0.762) total time= 0.0s [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.705, test=0.718) total time= 0.0s [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log,

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penalty=11, shuffle=False;, score=(train=0.782, test=0.718) total time= 0.0s [CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.761, test=0.881) total time= 0.0s [CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=log, penalty=elasticnet, shuffle=True, score=(train=0.752, test=0.685) total time= 0.0s [CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=log, penalty=elasticnet, shuffle=True, score=(train=0.752, test=0.685) total time= 0.0s [CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=log, penalty=elasticnet, shuffle=True, score=(train=0.752, test=0.685) total time= 0.0s [CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=log, penalty=elasticnet, shuffle=True, score=(train=0.752, test=0.685) total time= 0.0s [CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=log, penalty=elasticnet, shuffle=True, score=(train=0.752, test=0.685) total time= 0.0s [CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=log, penalty=elasticnet, shuffle=True, score=(train=0.752, test=0.685) total time= 0.0s [CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=log, penalty=elasticnet, shuffle=True, score=(train=0.752, test=0.685) total time= 0.0s [CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=log, penalty=elasticnet, shuffle=True, score=(train=0.752, test=0.685) total time= 0.0s [CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, score=(train=0.752, test=0.685) total time= 0.0s [CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, fit_intercept=True, fit_intercept=True, fit_intercept=True, fit_intercept=True, fit_intercept=True, fit_intercept=True, fit_intercept=True, fit_intercept=True, fit_intercept=True,
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- penalty=elasticnet, shuffle=True;, score=(train=0.752, test=0.685) total time= 0.0s
- [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.751, test=0.711) total time= 0.0s
- [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.677, test=0.690) total time= 0.0s
- [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.696, test=0.776) total time= 0.0s
- [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.684, test=0.692) total time= 0.0s
- [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.726, test=0.732) total time= 0.0s
- [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.674, test=0.683) total time= 0.0s
- [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s
- [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.455, test=0.469) total time= 0.0s
- [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.678, test=0.720) total time= 0.0s
- [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.754, test=0.732) total time= 0.0s
- [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.681, test=0.669) total time= 0.0s
- [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.637, test=0.655) total time= 0.0s

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[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.617, test=0.615)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.722, test=0.734)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.718, test=0.718)
total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.386, test=0.380)
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.712, test=0.706)
            0.0s
total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.807, test=0.783)
total time=
            0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.775, test=0.775)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.500, test=0.521)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.651, test=0.648)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.733, test=0.776)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.705, test=0.678)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.732, test=0.732)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.786, test=0.711)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.409,
test=0.469) total time=
                          0.0s
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[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.731,
test=0.720) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.784,
                         0.0s
test=0.789) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.760,
test=0.648) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.747,
test=0.768) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.721,
test=0.748) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.747,
test=0.720) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.721,
test=0.718) total time=
                        0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.723,
test=0.711) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.774,
test=0.803) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.634, test=0.657)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.721, test=0.725)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.614, test=0.634)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.735, test=0.739)
              0.0s
total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.626, test=0.615)
total time=
             0.0s
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[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.667, test=0.641)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.461, test=0.444)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
             0.0s
total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.450, test=0.510)
             0.0s
total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.411, test=0.406)
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.744, test=0.746)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.732, test=0.718)
            0.0s
total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.742, test=0.754)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.779, test=0.797)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.793, test=0.734)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.739, test=0.746)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.751, test=0.718)
total time=
            0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.689,
test=0.713) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.636,
test=0.657) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.725,
test=0.718) total time=
                          0.0s
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[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.753,
test=0.648) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.725,
test=0.711) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.691,
test=0.699) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.698,
test=0.692) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.732,
test=0.725) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.456,
test=0.444) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.724, test=0.762)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.631, test=0.608)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.618, test=0.613)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.639, test=0.634)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.618, test=0.620)
             0.0s
total time=
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.517, test=0.566)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.689, test=0.692)
              0.0s
total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.698, test=0.725)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.730, test=0.690)
total time=
             0.0s
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[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.617, test=0.615)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.819, test=0.734)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.654, test=0.641)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.689, test=0.718)
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.754, test=0.746)
total time=
            0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.397, test=0.427)
total time=
            0.0s
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.794, test=0.762)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.796, test=0.796)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.768, test=0.697)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.675, test=0.648)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.689,
test=0.706) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.383,
test=0.385) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.781,
test=0.775) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.714,
test=0.697) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.721,
test=0.676) total time=
                          0.0s
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[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.699,
test=0.699) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.712,
test=0.713) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.386,
test=0.394) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.679,
test=0.704) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=True;, score=(train=0.378, test=0.378)
            0.0s
total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.407, test=0.408)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.305, test=0.352)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.663, test=0.720)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.325, test=0.329)
total time=
            0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.361, test=0.373)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.384, test=0.380)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.650, test=0.629)
total time=
             0.0s
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[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.385, test=0.406)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=True;, score=(train=0.644, test=0.627)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=True;, score=(train=0.658, test=0.577)
total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.598, test=0.606)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.671, test=0.713)
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.383, test=0.385)
total time=
            0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.568, test=0.606)
            0.0s
total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.675, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.448,
test=0.420) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.384,
test=0.380) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.368,
test=0.401) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.617,
test=0.615) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.583,
test=0.608) total time=
                          0.0s
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[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.382,
test=0.387) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.688,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time=
                                                                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.384, test=0.380) total time=
                                                                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.384, test=0.380) total time=
                                                                         0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.313, test=0.315) total time=
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.580, test=0.587) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.618, test=0.613) total time=
                                                                           0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.658, test=0.620) total time=
                                                                           0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.600, test=0.606) total time=
                                                                           0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.622, test=0.671) total time=
                                                                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.409, test=0.392) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.382, test=0.394) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.561, test=0.577) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.393, test=0.380) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=False;, score=(train=0.661, test=0.706) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=False;, score=(train=0.624, test=0.608) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=False;, score=(train=0.412, test=0.345) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True, loss=huber,
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- penalty=11, shuffle=False;, score=(train=0.384, test=0.380) total time= 0.0s [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.348, test=0.301) total time= 0.0s
- [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.688, test=0.655) total time= 0.0s
- [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.384, test=0.380) total time= 0.0s
- [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.636, test=0.622) total time= 0.0s
- [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.383, test=0.385) total time=0.0s
- [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.642, test=0.655) total time= 0.0s
- [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.425, test=0.472) total time= 0.0s
- [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.384, test=0.380) total time= 0.0s
- [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.327, test=0.273) total time= 0.0s
- [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.599, test=0.601) total time= 0.0s
- [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.382, test=0.387) total time= 0.0s
- [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.442, test=0.430) total time= 0.0s
- [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.498, test=0.493) total time= 0.0s
- [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=False;, score=(train=0.383,

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test=0.385) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                        0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.686,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.677,
test=0.699) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.397,
test=0.399) total time=
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.412,
test=0.437) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.363,
test=0.366) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.562,
test=0.573) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.382,
test=0.387) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                        0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.594,
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test=0.601) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.533,
test=0.521) total time=
                        0.0s
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.356,
test=0.380) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.383, test=0.385) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.682, test=0.683) total time=
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.606,
test=0.622) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.402,
test=0.401) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.311,
test=0.380) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.439, test=0.427) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.387, test=0.385) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
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score=(train=0.612, test=0.613) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.332, test=0.352) total time=
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.400, test=0.394) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.376,
test=0.385) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.671,
test=0.671) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.382,
test=0.387) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.602,
test=0.599) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.353,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=l1, shuffle=False;,
score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.616, test=0.620) total time= 0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.388, test=0.392) total time=
                                             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.383, test=0.385) total time=
                                              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.677, test=0.697) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
```

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score=(train=0.326, test=0.338) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.384, test=0.380) total time=
                                              0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.383, test=0.343) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.336, test=0.294) total time=
                                              0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.664, test=0.734) total time=
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.480, test=0.441) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.795, test=0.718) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.712, test=0.746) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.738, test=0.783) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
                                                                          0.0s
penalty=12, shuffle=False;, score=(train=0.685, test=0.685) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.733, test=0.725) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.744, test=0.732) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.768, test=0.782) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.620, test=0.643) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.670, test=0.643) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.418, test=0.415) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.670, test=0.648) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
```

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penalty=11, shuffle=True;, score=(train=0.698, test=0.690) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.757, test=0.762) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.772, test=0.734) total time=
                                                                          0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.689, test=0.655) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.775, test=0.768) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=elasticnet, shuffle=True;, score=(train=0.743, test=0.769) total time=
0.0s
```

[CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.385, test=0.371) total time= 0.0s

[CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.433, test=0.415) total time= 0.0s

[CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s

[CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.682, test=0.669) total time= 0.0s

[CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.617, test=0.615) total time= 0.0s

[CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.506, test=0.476) total time= 0.0s

[CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.742, test=0.725) total time= 0.0s

[CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.730, test=0.732) total time= 0.0s

[CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s

[CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.687, test=0.706) total time= 0.0s [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.627, test=0.622) total time= 0.0s [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.740, test=0.754) total time= 0.0s [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log,

penalty=12, shuffle=True;, score=(train=0.456, test=0.465) total time= [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.647, test=0.620) total time= [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.411, test=0.455) total time= [CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.708, test=0.699) total time= [CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.712, test=0.725) total time= [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.405, test=0.394) total time= 0.0s [CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.784, test=0.811) total time= [CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.698, test=0.692) total time= 0.0s [CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.739, test=0.739) total time= 0.0s [CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.686, test=0.704) total time= [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.735, test=0.775) total time= [CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.786, test=0.790) total time= [CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.789, test=0.734) total time= [CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.698, test=0.690) total time= [CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.684, test=0.704) total time= 0.0s [CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.487, test=0.531) total time= 0.0s

[CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.417, test=0.385) total time= 0.0s

[CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.696, test=0.697) total time= 0.0s

[CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.705, test=0.676) total time= 0.0s

[CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.714, test=0.683) total time= 0.0s

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[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.420, test=0.476) total time=
0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.772, test=0.748) total time=
0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.749, test=0.739) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.635, test=0.634) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.663, test=0.671)
total time=
            0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.385, test=0.378)
total time=
            0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.756, test=0.768)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.718, test=0.648)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.742, test=0.768)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.633, test=0.629)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.439, test=0.413)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.686, test=0.662)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.730, test=0.711)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.726, test=0.818)
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total time=

0.0s

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[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.724, test=0.713)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.582, test=0.599)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.775, test=0.746)
total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.788, test=0.817)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.749, test=0.755)
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.420, test=0.406)
            0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.789, test=0.796)
total time=
            0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.733, test=0.690)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.729,
test=0.699) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.716,
test=0.704) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.811,
test=0.746) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.768,
test=0.796) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.675,
test=0.671) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.747,
test=0.720) total time=
                          0.0s
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[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.642,
test=0.556) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.742,
test=0.704) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.654, test=0.685)
             0.0s
total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.731, test=0.699)
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.644, test=0.662)
             0.0s
total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.768, test=0.697)
            0.0s
total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.744, test=0.782)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.726, test=0.769)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.675, test=0.671)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.718, test=0.725)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.695, test=0.711)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.408, test=0.462)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.606, test=0.573)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.765, test=0.775)
total time=
             0.0s
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[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.633, test=0.592)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.712, test=0.676)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.664, test=0.734)
             0.0s
total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.722, test=0.664)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.763, test=0.739)
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.707, test=0.739)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
            0.0s
total time=
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.647,
test=0.720) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.436,
test=0.371) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.674,
test=0.641) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.767,
test=0.761) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.788,
test=0.803) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.703,
test=0.713) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.413,
test=0.406) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.732,
test=0.725) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.723,
test=0.662) total time=
                          0.0s
```

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[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.605, test=0.615)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.617, test=0.615)
             0.0s
total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.786, test=0.789)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.795, test=0.768)
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.611, test=0.613)
total time=
            0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.714, test=0.748)
            0.0s
total time=
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.626, test=0.615)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.707, test=0.718)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.677, test=0.690)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.665, test=0.655)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.796, test=0.846)
             0.0s
total time=
[CV 2/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.793, test=0.748)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.791, test=0.796)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.670, test=0.592)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.737, test=0.754)
```

total time=

0.0s

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[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.787, test=0.797)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.710, test=0.671)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.725, test=0.711)
total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.707, test=0.655)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.687,
test=0.706) total time=
                        0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.703,
test=0.734) total time=
                        0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.668,
test=0.662) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.723,
test=0.648) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.714,
test=0.690) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.721,
test=0.755) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.701,
test=0.685) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.614,
test=0.606) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.496,
test=0.507) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.559, test=0.573)
total time=
             0.0s
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[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.323, test=0.252)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.632, test=0.627)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.389, test=0.437)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.596, test=0.599)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.344, test=0.280)
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.323, test=0.280)
            0.0s
total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.618, test=0.613)
            0.0s
total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.663, test=0.692)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=True;, score=(train=0.382, test=0.387)
total time=
            0.0s
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.386, test=0.380)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.323, test=0.359)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.399, test=0.357)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.325, test=0.308)
total time=
             0.0s
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[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.618, test=0.613)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.671,
test=0.671) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.476,
test=0.462) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.583,
test=0.594) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.618,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.664, test=0.699) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.677, test=0.697) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
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penalty=12, shuffle=True;, score=(train=0.312, test=0.359) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.383, test=0.385) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.631, test=0.664) total time=
                                                                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.619, test=0.620) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.684, test=0.669) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time=
                                                                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.413, test=0.378) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.385, test=0.406) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.653, test=0.641) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.625, test=0.570) total time=
                                                                         0.0s
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.637, test=0.627) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.617, test=0.608) total time=
                                                                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.382, test=0.387) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.325, test=0.310) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=True;, score=(train=0.388, test=0.392) total time=
0.0s
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[CV 2/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.383, test=0.385) total time= 0.0s

[CV 3/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.311, test=0.296) total time= 0.0s

[CV 4/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.604, test=0.599) total time= 0.0s

[CV 5/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s

[CV 1/5] END alpha=0.0001, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.592, test=0.629) total time=

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0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.401, test=0.399) total time=
0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.398, test=0.387) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.665, test=0.620) total time=
0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.384, test=0.380) total time=
0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.383,
test=0.385) total time=
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.611,
test=0.606) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.314,
test=0.352) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.327,
test=0.315) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.711,
test=0.725) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.609,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.322,
test=0.308) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
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loss=epsilon\_insensitive, penalty=11, shuffle=True;, score=(train=0.557,

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test=0.566) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.318,
test=0.310) total time=
                        0.0s
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.376,
test=0.336) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.335,
test=0.310) total time=
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.688,
test=0.627) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.679,
test=0.648) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.624,
test=0.657) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.684,
test=0.676) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.419,
test=0.408) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.535,
test=0.563) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.673, test=0.741) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
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score=(train=0.382, test=0.387) total time=
                                            0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.397,
test=0.413) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.592,
test=0.601) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.340,
test=0.338) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.600,
test=0.542) total time=
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.666, test=0.713) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.428, test=0.451) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.314, test=0.345) total time=
[CV 5/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.609, test=0.620) total time=
[CV 1/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.383,
test=0.392) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.654,
test=0.685) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.684,
test=0.683) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.314,
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test=0.352) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.383, test=0.385) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.381, test=0.364) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.333, test=0.324) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.312, test=0.324) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.664, test=0.713) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.645, test=0.692) total time=
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.333, test=0.345) total time=
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.688, test=0.669) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.600, test=0.606) total time=
[CV 1/5] END alpha=0.0001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.594, test=0.629) total time=
[CV 2/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.327, test=0.273) total time=
                                              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.681, test=0.683) total time=
                                              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.309, test=0.345) total time=
[CV 5/5] END alpha=0.0001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
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score=(train=0.616, test=0.620) total time=
                                              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.710, test=0.790) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.427, test=0.406) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.814, test=0.789) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.770, test=0.641) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.770, test=0.789) total time=
                                                                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.745, test=0.825) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.728, test=0.699) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.740, test=0.754) total time=
                                                                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.746, test=0.662) total time=
                                                                          0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.628, test=0.662) total time=
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.807, test=0.839) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.649, test=0.566) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.809, test=0.796) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.814, test=0.796) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.807, test=0.824) total time=
                                                                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.717, test=0.797) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.742, test=0.727) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.761, test=0.725) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.800, test=0.739) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.788, test=0.824) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=elasticnet, shuffle=True;, score=(train=0.770, test=0.853) total time=
0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=elasticnet, shuffle=True;, score=(train=0.636, test=0.608) total time=
0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=hinge,
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penalty=elasticnet, shuffle=True;, score=(train=0.646, test=0.613) total time= 0.0s

[CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.651, test=0.641) total time= 0.0s

[CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.682, test=0.690) total time= 0.0s

[CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.736, test=0.818) total time= 0.0s

[CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.770, test=0.741) total time= 0.0s

[CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.730, test=0.754) total time= 0.0s

[CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.779, test=0.704) total time= 0.0s

[CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.653, test=0.669) total time= 0.0s

[CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.663, test=0.671) total time= 0.0s [CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.677, test=0.622) total time= [CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.791, test=0.803) total time= [CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.777, test=0.669) total time= 0.0s [CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.386, test=0.380) total time= 0.0s [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.673, test=0.741) total time= [CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.752, test=0.727) total time= [CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.756, test=0.754) total time= [CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.775, test=0.704) total time= [CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.635, test=0.662) total time= [CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.759, test=0.839) total time= 0.0s [CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.817, test=0.734) total time= [CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=log,

- penalty=11, shuffle=True;, score=(train=0.788, test=0.761) total time= [CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.786, test=0.718) total time= 0.0s [CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.767, test=0.796) total time= [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.724, test=0.804) total time= [CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.699, test=0.671) total time= [CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.814, test=0.761) total time= 0.0s [CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.718, test=0.690) total time= [CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.795, test=0.838) total time= [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.620, test=0.629) total time= 0.0s
- [CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.777, test=0.748) total time= 0.0s
- [CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.805, test=0.789) total time= 0.0s
- [CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.782, test=0.739) total time= 0.0s
- [CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.726, test=0.711) total time= 0.0s
- [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.707, test=0.776) total time= 0.0s
- [CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.740, test=0.706) total time= 0.0s
- [CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.705, test=0.683) total time= 0.0s
- [CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.732, test=0.648) total time= 0.0s
- [CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.672, test=0.704) total time= 0.0s
- [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.717, test=0.748) total time= 0.0s

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[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.826, test=0.755)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.809, test=0.817)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.388, test=0.423)
total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.695, test=0.648)
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.719, test=0.790)
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.780, test=0.748)
            0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.753, test=0.768)
total time=
            0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.632, test=0.634)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.630, test=0.641)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.801, test=0.860)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.805, test=0.776)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.795, test=0.782)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.628, test=0.648)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.786, test=0.831)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.699, test=0.748)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.708, test=0.671)
total time=
             0.0s
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[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.807, test=0.754)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.788, test=0.711)
total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.774, test=0.831)
total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.735,
test=0.734) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.743,
test=0.706) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.723,
test=0.704) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.816,
test=0.746) total time=
                        0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.653,
test=0.662) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.717,
test=0.797) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.775,
test=0.741) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.711,
test=0.704) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.746,
test=0.669) total time=
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.693,
test=0.711) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.689, test=0.776)
              0.0s
total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.822, test=0.769)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.658, test=0.634)
total time=
              0.0s
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[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.577, test=0.620)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.674, test=0.732)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.687, test=0.748)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.663, test=0.657)
             0.0s
total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.704, test=0.683)
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.753, test=0.676)
             0.0s
total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.677, test=0.704)
            0.0s
total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.754, test=0.860)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.826, test=0.769)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.742, test=0.718)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.779, test=0.697)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.802, test=0.824)
total time=
            0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.694, test=0.748)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.736, test=0.713)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.732, test=0.711)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.721, test=0.676)
total time=
             0.0s
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[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.781, test=0.817)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.675,
test=0.741) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.719,
test=0.671) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.700,
test=0.683) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.768,
test=0.739) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.774,
test=0.824) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.743,
test=0.818) total time=
                        0.0s
[CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.738,
test=0.706) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.695,
test=0.669) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.663,
test=0.648) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.681,
test=0.704) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.511, test=0.545)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.659, test=0.622)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.767, test=0.754)
              0.0s
total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.675, test=0.669)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.625, test=0.620)
total time=
             0.0s
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[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.745, test=0.811)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.768, test=0.734)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.740, test=0.754)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.681, test=0.683)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.635, test=0.662)
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.670, test=0.678)
total time=
            0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.736, test=0.685)
            0.0s
total time=
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.809, test=0.775)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.751, test=0.775)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.796, test=0.831)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.710, test=0.762)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.701, test=0.678)
             0.0s
total time=
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.819, test=0.761)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.804, test=0.739)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.767, test=0.803)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.413,
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0.0s

test=0.441) total time=

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[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.794,
test=0.769) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.637,
test=0.627) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.814,
test=0.789) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.781,
test=0.796) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.714,
test=0.776) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.777,
test=0.734) total time=
                        0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.716,
test=0.718) total time=
                        0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.691,
test=0.683) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.672,
test=0.704) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.327, test=0.287)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=True;, score=(train=0.382, test=0.387)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.614, test=0.620)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.384, test=0.380)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.617, test=0.615)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.659, test=0.692)
total time=
             0.0s
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[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.649, test=0.634)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.384, test=0.380)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.384, test=0.380)
total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.670, test=0.727)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.336, test=0.301)
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.595, test=0.592)
total time=
            0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=True;, score=(train=0.311, test=0.366)
            0.0s
total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.346, test=0.322)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.333, test=0.366)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
            0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.663,
test=0.671) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.424,
test=0.448) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.328,
test=0.317) total time=
                          0.0s
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[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.380,
test=0.350) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.592,
test=0.622) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.651,
test=0.648) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.647,
test=0.585) total time=
                        0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.599, test=0.601) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.339, test=0.338) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.384, test=0.380) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.311, test=0.345) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
                                                                          0.0s
penalty=12, shuffle=False;, score=(train=0.691, test=0.748) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.636, test=0.636) total time=
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.382, test=0.387) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.728, test=0.641) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.615, test=0.608) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.615, test=0.594) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.416, test=0.437) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True, loss=huber,
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- penalty=11, shuffle=True;, score=(train=0.696, test=0.620) total time= [CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.681, test=0.641) total time= 0.0s [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.395, test=0.413) total time= 0.0s [CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.817, test=0.748) total time= [CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.618, test=0.613) total time= [CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.400, test=0.394) total time= [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.332, test=0.315) total time= 0.0s
- [CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s
- [CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.384, test=0.380) total time= 0.0s
- [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.680, test=0.601) total time= 0.0s
- [CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.618, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.751, test=0.746) total time= 0.0s
- [CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.400, test=0.394) total time= 0.0s
- [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.659, test=0.713) total time= 0.0s
- [CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.633,

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test=0.664) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.330,
test=0.303) total time=
                        0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.384,
test=0.380) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.309,
test=0.359) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.401,
test=0.357) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.404,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.421,
test=0.401) total time=
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.600,
test=0.606) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.612,
test=0.608) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.385,
test=0.406) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.321,
test=0.324) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.354,
test=0.387) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.609,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.666,
test=0.678) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.401,
test=0.392) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.618,
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test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.391,
test=0.380) total time=
                        0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.600,
test=0.606) total time=
                        0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.373,
test=0.392) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.406,
test=0.357) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.386,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.341, test=0.273) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.397, test=0.371) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.328, test=0.303) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.323, test=0.380) total time=
                                              0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.404, test=0.394) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.610,
test=0.594) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
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test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.383, test=0.385) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.664, test=0.692) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.623, test=0.627) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.695, test=0.620) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.619,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.617,
test=0.615) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.588,
test=0.585) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.335,
test=0.366) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
                                              0.0s
score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.382, test=0.387) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.305, test=0.380) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
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score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.332, test=0.308) total time=
[CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.670, test=0.669) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.484, test=0.465) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.382, test=0.380) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.622, test=0.657) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.391, test=0.352) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=12, shuffle=True;, score=(train=0.728, test=0.706) total
       0.0s
time=
[CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=hinge, penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total
       0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=12, shuffle=True;, score=(train=0.660, test=0.570) total
       0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=12, shuffle=True;, score=(train=0.816, test=0.739) total
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=12, shuffle=True;, score=(train=0.714, test=0.683) total
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=12, shuffle=False;, score=(train=0.724, test=0.804) total
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time=
       0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=12, shuffle=False;, score=(train=0.712, test=0.671) total
       0.0s
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=hinge, penalty=12, shuffle=False;, score=(train=0.719, test=0.711) total
time= 0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=12, shuffle=False;, score=(train=0.761, test=0.676) total
time= 0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=hinge, penalty=12, shuffle=False;, score=(train=0.632, test=0.669) total
      0.0s
time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=11, shuffle=True;, score=(train=0.796, test=0.839) total
time= 0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=11, shuffle=True;, score=(train=0.819, test=0.741) total
time=
       0.0s
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=hinge, penalty=11, shuffle=True;, score=(train=0.791, test=0.775) total
       0.0s
time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=11, shuffle=True;, score=(train=0.807, test=0.789) total
time= 0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=hinge, penalty=11, shuffle=True;, score=(train=0.807, test=0.852) total
time=
       0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=11, shuffle=False;, score=(train=0.722, test=0.783) total
time=
      0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=11, shuffle=False;, score=(train=0.793, test=0.741) total
       0.0s
time=
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=hinge, penalty=11, shuffle=False;, score=(train=0.802, test=0.754) total
time= 0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=11, shuffle=False;, score=(train=0.728, test=0.662) total
       0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=11, shuffle=False;, score=(train=0.796, test=0.845) total
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.747, test=0.867)
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
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loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.698, test=0.671)

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0.0s
total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.807, test=0.789)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.802, test=0.754)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.635, test=0.641)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.729, test=0.818)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.747, test=0.685)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.723, test=0.718)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.765, test=0.697)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.684, test=0.704)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=12, shuffle=True;, score=(train=0.663, test=0.706) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=12, shuffle=True;, score=(train=0.749, test=0.720) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=12, shuffle=True;, score=(train=0.786, test=0.761) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=12, shuffle=True;, score=(train=0.682, test=0.613) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=12, shuffle=True;, score=(train=0.747, test=0.789) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=12, shuffle=False;, score=(train=0.729, test=0.811) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=12, shuffle=False;, score=(train=0.703, test=0.664) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=12, shuffle=False;, score=(train=0.742, test=0.746) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=12, shuffle=False;, score=(train=0.754, test=0.676) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=12, shuffle=False;, score=(train=0.625, test=0.662) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
penalty=11, shuffle=True;, score=(train=0.784, test=0.867) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False, loss=log,
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penalty=11, shuffle=True;, score=(train=0.821, test=0.727) total time= [CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.811, test=0.796) total time= [CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.765, test=0.711) total time= [CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.782, test=0.845) total time= [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.696, test=0.741) total time= [CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.740, test=0.699) total time= 0.0s [CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.795, test=0.754) total time= [CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.711, test=0.690) total time= [CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.767, test=0.803) total time= [CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.689, test=0.678) total time= 0.0s

[CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.721, test=0.664) total time= 0.0s

[CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.751, test=0.746) total time= 0.0s

[CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.739, test=0.739) total time= 0.0s

[CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.788, test=0.838) total time= 0.0s

[CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.670, test=0.720) total time= 0.0s

[CV 2/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.745, test=0.692) total time= 0.0s

[CV 3/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.705, test=0.690) total time= 0.0s

[CV 4/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.698, test=0.683) total time= 0.0s

[CV 5/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.644, test=0.690) total time= 0.0s

[CV 1/5] END alpha=0.0001, early\_stopping=False, fit\_intercept=False,

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loss=modified huber, penalty=12, shuffle=True;, score=(train=0.685, test=0.685)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.798, test=0.727)
              0.0s
total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.668, test=0.641)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.444, test=0.423)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.699, test=0.762)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.703, test=0.671)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.696, test=0.669)
total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.802, test=0.725)
total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.660, test=0.704)
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.798, test=0.853)
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.757, test=0.699)
total time=
            0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.775, test=0.746)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.800, test=0.739)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.800, test=0.852)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.728, test=0.818)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=False,
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loss=modified huber, penalty=11, shuffle=False;, score=(train=0.691, test=0.678)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.782, test=0.761)
              0.0s
total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.788, test=0.718)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.796, test=0.838)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.694,
test=0.692) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.696,
test=0.718) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.691,
test=0.711) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.788,
test=0.838) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.742,
test=0.825) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.773,
test=0.741) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.739,
test=0.725) total time=
                        0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.768,
test=0.690) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.672,
test=0.704) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.675, test=0.685)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.721, test=0.706)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=False,
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loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.747, test=0.754)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.679, test=0.697)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.730, test=0.725)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.668, test=0.727)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.757, test=0.720)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.732, test=0.732)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.672, test=0.676)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.658, test=0.704)
total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.764, test=0.881)
total time=
              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.810, test=0.776)
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.749, test=0.754)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.809, test=0.796)
total time= 0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.753, test=0.768)
total time=
            0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.717, test=0.790)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.763, test=0.713)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.805, test=0.789)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
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loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.805, test=0.739)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.791, test=0.852)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.701,
test=0.699) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.717,
test=0.678) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.719,
test=0.662) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.811,
test=0.725) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.724,
test=0.804) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.705,
test=0.671) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.732,
test=0.739) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.716,
test=0.683) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.670,
test=0.711) total time=
                        0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.487, test=0.545)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.824, test=0.769)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.782, test=0.782)
             0.0s
total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.800, test=0.768)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,
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loss=perceptron, penalty=12, shuffle=True;, score=(train=0.649, test=0.690)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.703, test=0.762)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.742, test=0.699)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.723, test=0.718)
              0.0s
total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.753, test=0.641)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.658, test=0.704)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.801, test=0.846)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.770, test=0.664)
total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.630, test=0.627)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.744, test=0.718)
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.761, test=0.768)
            0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.710, test=0.804)
total time=
            0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.743, test=0.713)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.786, test=0.754)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.723, test=0.690)
             0.0s
total time=
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.772, test=0.810)
total time=
             0.0s
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[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=False,

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loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.791,
test=0.846) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.636,
test=0.615) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.637,
test=0.634) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.718,
test=0.754) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.739,
                          0.0s
test=0.754) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.712,
test=0.776) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.775,
test=0.734) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.754,
test=0.768) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.765,
test=0.676) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.668,
test=0.711) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.329, test=0.322)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.443, test=0.434)
total time= 0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.358, test=0.373)
total time=
            0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.312, test=0.331)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.600, test=0.606)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.339, test=0.273)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
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loss=squared loss, penalty=12, shuffle=False;, score=(train=0.329, test=0.273)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.634)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.529, test=0.545)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.382, test=0.387)
total time=
             0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=True;, score=(train=0.325, test=0.373)
total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.384, test=0.380)
total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.661, test=0.720)
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.318, test=0.315)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.618, test=0.613)
total time= 0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.602, test=0.570)
total time=
            0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.559,
test=0.622) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
```

```
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.304,
test=0.373) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.614,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.418,
test=0.378) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.325,
test=0.273) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.630,
test=0.648) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.375,
test=0.444) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.391,
test=0.387) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=12, shuffle=True;, score=(train=0.390, test=0.406) total
       0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=12, shuffle=True;, score=(train=0.346, test=0.301) total
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=12, shuffle=True;, score=(train=0.660, test=0.570) total
      0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total
       0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=12, shuffle=False;, score=(train=0.591, test=0.559) total
time=
       0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=12, shuffle=False;, score=(train=0.692, test=0.727) total
time=
       0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=12, shuffle=False;, score=(train=0.382, test=0.387) total
time=
        0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=False,
```

```
loss=huber, penalty=12, shuffle=False;, score=(train=0.323, test=0.380) total
time=
       0.0s
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=huber, penalty=12, shuffle=False;, score=(train=0.384, test=0.380) total
time=
      0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=11, shuffle=True;, score=(train=0.617, test=0.615) total
time=
       0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=11, shuffle=True;, score=(train=0.603, test=0.601) total
time=
       0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=11, shuffle=True;, score=(train=0.611, test=0.613) total
       0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=11, shuffle=True;, score=(train=0.651, test=0.606) total
time=
       0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=11, shuffle=True;, score=(train=0.384, test=0.380) total
time=
       0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=11, shuffle=False;, score=(train=0.712, test=0.699) total
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=11, shuffle=False;, score=(train=0.400, test=0.394) total
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=11, shuffle=False;, score=(train=0.400, test=0.394) total
      0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.606, test=0.636)
total time=
             0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.641, test=0.657)
total time=
             0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.665, test=0.676)
             0.0s
total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
```

loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.393, test=0.380)

[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,

total time=

0.0s

```
loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.558, test=0.577)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.371, test=0.371)
             0.0s
total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.626, test=0.615)
total time=
              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.777, test=0.739)
total time=
              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.661, test=0.613)
total time=
              0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.399,
test=0.399) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.389,
test=0.394) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.491,
test=0.493) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.395,
test=0.364) total time=
                        0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.654,
test=0.671) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.439,
test=0.415) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.654,
test=0.592) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
```

```
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.386,
test=0.366) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.336,
test=0.315) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.638,
test=0.671) total time=
                         0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.400,
test=0.394) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.398,
test=0.401) total time=
                          0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                         0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.383,
test=0.399) total time=
                         0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.320,
test=0.301) total time=
                        0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.665,
test=0.676) total time=
                         0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.691,
test=0.648) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.365,
test=0.366) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.411, test=0.350) total time=
                                              0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
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loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.634, test=0.622) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.391, test=0.380) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.609, test=0.620) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.332,
test=0.322) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.330,
test=0.280) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.602,
test=0.599) total time=
                         0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.323,
test=0.359) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.401, test=0.371) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.395, test=0.399) total time=
                                              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.642, test=0.620) total time=
                                            0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=False;,
score=(train=0.396, test=0.437) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.386, test=0.380) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.680,
test=0.727) total time=
                          0.0s
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.0001, early stopping=False, fit intercept=False,
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loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.618,
test=0.613) total time=
[CV 4/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.425,
test=0.465) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.657, test=0.727) total time=
[CV 2/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.344, test=0.301) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.340, test=0.324) total time=
                                              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.363, test=0.415) total time=
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.617, test=0.615) total time=
                                              0.0s
[CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.339, test=0.301) total time=
                                              0.0s
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.326, test=0.289) total time=
                                              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.602, test=0.599) total time=
                                             0.0s
[CV 5/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.402, test=0.394) total time=
                                             0.0s
[CV 1/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.643, test=0.713) total time=
[CV 2/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.336, test=0.322) total time=
[CV 3/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.416, test=0.401) total time=
                                              0.0s
[CV 4/5] END alpha=0.0001, early_stopping=False, fit_intercept=False,
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loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.639, test=0.570) total time=
[CV 5/5] END alpha=0.0001, early stopping=False, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.775, test=0.818) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.804, test=0.796) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.689, test=0.711) total time=
                                                                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.696, test=0.718) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.626, test=0.706) total time=
                                                                           0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.750, test=0.755) total time=
                                                                           0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.626, test=0.627) total time=
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.686, test=0.711) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time=
                                                                           0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.768, test=0.846) total time=
                                                                         0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.682, test=0.622) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.660, test=0.690) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.760, test=0.704) total time=
                                                                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.709, test=0.732) total time=
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.749, test=0.755) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.780, test=0.727) total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.718, test=0.697) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.765, test=0.746) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=11, shuffle=False;, score=(train=0.774, test=0.817) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=elasticnet, shuffle=True;, score=(train=0.701, test=0.776) total time=
0.0s
```

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[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.803, test=0.797) total time= 0.0s
```

[CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.682, test=0.683) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.718, test=0.648) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.623, test=0.620) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.617, test=0.615) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.703, test=0.699) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.696, test=0.697) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.782, test=0.718) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.628, test=0.620) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.626, test=0.615) total time= [CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.429, test=0.392) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.670, test=0.662) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s [CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.674, test=0.662) total time= [CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.575, test=0.643) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.654, test=0.622) total time= 0.0s [CV 3/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.704, test=0.697) total time= 0.0s [CV 4/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.428, test=0.444) total time= 0.0s [CV 5/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.758, test=0.789) total time= 0.0s [CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log,

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penalty=11, shuffle=True;, score=(train=0.786, test=0.846) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=True;, score=(train=0.810, test=0.769) total time=
                                                                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=True;, score=(train=0.781, test=0.789) total time=
                                                                          0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=log,
penalty=11, shuffle=True;, score=(train=0.616, test=0.634) total time=
                                                                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=True;, score=(train=0.786, test=0.817) total time=
                                                                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=False;, score=(train=0.747, test=0.755) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=log,
penalty=11, shuffle=False;, score=(train=0.779, test=0.727) total time=
                                                                           0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=log,
penalty=11, shuffle=False;, score=(train=0.714, test=0.683) total time=
                                                                           0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=False;, score=(train=0.754, test=0.697) total time=
                                                                           0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=log,
penalty=11, shuffle=False;, score=(train=0.653, test=0.690) total time=
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=log,
penalty=elasticnet, shuffle=True;, score=(train=0.775, test=0.825) total time=
0.0s
```

- [CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.759, test=0.692) total time= 0.0s
- [CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.419, test=0.415) total time= 0.0s
- [CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.733, test=0.739) total time= 0.0s
- [CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.633, test=0.629) total time= 0.0s
- [CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.733, test=0.741) total time= 0.0s
- [CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.672, test=0.662) total time= 0.0s
- [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.684, test=0.711) total time= 0.0s
- [CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.718, test=0.683) total time=

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0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.680, test=0.713)
total time=
            0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.756, test=0.706)
total time=
            0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.618, test=0.613)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.732, test=0.711)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.691, test=0.718)
total time=
              0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.717, test=0.783)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.636, test=0.615)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.416, test=0.415)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.696, test=0.718)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.786, test=0.832)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.779, test=0.762)
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.791, test=0.796)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.616, test=0.620)
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.726, test=0.754)
total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.729, test=0.727)
```

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0.0s
total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.756, test=0.706)
total time=
            0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.758, test=0.732)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.758, test=0.711)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.644, test=0.627)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.682,
test=0.755) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.427,
test=0.413) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.418,
test=0.394) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.786,
test=0.711) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.733,
test=0.761) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.425,
test=0.413) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.726,
test=0.725) total time=
                        0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.723,
test=0.648) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.383, test=0.392)
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.422, test=0.406)
```

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0.0s
total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.798, test=0.789)
total time= 0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.781, test=0.768)
total time=
            0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.646, test=0.641)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.707, test=0.720)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.731, test=0.699)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.684, test=0.683)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.759, test=0.846)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.789, test=0.678)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.758, test=0.739)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.614, test=0.641)
total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.739, test=0.732)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.677, test=0.727)
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.775, test=0.741)
total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.747, test=0.711)
```

```
0.0s
total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.746, test=0.683)
total time=
            0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.618, test=0.620)
total time=
            0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.575,
test=0.601) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.786,
test=0.768) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.423,
test=0.408) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.774,
test=0.796) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.649,
test=0.685) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.415,
test=0.392) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.619,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.712,
test=0.739) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.749, test=0.860)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.777, test=0.741)
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.404, test=0.408)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
```

```
0.0s
total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.695, test=0.648)
total time=
            0.0s
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.717, test=0.762)
total time=
            0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.531, test=0.510)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.672, test=0.641)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.711, test=0.732)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.652, test=0.706)
             0.0s
total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.793, test=0.769)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.665, test=0.676)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.814, test=0.761)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.749, test=0.782)
total time=
              0.0s
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.670, test=0.720)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.791, test=0.748)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.793, test=0.782)
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.781, test=0.697)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.653, test=0.683)
```

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0.0s
total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.666,
test=0.678) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.743,
test=0.685) total time=
                        0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.698,
test=0.718) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.695,
test=0.641) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.707,
test=0.790) total time=
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.701,
                          0.0s
test=0.713) total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.749,
test=0.739) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.660,
test=0.669) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.336, test=0.266)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.383, test=0.385)
total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.382, test=0.387)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.384, test=0.380)
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.668, test=0.720)
```

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0.0s
total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.668, test=0.699)
total time= 0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.667, test=0.641)
total time=
            0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.696, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.425, test=0.399)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.401, test=0.392)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.330, test=0.310)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.302, test=0.366)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.383, test=0.385)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.388, test=0.406)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.516, test=0.472)
total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.681, test=0.627)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.384, test=0.380)
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.348,
test=0.273) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.329,
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test=0.294) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.677,
test=0.697) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                        0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.385,
test=0.385) total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.382,
test=0.387) total time=
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.675, test=0.678) total time=
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.327, test=0.287) total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.384, test=0.394) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time=
                                                                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.688, test=0.669) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.378, test=0.350) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.329, test=0.329) total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.382, test=0.387) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.419, test=0.408) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True, loss=huber,
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penalty=11, shuffle=True;, score=(train=0.805, test=0.748) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.686, test=0.676) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.635, test=0.592) total time= 0.0s [CV 5/5] END alpha=0.001, early stopping=True, fit intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.661, test=0.648) total time= [CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.612, test=0.608) total time= [CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.615, test=0.594) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.618, test=0.613) total time= [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.609, test=0.620) total time= [CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.609, test=0.620) total time= [CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.583, test=0.552) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.689, test=0.664) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.382, test=0.387) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.665, test=0.662) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.596, test=0.577) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.373, test=0.315) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.334, test=0.273) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.589, test=0.592) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.660, test=0.613) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.384, test=0.380) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=True,

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loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.395,
test=0.392) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.329,
test=0.287) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.327,
test=0.301) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.370,
test=0.338) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.346,
test=0.280) total time=
                        0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.401,
test=0.392) total time=
                        0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.395,
test=0.401) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.407,
test=0.394) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.393,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.318,
test=0.301) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
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loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.599,
test=0.608) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.382,
test=0.387) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.418,
test=0.423) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.600,
test=0.606) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.411,
test=0.406) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.663,
test=0.699) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.332,
test=0.352) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.419,
test=0.458) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.421,
test=0.437) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.661, test=0.713) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.383, test=0.385) total time=
                                             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.663, test=0.662) total time= 0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.309, test=0.352) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
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loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.628,
test=0.648) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.495,
test=0.514) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.675, test=0.734) total time=
                                              0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.617, test=0.615) total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.346, test=0.324) total time=
                                              0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.384, test=0.380) total time= 0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.384, test=0.380) total time= 0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.664,
test=0.692) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.668,
test=0.671) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.689,
test=0.704) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.591,
test=0.606) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.664, test=0.720) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.615, test=0.615) total time= 0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.525, test=0.549) total time=
                                              0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
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loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.681, test=0.620) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.605, test=0.587) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.599, test=0.608) total time=
                                              0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.409, test=0.401) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.684, test=0.634) total time=
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.682, test=0.713) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.640, test=0.671) total time=
                                              0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.618, test=0.613) total time=
                                              0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.535) total time=
                                              0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.384, test=0.380) total time=
                                             0.0s
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=False, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.715, test=0.776) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.745, test=0.720) total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.637, test=0.620) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.579, test=0.641) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.689, test=0.669) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.406, test=0.455) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=hinge,
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penalty=12, shuffle=False;, score=(train=0.650, test=0.657) total time= [CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.733, test=0.718) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.763, test=0.754) total time= 0.0s [CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.622, test=0.622) total time= [CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.821, test=0.727) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.763, test=0.768) total time= [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.805, test=0.739) total time= [CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.744, test=0.775) total time= 0.0s [CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.743, test=0.853) total time= 0.0s [CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.789, test=0.727) total time= [CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.774, test=0.782) total time= [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.798, test=0.732) total time= 0.0s[CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.667, test=0.648) total time= [CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.691, test=0.685) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.682, test=0.720) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.733, test=0.648) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.742, test=0.739) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.772, test=0.769) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.692, test=0.685) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.751, test=0.718) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.642, test=0.655) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time=0.0s

[CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.712, test=0.713) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.750, test=0.713) total time= [CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.389, test=0.387) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.695, test=0.641) total time= 0.0s [CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.001, early stopping=True, fit intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.703, test=0.706) total time= [CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.649, test=0.671) total time= 0.0s [CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.618, test=0.613) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.691, test=0.697) total time= 0.0s [CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.602, test=0.577) total time= 0.0s [CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.775, test=0.860) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.728, test=0.727) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.804, test=0.789) total time= [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.761, test=0.704) total time= [CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.663, test=0.655) total time= 0.0s [CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.731, test=0.755) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.787, test=0.741) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.753, test=0.739) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.754, test=0.704) total time= 0.0s [CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log,

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penalty=11, shuffle=False;, score=(train=0.626, test=0.641) total time= 0.0s [CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.742, test=0.776) total time= 0.0s [CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.694, test=0.671) total time=
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[CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.682, test=0.655) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.704, test=0.704) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.566, test=0.629) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.708, test=0.699) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.716, test=0.683) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.579, test=0.620) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.703, test=0.643) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.726, test=0.725) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.698, test=0.648) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=False;, score=(train=0.395, test=0.420)

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0.0s
total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.698, test=0.706)
total time=
            0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.725, test=0.725)
total time=
            0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.739, test=0.641)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.656, test=0.629)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.807, test=0.713)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.802, test=0.789)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.716, test=0.746)
total time=
              0.0s
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.726, test=0.832)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.757, test=0.692)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.779, test=0.775)
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.737, test=0.683)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.782,
test=0.846) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.408,
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test=0.378) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.604,
test=0.585) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.742,
test=0.676) total time=
                        0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.723,
test=0.725) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.722,
test=0.748) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.712,
test=0.713) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.725,
test=0.725) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.604,
test=0.634) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.627, test=0.657)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.541, test=0.497)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.709, test=0.690)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.668, test=0.641)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.675, test=0.769)
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.731, test=0.706)
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.482, test=0.458)
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0.0s
total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.725, test=0.739)
total time= 0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
            0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.742, test=0.769)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.620, test=0.615)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.753, test=0.775)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.786, test=0.718)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.633, test=0.662)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.701, test=0.783)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.759, test=0.720)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.716, test=0.711)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.767, test=0.704)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.637, test=0.620)
total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.710,
test=0.755) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.747,
test=0.727) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.623,
test=0.648) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.746,
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test=0.711) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.714,
test=0.704) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.678,
test=0.748) total time=
                        0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.696,
test=0.699) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.695,
test=0.690) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.716,
test=0.746) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.408, test=0.441)
             0.0s
total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.678, test=0.741)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.618, test=0.613)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.663, test=0.648)
              0.0s
total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.728, test=0.704)
              0.0s
total time=
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.383, test=0.385)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.729, test=0.706)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.704, test=0.704)
            0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.691, test=0.711)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
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0.0s
total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.634, test=0.706)
total time=
            0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.728, test=0.671)
total time=
            0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.767, test=0.754)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.807, test=0.768)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.716, test=0.761)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.750, test=0.769)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.775, test=0.755)
             0.0s
total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.770, test=0.782)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.800, test=0.725)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.621, test=0.627)
              0.0s
total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.634,
test=0.601) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.733,
test=0.720) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.651,
test=0.641) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.707,
test=0.648) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.670,
test=0.648) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.689,
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test=0.678) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.705,
test=0.692) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.663,
test=0.662) total time=
                        0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.739,
test=0.754) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.615, test=0.594)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.598, test=0.599)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.582, test=0.599)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.647, test=0.692)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.417, test=0.427)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.688, test=0.683)
total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.642, test=0.606)
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.617, test=0.615)
total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.515, test=0.538)
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0.0s
total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.337, test=0.317)
total time= 0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.661, test=0.627)
total time=
            0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.321, test=0.359)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.409, test=0.385)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.380, test=0.364)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.667, test=0.683)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.528, test=0.556)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.661,
test=0.734) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.626,
test=0.601) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.670,
test=0.697) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.686,
test=0.641) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.674,
test=0.613) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.344,
test=0.287) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.618,
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test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                        0.0s
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.320, test=0.287) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.384, test=0.380) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.609, test=0.613) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.673, test=0.706) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.425, test=0.420) total time=
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.675, test=0.690) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.398, test=0.401) total time=
                                                                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.667, test=0.627) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.448, test=0.441) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.401, test=0.392) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.651, test=0.676) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.612, test=0.620) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.696, test=0.676) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.671, test=0.678) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.401, test=0.392) total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.628, test=0.620) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.751, test=0.732) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.609, test=0.620) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
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penalty=elasticnet, shuffle=True;, score=(train=0.383, test=0.385) total time=
0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=True;, score=(train=0.617, test=0.615) total time=
0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False, loss=huber,
penalty=elasticnet, shuffle=True;, score=(train=0.402, test=0.394) total time=
0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=True;, score=(train=0.389, test=0.430) total time=
0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=True;, score=(train=0.426, test=0.451) total time=
0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.350, test=0.357) total time=
0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.401, test=0.392) total time=
0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.400, test=0.394) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.602, test=0.599) total time=
0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time=
0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.334,
test=0.322) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                        0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.379,
test=0.359) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.673,
test=0.720) total time=
                          0.0s
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[CV 2/5] END alpha=0.001, early\_stopping=True, fit\_intercept=False,

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loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.611,
test=0.599) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.382,
test=0.437) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.429,
test=0.350) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.610,
test=0.594) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.560,
test=0.542) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.333,
test=0.373) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.296,
test=0.261) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.605,
test=0.587) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.327,
test=0.301) total time=
                        0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.389,
test=0.387) total time=
                        0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.591,
test=0.563) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.616,
                          0.0s
test=0.620) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.620,
test=0.622) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.337,
test=0.301) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
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loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.686,
test=0.690) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.661,
test=0.613) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.617, test=0.615) total time=
                                              0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.617, test=0.615) total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.628, test=0.669) total time=
                                              0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.614, test=0.599) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.610,
test=0.594) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.615,
test=0.601) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.618,
                         0.0s
test=0.613) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.614,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.612, test=0.608) total time=
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.482, test=0.462) total time= 0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.682, test=0.732) total time=
                                              0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
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loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.619,
test=0.622) total time=
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.571,
test=0.580) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.621,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.639,
test=0.613) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.668, test=0.727) total time=
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.617, test=0.615) total time=
                                              0.0s
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.312, test=0.317) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.609, test=0.606) total time=
                                              0.0s
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.616, test=0.620) total time= 0.0s
[CV 1/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.383, test=0.385) total time=
                                             0.0s
[CV 2/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.617, test=0.615) total time=
[CV 3/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
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loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.563, test=0.577) total time=
[CV 1/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.663, test=0.706) total time=
[CV 3/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.618, test=0.613) total time=
                                              0.0s
[CV 4/5] END alpha=0.001, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.001, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
                                              0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.624, test=0.671) total time=
[CV 2/5] END alpha=0.001, early stopping=False, fit intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.656, test=0.650) total time=
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.419, test=0.394) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.711, test=0.718) total time=
                                                                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.775, test=0.803) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.729, test=0.804) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.724, test=0.713) total time=
                                                                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.702, test=0.690) total time=
                                                                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.709, test=0.655) total time=
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.672, test=0.704) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.740, test=0.846) total time=
                                                                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.761, test=0.692) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.784, test=0.761) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.788, test=0.782) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=11, shuffle=True;, score=(train=0.791, test=0.824) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge,
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penalty=11, shuffle=False;, score=(train=0.745, test=0.846) total time= 0.0s [CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.782, test=0.727) total time= 0.0s [CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.802, test=0.775) total time= 0.0s [CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.754, test=0.676) total time= 0.0s [CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.784, test=0.831) total time= 0.0s [CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.729, test=0.811) total time= 0.0s
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[CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.791, test=0.755) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.702, test=0.676) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.549, test=0.556) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.765, test=0.782) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.699, test=0.776) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.701, test=0.657) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.714, test=0.704) total time=0.0s

[CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.733, test=0.634) total time=0.0s

[CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.712, test=0.732) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.761, test=0.797) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.784, test=0.748) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.784, test=0.761) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.405, test=0.401) total time= 0.0s [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log,

penalty=12, shuffle=True;, score=(train=0.770, test=0.796) total time= [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.729, test=0.790) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.719, test=0.706) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.719, test=0.704) total time= [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.767, test=0.690) total time= 0.0s [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.670, test=0.704) total time= 0.0s [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.794, test=0.867) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.452, test=0.427) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.711, test=0.669) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.804, test=0.796) total time= 0.0s [CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.719, test=0.711) total time= [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.733, test=0.825) total time= [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.787, test=0.727) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.789, test=0.782) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.795, test=0.697) total time= [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.793, test=0.838) total time= [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.699, test=0.741) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.798, test=0.755) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.814, test=0.782) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.749, test=0.718) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.793, test=0.831) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.684, test=0.748) total time=

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[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.640, test=0.615) total time=
0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.686, test=0.648) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.730, test=0.662) total time=
0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.777, test=0.824) total time=
0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.740, test=0.783)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.784, test=0.734)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.768, test=0.768)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.740, test=0.655)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.749, test=0.789)
total time=
              0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.691, test=0.748)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.728, test=0.706)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.733, test=0.739)
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.744, test=0.669)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.800, test=0.831)
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.791, test=0.867)
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.773, test=0.713)
```

0.0s

```
0.0s
total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.811, test=0.810)
total time=
            0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.811, test=0.782)
total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.791, test=0.852)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.715, test=0.783)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.793, test=0.727)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.796, test=0.768)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.758, test=0.669)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.753, test=0.782)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.647,
test=0.685) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.735,
test=0.727) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.675,
test=0.676) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.796,
test=0.754) total time=
                        0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.718,
test=0.768) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.761,
test=0.832) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.764,
test=0.734) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.709,
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test=0.725) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.602,
test=0.634) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.647,
test=0.669) total time= 0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.749, test=0.776)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.822, test=0.755)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.618, test=0.613)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.549, test=0.528)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.718, test=0.697)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.701, test=0.769)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.772, test=0.748)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.688, test=0.655)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.632, test=0.662)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.635, test=0.669)
total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.735, test=0.853)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.807, test=0.734)
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.788, test=0.768)
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.739, test=0.704)
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0.0s
total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.672, test=0.690)
total time=
            0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.749, test=0.818)
total time=
            0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.777, test=0.720)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.811, test=0.761)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.775, test=0.683)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.772, test=0.803)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.620,
test=0.622) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.678,
test=0.706) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.805,
test=0.817) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.712,
test=0.711) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.756,
test=0.768) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.745,
test=0.804) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.735,
test=0.720) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.770,
test=0.796) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.733,
test=0.676) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.646,
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test=0.669) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.793, test=0.839)
total time=
            0.0s
[CV 2/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.401, test=0.385)
total time=
            0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.677, test=0.669)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.689, test=0.655)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.658, test=0.711)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.754, test=0.825)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.772, test=0.741)
             0.0s
total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.719, test=0.718)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.728, test=0.655)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.635, test=0.648)
              0.0s
total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.800, test=0.853)
              0.0s
total time=
[CV 2/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.819, test=0.727)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.718, test=0.683)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.779, test=0.690)
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.788, test=0.817)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.735, test=0.832)
```

```
0.0s
total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.743, test=0.699)
total time=
            0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.781, test=0.761)
total time=
            0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.798, test=0.732)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.791, test=0.845)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.633,
test=0.713) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.712,
test=0.727) total time=
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.793,
                          0.0s
test=0.782) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.688,
test=0.613) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.698,
test=0.690) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.708,
test=0.776) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.763,
test=0.734) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.737,
                         0.0s
test=0.761) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.756,
test=0.662) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.726,
test=0.782) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.383, test=0.385)
total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.402, test=0.385)
```

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0.0s
total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.382, test=0.387)
total time= 0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
            0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.684, test=0.655)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.670, test=0.727)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.325, test=0.301)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.382, test=0.387)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.682, test=0.676)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.615, test=0.601)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.595, test=0.585)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.530, test=0.542)
total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.436, test=0.399)
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.334, test=0.280)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.618, test=0.613)
```

```
0.0s
total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.361, test=0.415)
total time= 0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.400, test=0.394)
total time=
            0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.383,
test=0.378) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.339,
test=0.310) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.625,
test=0.563) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.421,
test=0.415) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.671,
test=0.720) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.382,
test=0.387) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.400,
test=0.394) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.661, test=0.727) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.703, test=0.727) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.707, test=0.690) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.672, test=0.655) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=huber,
```

penalty=12, shuffle=False;, score=(train=0.634, test=0.629) total time= [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.580, test=0.538) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.681, test=0.662) total time= [CV 4/5] END alpha=0.001, early stopping=False, fit intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.721, test=0.697) total time= [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.632, test=0.620) total time= [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.663, test=0.727) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.617, test=0.594) total time= [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.782, test=0.732) total time= [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.644, test=0.648) total time= 0.0s [CV 1/5] END alpha=0.001, early stopping=False, fit intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.395, test=0.413) total time= [CV 2/5] END alpha=0.001, early stopping=False, fit intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.401, test=0.392) total time= [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.400, test=0.394) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.383, test=0.392) total time=

[CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.654, test=0.650) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.816, test=0.761) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.772, test=0.768) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.712, test=0.732) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.685, test=0.755) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=True, loss=huber,

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penalty=elasticnet, shuffle=False;, score=(train=0.659, test=0.685) total time=
0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.789, test=0.739) total time=
0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.688, test=0.634) total time=
0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.628, test=0.613) total time=
0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.382,
test=0.387) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.375,
test=0.380) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.538,
test=0.559) total time=
                        0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                        0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.337,
test=0.317) total time= 0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.444,
test=0.493) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
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loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.382,
test=0.387) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.614,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.815,
test=0.720) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.619,
test=0.620) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.400,
test=0.394) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.605,
test=0.594) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.332,
test=0.259) total time=
                        0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                        0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.400,
test=0.401) total time= 0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.602,
test=0.606) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.663, test=0.643) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.617, test=0.615) total time=
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.402, test=0.394) total time=
                                              0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
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loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.398, test=0.401) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.600, test=0.606) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.617,
test=0.615) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.427,
test=0.427) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.695,
test=0.648) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.383, test=0.385) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.369, test=0.371) total time=
                                             0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.679, test=0.697) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.321, test=0.366) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.616, test=0.620) total time= 0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.641,
test=0.629) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.350,
test=0.308) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.600,
test=0.606) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.395,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True,
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loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.330,
test=0.352) total time=
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.617, test=0.622) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.332, test=0.315) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.326, test=0.324) total time=
                                              0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.609, test=0.599) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.383, test=0.385) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.409, test=0.415) total time=
                                              0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.411, test=0.401) total time=
                                              0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.384, test=0.380) total time=
                                              0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.631, test=0.650) total time=
                                             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.673, test=0.699) total time=
                                             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.684, test=0.683) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.321, test=0.380) total time=
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.398, test=0.394) total time=
                                              0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=hinge,
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penalty=12, shuffle=True;, score=(train=0.779, test=0.832) total time= [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.617, test=0.559) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.811, test=0.782) total time= 0.0s [CV 4/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.742, test=0.718) total time= [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.409, test=0.394) total time= [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.708, test=0.769) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.743, test=0.706) total time= 0.0s [CV 3/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.735, test=0.746) total time= [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.733, test=0.655) total time= 0.0s [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.686, test=0.704) total time= 0.0s [CV 1/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.786, test=0.846) total time= [CV 2/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.807, test=0.769) total time= [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.809, test=0.789) total time= 0.0s [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.793, test=0.739) total time= [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.782, test=0.831) total time= [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.707, test=0.790) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, 0.0s penalty=11, shuffle=False;, score=(train=0.787, test=0.713) total time= [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.796, test=0.782) total time= [CV 4/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.742, test=0.683) total time= [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.781, test=0.852) total time= [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.786, test=0.811) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.803, test=0.734) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.811, test=0.796) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.711, test=0.648) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.719, test=0.754) total time= 0.0s

[CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.684, test=0.727) total time= 0.0s

[CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.733, test=0.706) total time= 0.0s

[CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.700, test=0.669) total time= 0.0s

[CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.611, test=0.641) total time= 0.0s

[CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.649, test=0.676) total time= 0.0s

[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.740, test=0.797) total time= [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.794, test=0.734) total time= 0.0s [CV 3/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time= [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.767, test=0.768) total time= [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.753, test=0.810) total time= 0.0s [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.729, test=0.811) total time= 0.0s [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.747, test=0.699) total time= [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.705, test=0.669) total time= [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.768, test=0.690) total time= [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.623, test=0.648) total time= [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.787, test=0.846) total time= 0.0s [CV 2/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.807, test=0.762) total time= 0.0s [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.809, test=0.789) total time= [CV 4/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=log,

- penalty=11, shuffle=True;, score=(train=0.768, test=0.697) total time= [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.786, test=0.838) total time= 0.0s [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.705, test=0.790) total time= [CV 2/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.793, test=0.727) total time= [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.791, test=0.789) total time= [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.789, test=0.697) total time= [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.789, test=0.831) total time= [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.708, test=0.741) total time= 0.0s
- [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.757, test=0.762) total time= 0.0s
- [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.695, test=0.662) total time= 0.0s
- [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.468, test=0.437) total time= 0.0s
- [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.716, test=0.711) total time= 0.0s
- [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.724, test=0.811) total time= 0.0s
- [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.738, test=0.720) total time= 0.0s
- [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.695, test=0.669) total time=
- [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.747, test=0.662) total time= 0.0s
- [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.640, test=0.662) total time= 0.0s
- [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.803, test=0.832) total time= 0.0s
- [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.754, test=0.734)

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0.0s
total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.765, test=0.739)
total time=
            0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.412, test=0.408)
total time=
            0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.746, test=0.768)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.736, test=0.839)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.738, test=0.685)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.719, test=0.711)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.665, test=0.669)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.661, test=0.704)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.793, test=0.846)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.828, test=0.755)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.816, test=0.789)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.793, test=0.768)
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.723, test=0.739)
total time=
              0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.707, test=0.790)
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.789, test=0.706)
total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.786, test=0.761)
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0.0s
total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.779, test=0.704)
total time=
            0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.777, test=0.817)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.756,
test=0.741) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.798,
test=0.769) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.761,
test=0.761) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.696,
test=0.697) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.709,
test=0.725) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.728,
test=0.818) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.756,
test=0.713) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.704,
test=0.690) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.782,
test=0.704) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.688,
test=0.711) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.684, test=0.755)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.617, test=0.615)
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.446, test=0.415)
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.719, test=0.641)
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0.0s
total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.718, test=0.697)
total time=
            0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.710, test=0.769)
total time=
            0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.740, test=0.713)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.719, test=0.711)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.737, test=0.669)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.625, test=0.655)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.793, test=0.839)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.798, test=0.727)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.796, test=0.761)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.768, test=0.732)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.711, test=0.746)
total time=
              0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.749, test=0.867)
total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.794, test=0.727)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.807, test=0.775)
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.719, test=0.676)
total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.796, test=0.845)
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0.0s
total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.703,
test=0.699) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.756,
test=0.720) total time=
                        0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.619,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.721,
test=0.655) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.423,
test=0.437) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.754,
test=0.839) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.756,
test=0.713) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.702,
test=0.676) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.782,
test=0.704) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.675,
test=0.711) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.684, test=0.713)
              0.0s
total time=
[CV 2/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.520, test=0.517)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.739, test=0.739)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.774, test=0.697)
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.767, test=0.803)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.728, test=0.811)
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0.0s
total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.782, test=0.748)
total time=
            0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.744, test=0.761)
total time=
            0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.793, test=0.718)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.658, test=0.704)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.708, test=0.797)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.772, test=0.713)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.788, test=0.761)
             0.0s
total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.426, test=0.408)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.795, test=0.838)
total time=
              0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.715, test=0.783)
              0.0s
total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.789, test=0.713)
              0.0s
total time=
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.767, test=0.754)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.739, test=0.683)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.782, test=0.845)
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.742,
test=0.867) total time=
                        0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.789,
```

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test=0.748) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.639,
test=0.627) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.746,
test=0.683) total time=
                        0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.714,
test=0.676) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.708,
test=0.797) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.779,
test=0.748) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.719,
test=0.718) total time=
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.777,
test=0.704) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.649,
test=0.669) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.518, test=0.476)
total time=
              0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.585, test=0.615)
total time=
              0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.382, test=0.387)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.384, test=0.380)
total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.469, test=0.427)
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.677, test=0.699)
total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.389, test=0.387)
```

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0.0s
total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.691, test=0.627)
total time= 0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
            0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.343, test=0.294)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.373, test=0.308)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.665, test=0.697)
total time=
             0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.630, test=0.620)
             0.0s
total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.329, test=0.301)
total time=
             0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.670, test=0.706)
total time=
             0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.670, test=0.683)
total time=
              0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.319, test=0.380)
total time=
              0.0s
[CV 5/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.661,
test=0.664) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.675,
test=0.683) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.616,
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test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.668,
test=0.648) total time=
                        0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                        0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.668,
test=0.678) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.304,
test=0.380) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.649, test=0.720) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.617, test=0.573) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.679, test=0.669) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.384, test=0.380) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.630, test=0.613) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.692, test=0.762) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
                                                                          0.0s
penalty=12, shuffle=False;, score=(train=0.731, test=0.741) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.668, test=0.669) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.637, test=0.641) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.545, test=0.559) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.808, test=0.755) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.640, test=0.655) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
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penalty=11, shuffle=True;, score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.624, test=0.643) total time=
                                                                          0.0s
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.400, test=0.394) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=True;, score=(train=0.784, test=0.832) total time=
0.0s
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- [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.645, test=0.643) total time= 0.0s
- [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.405, test=0.408) total time= 0.0s
- [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.756, test=0.746) total time= 0.0s
- [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.795, test=0.845) total time= 0.0s
- [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.786, test=0.839) total time= 0.0s
- [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.808, test=0.755) total time= 0.0s
- [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.814, test=0.775) total time= 0.0s
- [CV 4/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.809, test=0.817) total time= 0.0s
- [CV 5/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.400, test=0.394) total time= 0.0s
- [CV 1/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.554, test=0.594) total time= 0.0s
- [CV 2/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 3/5] END alpha=0.001, early\_stopping=False, fit\_intercept=False,

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loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.321,
test=0.310) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.490,
test=0.469) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.411,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.339,
test=0.317) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.637,
test=0.634) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.395,
test=0.413) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.606,
test=0.608) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                        0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.602,
test=0.599) total time=
                        0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.621,
test=0.627) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.395,
test=0.413) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.613,
test=0.601) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
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loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.398,
test=0.401) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.395,
test=0.413) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.592,
test=0.566) total time=
                          0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.511,
test=0.500) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.391,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                         0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.663, test=0.727) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.661, test=0.629) total time=
                                              0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.400, test=0.394) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time= 0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.383,
test=0.392) total time=
                         0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.596,
test=0.615) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.382,
test=0.387) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.674,
test=0.627) total time=
                          0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
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loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.384,
test=0.380) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.589, test=0.601) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=False;,
score=(train=0.323, test=0.301) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.382, test=0.387) total time=
                                              0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.695, test=0.620) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.382, test=0.380) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.351,
test=0.301) total time=
                          0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.355,
test=0.343) total time=
                         0.0s
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.628,
test=0.641) total time=
                          0.0s
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.523,
test=0.521) total time=
                         0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.349,
                         0.0s
test=0.387) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.325, test=0.329) total time= 0.0s
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.332, test=0.294) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=l1, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.400, test=0.394) total time=
                                              0.0s
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
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loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.612, test=0.608) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.001, early stopping=False, fit intercept=False,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.323, test=0.331) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.314, test=0.373) total time=
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.696, test=0.641) total time=
[CV 1/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.373, test=0.301) total time=
[CV 2/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.325, test=0.317) total time=
[CV 4/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
                                              0.0s
[CV 5/5] END alpha=0.001, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.384, test=0.380) total time=
                                              0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.406, test=0.441) total time=
                                                                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.671, test=0.657) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.614, test=0.606) total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.725, test=0.690) total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.735, test=0.711) total time=
                                                                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.694, test=0.762) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.699, test=0.678) total time=
                                                                           0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.739, test=0.732) total time=
                                                                           0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=hinge,
penalty=12, shuffle=False;, score=(train=0.440, test=0.415) total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=hinge,
```

penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.768, test=0.860) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.812, test=0.720) total time= 0.0s [CV 3/5] END alpha=0.01, early stopping=True, fit intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.446, test=0.401) total time= [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.807, test=0.739) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.779, test=0.817) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.750, test=0.797) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.800, test=0.706) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.753, test=0.732) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.728, test=0.676) total time= [CV 5/5] END alpha=0.01, early stopping=True, fit intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.628, test=0.627) total time= [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.620, test=0.615) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.777, test=0.769) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.737, test=0.725) total time= 0.0s

[CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.754, test=0.732) total time=0.0s

[CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.660, test=0.641) total time= 0.0s

[CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.675, test=0.671) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.705, test=0.713) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.768, test=0.761) total time= 0.0s

[CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.777, test=0.711) total time= 0.0s

[CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s

[CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.661, test=0.720) total time= [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.754, test=0.769) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.732, test=0.732) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.618, test=0.620) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.714, test=0.697) total time= [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.707, test=0.734) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.647, test=0.678) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.716, test=0.711) total time= [CV 4/5] END alpha=0.01, early stopping=True, fit intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.712, test=0.725) total time= [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.673, test=0.755) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.682, test=0.622) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.765, test=0.718) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.786, test=0.732) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.758, test=0.754) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.745, test=0.853) total time= [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.793, test=0.706) total time= [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.793, test=0.782) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.767, test=0.704) total time= [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.758, test=0.782) total time= [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.657, test=0.706) total time=

[CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.756, test=0.706) total time=

- 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.804, test=0.789) total time= 0.0s
- [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.800, test=0.782) total time= 0.0s
- [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.789, test=0.838) total time= 0.0s
- [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.719, test=0.832) total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.652, test=0.587) total time= 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.644, test=0.620) total time=0.0s
- [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.714, test=0.718) total time= 0.0s
- [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.754, test=0.782) total time= 0.0s
- [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.650, test=0.720) total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.738, test=0.713) total time= 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.721, test=0.704)
- total time= 0.0s
  [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True,
- loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.639, test=0.662) total time= 0.0s
- [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True,
- loss=modified\_huber, penalty=12, shuffle=False;, score=(train=0.680, test=0.755)
  total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True,
- loss=modified\_huber, penalty=12, shuffle=False;, score=(train=0.735, test=0.706)
  total time= 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=modified huber, penalty=12, shuffle=False;, score=(train=0.711, test=0.711)

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0.0s
total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.758, test=0.683)
total time=
            0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.643, test=0.636)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.779, test=0.727)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.521, test=0.451)
total time=
              0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.728, test=0.761)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.735, test=0.761)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.750, test=0.832)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.791, test=0.748)
total time=
              0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.768, test=0.761)
total time=
              0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.807, test=0.732)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.779, test=0.817)
total time=
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.624,
test=0.636) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.758,
test=0.754) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.709,
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test=0.648) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.714,
test=0.746) total time=
                        0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.780,
test=0.755) total time=
                        0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.722,
test=0.706) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.677,
test=0.627) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.725,
test=0.711) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.404, test=0.427)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.673, test=0.650)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.384, test=0.387)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.698, test=0.711)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.726, test=0.732)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.641, test=0.664)
total time=
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.629, test=0.643)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.633, test=0.627)
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.442, test=0.444)
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
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0.0s
total time=
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.540, test=0.538)
total time=
            0.0s
[CV 2/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.789, test=0.762)
total time=
            0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.756, test=0.739)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.653, test=0.641)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.735, test=0.754)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.742, test=0.832)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.766, test=0.699)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.774, test=0.768)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.798, test=0.718)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.730, test=0.789)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.645,
test=0.678) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.764,
test=0.692) total time=
                        0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.723,
test=0.704) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.751,
test=0.641) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.782,
test=0.782) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.736,
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test=0.741) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.645,
test=0.608) total time=
                        0.0s
[CV 3/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.646,
test=0.620) total time=
                        0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.719,
test=0.711) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.689, test=0.748)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.673, test=0.727)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.707, test=0.704)
             0.0s
total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.633, test=0.606)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.749, test=0.782)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.703, test=0.692)
             0.0s
total time=
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.684, test=0.678)
total time=
              0.0s
[CV 3/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.411, test=0.423)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.768, test=0.711)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.695, test=0.676)
            0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.624, test=0.629)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.796, test=0.762)
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0.0s
total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.725, test=0.704)
total time=
            0.0s
[CV 4/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.633, test=0.662)
total time=
            0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.728, test=0.746)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.710, test=0.776)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.752, test=0.678)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.791, test=0.782)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.770, test=0.711)
             0.0s
total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.772, test=0.817)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.779,
test=0.846) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.724,
test=0.713) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.784,
test=0.768) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.714,
test=0.662) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.749,
test=0.775) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.773,
test=0.846) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.619,
test=0.615) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.746,
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test=0.732) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.793,
test=0.739) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.535,
test=0.507) total time= 0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.383, test=0.385)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.671, test=0.699)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.661, test=0.669)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.305, test=0.345)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.404, test=0.394)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.320, test=0.245)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.330, test=0.331)
total time=
              0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.428, test=0.458)
total time=
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.330, test=0.301)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.605, test=0.594)
            0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.658, test=0.683)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.549, test=0.577)
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0.0s
total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.633, test=0.627)
total time= 0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.659, test=0.678)
total time=
            0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.650, test=0.706)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.328, test=0.373)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.679, test=0.676)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.388,
test=0.399) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.547,
test=0.577) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.309,
test=0.366) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.344,
test=0.401) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.615,
test=0.615) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.689,
test=0.697) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.360,
test=0.380) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
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test=0.380) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time= [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=12, shuffle=True;, score=(train=0.631, test=0.685) total time= [CV 3/5] END alpha=0.01, early stopping=True, fit intercept=True, loss=huber, penalty=12, shuffle=True;, score=(train=0.619, test=0.606) total time= [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=12, shuffle=True;, score=(train=0.616, test=0.577) total time= [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.617, test=0.615) total time= [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.409, test=0.371) total time= [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.600, test=0.613) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.689, test=0.669) total time= [CV 5/5] END alpha=0.01, early stopping=True, fit intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.01, early stopping=True, fit intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.612, test=0.608) total time= [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.663, test=0.648) total time= [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time= [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.618, test=0.613) total time= [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time=

[CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.627, test=0.615) total time=0.0s

[CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.448, test=0.510) total time=

0.0s

[CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=huber,

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penalty=elasticnet, shuffle=True;, score=(train=0.805, test=0.768) total time=
0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=True;, score=(train=0.616, test=0.620) total time=
0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=True;, score=(train=0.400, test=0.394) total time=
0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.749, test=0.790) total time=
0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.815, test=0.720) total time=
0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.711, test=0.732) total time=
0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.686, test=0.634) total time=
0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.384, test=0.380) total time=
0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.568,
test=0.538) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.367,
test=0.385) total time=
                        0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.372,
test=0.345) total time=
                        0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.326,
test=0.345) total time=
                        0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.336,
test=0.301) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.574,
test=0.599) total time=
                          0.0s
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[CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True,

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loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.623,
test=0.641) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.647,
test=0.669) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.586,
test=0.535) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.387,
test=0.336) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.413,
test=0.371) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.400,
test=0.394) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.395,
test=0.380) total time= 0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.599,
test=0.608) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.663,
test=0.669) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
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loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.372,
test=0.387) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.369, test=0.385) total time=
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.599, test=0.608) total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.682, test=0.690) total time=
                                              0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.609, test=0.620) total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.407, test=0.387) total time=
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.668,
test=0.678) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.382,
test=0.387) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.322, test=0.301) total time= 0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=False;,
score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.325, test=0.331) total time=
                                              0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.325, test=0.359) total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.616, test=0.620) total time=
                                              0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
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loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.320,
test=0.280) total time=
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.382,
test=0.387) total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.628,
test=0.627) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.383, test=0.385) total time=
                                              0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.417, test=0.420) total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.665, test=0.662) total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.523, test=0.570) total time=
                                              0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.384, test=0.380) total time=
                                             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.617, test=0.615) total time=
                                             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.364, test=0.329) total time= 0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.382, test=0.387) total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.568, test=0.577) total time=
                                             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.661, test=0.620) total time=
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.617, test=0.615) total time=
                                              0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=True,
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loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.383, test=0.385) total time= [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.558, test=0.585) total time= [CV 4/5] END alpha=0.01, early stopping=True, fit intercept=True, loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.602, test=0.599) total time= [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.638, test=0.699) total time= [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.645, test=0.629) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.618, test=0.627) total time= 0.0s [CV 5/5] END alpha=0.01, early stopping=True, fit intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.726, test=0.704) total time= [CV 1/5] END alpha=0.01, early stopping=True, fit intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.415, test=0.448) total time= [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.775, test=0.734) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.716, test=0.697) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.719, test=0.725) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.787, test=0.853) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.420, test=0.406) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.777, test=0.810) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.728, test=0.676) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.740, test=0.768) total time= [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.766, test=0.867) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.777, test=0.748) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.744, test=0.746) total time= [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge,

- penalty=11, shuffle=False;, score=(train=0.788, test=0.718) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.621, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.455, test=0.517) total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.796, test=0.727) total time= 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.772, test=0.754) total time= 0.0s
- [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.679, test=0.704) total time= 0.0s
- [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.746, test=0.789) total time= 0.0s
- [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.634, test=0.671) total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.738, test=0.706) total time= 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.719, test=0.697) total time= 0.0s
- [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.712, test=0.697) total time= 0.0s
- [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s
- [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.673, test=0.678) total time= [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.714, test=0.720) total time= [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.705, test=0.704) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.596, test=0.577) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.600, test=0.606) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.673, test=0.685) total time= 0.0s [CV 2/5] END alpha=0.01, early stopping=True, fit intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.441, test=0.406) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log,

penalty=12, shuffle=False;, score=(train=0.721, test=0.704) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.577, test=0.613) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.787, test=0.853) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.817, test=0.734) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.789, test=0.782) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.791, test=0.725) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.628, test=0.641) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.710, test=0.769) total time= 0.0s [CV 2/5] END alpha=0.01, early stopping=True, fit intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.773, test=0.713) total time= 0.0s [CV 3/5] END alpha=0.01, early stopping=True, fit intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.767, test=0.754) total time= [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.793, test=0.711) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.740, test=0.761) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.756, test=0.811) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.714, test=0.720) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.712, test=0.697) total time=0.0s

[CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.774, test=0.754) total time= 0.0s

[CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.781, test=0.824) total time= 0.0s

[CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.782, test=0.818) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.624, test=0.615) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.637, test=0.627) total time=

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0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.614, test=0.634) total time=
0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.772, test=0.796) total time=
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.731, test=0.769)
total time=
              0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.620, test=0.580)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.714, test=0.718)
total time=
              0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.654, test=0.606)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.424, test=0.469)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.789, test=0.727)
total time=
              0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.739, test=0.746)
total time=
              0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.421, test=0.437)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.738, test=0.790)
total time=
              0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.807, test=0.755)
[CV 3/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.774, test=0.746)
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
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loss=modified huber, penalty=11, shuffle=True;, score=(train=0.614, test=0.627)

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0.0s
total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.777, test=0.782)
total time=
            0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.735, test=0.846)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.763, test=0.706)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.751, test=0.746)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.781, test=0.697)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.707, test=0.718)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.740,
test=0.748) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.773,
test=0.762) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.649,
test=0.662) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.744,
test=0.718) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.758,
test=0.782) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.643,
test=0.629) total time=
                        0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.743,
test=0.713) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.696,
test=0.697) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.739,
test=0.739) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.616,
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test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.617, test=0.622)
total time=
            0.0s
[CV 2/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.752, test=0.678)
total time=
            0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.389, test=0.408)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.682, test=0.704)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.742, test=0.775)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.561, test=0.601)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.726, test=0.706)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.679, test=0.676)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.700, test=0.739)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.786, test=0.839)
total time=
              0.0s
[CV 2/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.764, test=0.685)
total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.753, test=0.761)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.798, test=0.732)
            0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.782, test=0.824)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.745, test=0.853)
```

```
0.0s
total time=
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.796, test=0.734)
total time=
            0.0s
[CV 3/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.672, test=0.641)
total time=
            0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.672, test=0.662)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.735, test=0.754)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.708,
test=0.790) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.710,
test=0.692) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.691,
test=0.655) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.654,
test=0.648) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.777,
test=0.796) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.638,
test=0.671) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.678,
test=0.657) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.733,
test=0.732) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.751,
test=0.711) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.541, test=0.587)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.789, test=0.762)
```

```
0.0s
total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.700, test=0.697)
total time=
            0.0s
[CV 4/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
            0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.716, test=0.669)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.418, test=0.476)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.632, test=0.627)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.695, test=0.627)
             0.0s
total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.649, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.719, test=0.734)
total time=
              0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.763, test=0.692)
             0.0s
total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.795, test=0.796)
total time=
              0.0s
[CV 4/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.775, test=0.718)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.791, test=0.824)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.668, test=0.720)
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.798, test=0.769)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.756, test=0.746)
```

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0.0s
total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.788, test=0.754)
total time=
            0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.798, test=0.831)
total time=
            0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.787,
test=0.734) total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.770,
test=0.739) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.800,
test=0.782) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.753,
                          0.0s
test=0.789) total time=
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.735,
test=0.762) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.733,
test=0.727) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.753,
test=0.732) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.711,
test=0.732) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.395, test=0.413)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.374, test=0.364)
             0.0s
[CV 3/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.618, test=0.613)
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.465, test=0.444)
```

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0.0s
total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.519, test=0.479)
total time= 0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.327, test=0.280)
total time=
            0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.320, test=0.301)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.688, test=0.683)
total time=
            0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.688, test=0.634)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.383, test=0.385)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.631, test=0.594)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.598, test=0.599)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.386, test=0.366)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.695, test=0.655)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.464, test=0.441)
total time=
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.373, test=0.350)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.668, test=0.662)
            0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.461, test=0.507)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.384, test=0.380)
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0.0s
total time=
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.432,
test=0.455) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                        0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.382,
test=0.387) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.637,
test=0.648) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.677,
test=0.706) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.347,
test=0.331) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.570,
test=0.528) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.359, test=0.371) total time=
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.382, test=0.387) total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.567, test=0.592) total time=
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.381, test=0.392) total time=
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.327, test=0.287) total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.382, test=0.387) total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=huber,
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penalty=12, shuffle=False;, score=(train=0.319, test=0.359) total time= [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=12, shuffle=False;, score=(train=0.640, test=0.648) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=11, shuffle=True;, score=(train=0.395, test=0.413) total time= 0.0s [CV 2/5] END alpha=0.01, early stopping=True, fit intercept=False, loss=huber, penalty=11, shuffle=True;, score=(train=0.617, test=0.615) total time= [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=11, shuffle=True;, score=(train=0.400, test=0.394) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=11, shuffle=True;, score=(train=0.402, test=0.401) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=11, shuffle=True;, score=(train=0.586, test=0.599) total time= [CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.612, test=0.608) total time= [CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.618, test=0.613) total time= [CV 4/5] END alpha=0.01, early stopping=True, fit intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.609, test=0.620) total time= [CV 5/5] END alpha=0.01, early stopping=True, fit intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.01, early stopping=True, fit intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.622, test=0.636) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.738, test=0.678) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.807, test=0.768) total time= 0.0s

[CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.595, test=0.620) total time= 0.0s

[CV 5/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.784, test=0.845) total time= 0.0s

[CV 1/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.395, test=0.413) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.627, test=0.622) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.716, test=0.676) total time= 0.0s

[CV 4/5] END alpha=0.01, early\_stopping=True, fit\_intercept=False, loss=huber,

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penalty=elasticnet, shuffle=False;, score=(train=0.774, test=0.768) total time=
0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.626, test=0.620) total time=
0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.619,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.595,
test=0.606) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.626,
test=0.577) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.318,
test=0.352) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.370,
test=0.373) total time=
                        0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.641,
test=0.622) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.382,
test=0.387) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.449,
test=0.458) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
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loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.444,
test=0.472) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.634,
test=0.650) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.614,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.689,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.721,
test=0.754) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.628,
test=0.577) total time=
                        0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.784, test=0.832) total time=
                                              0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.671, test=0.678) total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.389, test=0.387) total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
                                              0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
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loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.395,
test=0.420) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.614,
test=0.613) total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.388,
test=0.373) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.382,
test=0.366) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.617, test=0.643) total time=
                                              0.0s
[CV 2/5] END alpha=0.01, early stopping=True, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.557, test=0.552) total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=False;,
score=(train=0.312, test=0.317) total time= 0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.616, test=0.620) total time=
                                              0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.332,
test=0.308) total time=
                        0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.391,
test=0.380) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.625,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
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loss=squared_epsilon_insensitive, penalty=l1, shuffle=False;,
score=(train=0.620, test=0.622) total time=
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.633, test=0.599) total time=
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.539, test=0.493) total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.384, test=0.380) total time=
                                              0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.343, test=0.350) total time=
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.617, test=0.615) total time=
                                              0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.618, test=0.620) total time=
                                              0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.384, test=0.437) total time=
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.625, test=0.627) total time=
                                              0.0s
[CV 1/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.649, test=0.699) total time=
                                              0.0s
[CV 2/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.383, test=0.385) total time=
                                              0.0s
[CV 3/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.670, test=0.697) total time= 0.0s
[CV 4/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.623, test=0.549) total time=
                                             0.0s
[CV 5/5] END alpha=0.01, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
                                             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.782, test=0.797) total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.770, test=0.692) total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=hinge,
penalty=12, shuffle=True;, score=(train=0.789, test=0.775) total time=
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=hinge,
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penalty=12, shuffle=True;, score=(train=0.789, test=0.768) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.775, test=0.796) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.701, test=0.776) total time= [CV 2/5] END alpha=0.01, early stopping=False, fit intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.756, test=0.720) total time= [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.726, test=0.718) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.746, test=0.662) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.802, test=0.845) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.800, test=0.846) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.703, test=0.678) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.807, test=0.782) total time= 0.0s [CV 4/5] END alpha=0.01, early stopping=False, fit intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.805, test=0.789) total time= [CV 5/5] END alpha=0.01, early stopping=False, fit intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.791, test=0.838) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.754, test=0.867) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.752, test=0.685) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.791, test=0.775) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.760, test=0.697) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.784, test=0.810) total time= [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.652, test=0.678) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.626, test=0.615) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.732, test=0.718) total time= 0.0s

[CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.732, test=0.718) total time= 0.0s

[CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.782, test=0.838) total time= 0.0s

[CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.721, test=0.832) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.747, test=0.734) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.691, test=0.655) total time= 0.0s

[CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.621, test=0.634) total time= 0.0s

[CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.651, test=0.662) total time= 0.0s

[CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.422, test=0.427) total time= 0.0s [CV 2/5] END alpha=0.01, early stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.819, test=0.734) total time= 0.0s [CV 3/5] END alpha=0.01, early stopping=False, fit intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.723, test=0.718) total time= [CV 4/5] END alpha=0.01, early stopping=False, fit intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.816, test=0.746) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.793, test=0.845) total time= 0.0s [CV 1/5] END alpha=0.01, early stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.743, test=0.832) total time= 0.0s [CV 2/5] END alpha=0.01, early stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.777, test=0.720) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.768, test=0.775) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.777, test=0.711) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.802, test=0.838) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.764, test=0.797) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.794, test=0.727) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.765, test=0.746) total time= 0.0s [CV 4/5] END alpha=0.01, early stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.800, test=0.796) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.763, test=0.789) total time= 0.0s [CV 1/5] END alpha=0.01, early stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.743, test=0.797) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log,

- penalty=11, shuffle=False;, score=(train=0.805, test=0.727) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.772, test=0.761) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.747, test=0.676) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.781, test=0.810) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.784, test=0.839) total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.773, test=0.734) total time= 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.730, test=0.711) total time= 0.0s
- [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.784, test=0.690) total time= 0.0s
- [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.795, test=0.852) total time= 0.0s
- [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.735, test=0.832) total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.759, test=0.727) total time= 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.723, test=0.704) total time= 0.0s
- [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.774, test=0.711) total time= 0.0s
- [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.765, test=0.824) total time= 0.0s
- [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.638, test=0.629) total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.703, test=0.713) total time= 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.795, test=0.732)

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0.0s
total time=
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.781, test=0.810)
total time=
            0.0s
[CV 1/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.710, test=0.776)
total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.733, test=0.706)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.700, test=0.662)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.774, test=0.683)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.675, test=0.711)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.712, test=0.769)
total time=
              0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.817, test=0.734)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.802, test=0.775)
total time=
              0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.782, test=0.725)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.775, test=0.810)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.729, test=0.769)
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.759, test=0.692)
total time=
              0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.765, test=0.761)
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.781, test=0.718)
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.775, test=0.810)
```

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0.0s
total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.731,
test=0.720) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.731,
test=0.713) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.809,
test=0.796) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.760,
test=0.704) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.740,
test=0.775) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.668,
test=0.720) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.717,
test=0.685) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.679,
test=0.648) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.689,
test=0.683) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.791,
test=0.845) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.617, test=0.615)
total time=
              0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.425, test=0.399)
total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.807, test=0.796)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.781, test=0.676)
             0.0s
[CV 5/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.800, test=0.838)
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.677, test=0.734)
```

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0.0s
total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.772, test=0.748)
total time=
            0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.716, test=0.711)
total time=
            0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.739, test=0.662)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.661, test=0.704)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.740, test=0.867)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.807, test=0.727)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.730, test=0.704)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.812, test=0.796)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.791, test=0.845)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.710, test=0.783)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.787, test=0.720)
total time=
              0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.786, test=0.782)
total time=
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.767, test=0.711)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.781, test=0.810)
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.736,
test=0.727) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.789,
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test=0.720) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.714,
test=0.725) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.672,
test=0.627) total time=
                        0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.754,
test=0.789) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.694,
test=0.748) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.757,
test=0.734) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.733,
test=0.746) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.775,
test=0.704) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.672,
test=0.711) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.627, test=0.622)
total time=
              0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.482, test=0.476)
              0.0s
total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.651, test=0.655)
              0.0s
total time=
[CV 4/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.637, test=0.634)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.770, test=0.789)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.731, test=0.832)
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.745, test=0.713)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.726, test=0.754)
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0.0s
total time=
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.735, test=0.655)
total time=
            0.0s
[CV 5/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.667, test=0.704)
total time=
            0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.757, test=0.783)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.800, test=0.692)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.795, test=0.775)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.802, test=0.739)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.779, test=0.824)
             0.0s
total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.757, test=0.867)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.780, test=0.720)
total time=
              0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.774, test=0.782)
              0.0s
total time=
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.774, test=0.704)
              0.0s
total time=
[CV 5/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.772, test=0.824)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.729,
test=0.720) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.789,
test=0.706) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.605,
test=0.585) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.796,
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test=0.718) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.667,
test=0.683) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.724,
test=0.825) total time= 0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.684,
test=0.664) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.682,
test=0.648) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.772,
test=0.704) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.635,
test=0.641) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.598, test=0.580)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.453, test=0.430)
total time=
              0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.570, test=0.563)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.384, test=0.380)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.654, test=0.713)
total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.383, test=0.385)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.618, test=0.613)
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.467, test=0.458)
total time=
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
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0.0s
total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.620, test=0.678)
total time= 0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.327, test=0.266)
total time=
            0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.609, test=0.613)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.333, test=0.373)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.619, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.618, test=0.613)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.384, test=0.380)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.671,
test=0.734) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.390,
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test=0.420) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.387,
test=0.406) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.623,
test=0.641) total time=
                        0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.500,
test=0.493) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.789, test=0.769) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.719, test=0.704) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.01, early stopping=False, fit intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.672, test=0.683) total time=
[CV 5/5] END alpha=0.01, early stopping=False, fit intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.711, test=0.718) total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.754, test=0.825) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.784, test=0.748) total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.781, test=0.739) total time=
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.777, test=0.704) total time=
                                                                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.654, test=0.697) total time=
                                                                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.678, test=0.699) total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.666, test=0.699) total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.618, test=0.613) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.649, test=0.620) total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True, loss=huber,
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- penalty=11, shuffle=False;, score=(train=0.618, test=0.613) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.674, test=0.641) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.808, test=0.755) total time=0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.632, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.623, test=0.641) total time= 0.0s
- [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.654, test=0.634) total time= 0.0s
- [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.791, test=0.853) total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.817, test=0.748) total time= 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.807, test=0.761) total time=
- [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.802, test=0.810) total time= 0.0s
- [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.770, test=0.803) total time= 0.0s
- [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.703, test=0.727) total time= 0.0s
- [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.418, test=0.392) total time= 0.0s
- [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.721, test=0.711) total time= 0.0s
- [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.628, test=0.606) total time= 0.0s
- [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True,

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loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.686,
test=0.669) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.640,
test=0.636) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.661,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.384,
test=0.387) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.693,
test=0.662) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.630,
test=0.641) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.619,
test=0.622) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.615,
test=0.636) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.419,
test=0.423) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.418,
test=0.423) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                        0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.411,
test=0.371) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.618,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.398,
test=0.401) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
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loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.615,
test=0.629) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.681,
test=0.627) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.740,
test=0.655) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.395, test=0.413) total time=
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.453, test=0.434) total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.626, test=0.620) total time=
                                             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.623, test=0.613) total time=
                                              0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.802, test=0.824) total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.601,
test=0.615) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.670,
test=0.734) total time=
                        0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.302,
test=0.373) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.499, test=0.462) total time=
                                              0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
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loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.337, test=0.322) total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.346, test=0.345) total time=
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=False;,
score=(train=0.314, test=0.324) total time=
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.617,
test=0.643) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.613,
test=0.601) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.409,
test=0.373) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.605,
test=0.599) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.622, test=0.692) total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.598, test=0.608) total time=
                                              0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.326, test=0.310) total time= 0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.575, test=0.528) total time=
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.364, test=0.336) total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=True,
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loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.618, test=0.613) total time= [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.384, test=0.380) total time= [CV 5/5] END alpha=0.01, early stopping=False, fit intercept=True, loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.589, test=0.599) total time= [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.429, test=0.420) total time= [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.332, test=0.259) total time= [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.311, test=0.310) total time= [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.677, test=0.648) total time= [CV 5/5] END alpha=0.01, early stopping=False, fit intercept=True, loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.657, test=0.713) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.805, test=0.776) total time= [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.802, test=0.775) total time= [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.753, test=0.732) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.651, test=0.697) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.742, test=0.839) total time= [CV 2/5] END alpha=0.01, early stopping=False, fit intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.740, test=0.699) total time= [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.779, test=0.789) total time= [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.763, test=0.683) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.795, test=0.838) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.784, test=0.825) total time= [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.775, test=0.706) total time= [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.767, test=0.775) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.786, test=0.761) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.765, test=0.796) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.768, test=0.846) total time= [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.791, test=0.706) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.786, test=0.768) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.795, test=0.711) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.774, test=0.810) total time= [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.796, test=0.846) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.722, test=0.734) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.633, test=0.613) total time= 0.0s

[CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.618, test=0.634) total time= 0.0s

[CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.786, test=0.838) total time= 0.0s

[CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.756, test=0.811) total time=0.0s

[CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.714, test=0.664) total time=0.0s

[CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.751, test=0.732) total time= 0.0s

[CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.770, test=0.683) total time= 0.0s

[CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.626, test=0.634) total time= 0.0s

[CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.685, test=0.692) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log,

penalty=12, shuffle=True;, score=(train=0.764, test=0.748) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.821, test=0.796) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.719, test=0.655) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.742, test=0.832) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.777, test=0.727) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.770, test=0.775) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.775, test=0.718) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.798, test=0.838) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.798, test=0.853) total time= 0.0s [CV 2/5] END alpha=0.01, early stopping=False, fit intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.782, test=0.706) total time= [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.782, test=0.761) total time= [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.795, test=0.725) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.760, test=0.782) total time= [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.705, test=0.762) total time= [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.814, test=0.727) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.784, test=0.768) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.804, test=0.789) total time= [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.779, test=0.838) total time= [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.768, test=0.839) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.805, test=0.720) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.653, test=0.627) total time= 0.0s

[CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.800, test=0.775) total time=

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0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=log,
penalty=elasticnet, shuffle=True;, score=(train=0.765, test=0.796) total time=
0.0s
[CV 1/5] END alpha=0.01, early stopping=False, fit intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.668, test=0.748) total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.759, test=0.720) total time=
0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.765, test=0.768) total time=
0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.774, test=0.711) total time=
0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.768, test=0.824) total time=
0.0s
[CV 1/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.717, test=0.790)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.757, test=0.692)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.618, test=0.613)
total time=
              0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.707, test=0.648)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.709, test=0.718)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.712, test=0.790)
total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.742, test=0.692)
total time=
              0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.693, test=0.662)
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.744, test=0.662)
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
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loss=modified huber, penalty=12, shuffle=False;, score=(train=0.635, test=0.641)

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0.0s
total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.794, test=0.860)
total time=
            0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.810, test=0.713)
total time=
            0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.774, test=0.775)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.719, test=0.711)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.670, test=0.676)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.721, test=0.790)
total time=
              0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.803, test=0.706)
total time=
              0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.782, test=0.782)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.795, test=0.725)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.760, test=0.803)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.786,
test=0.839) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.650,
test=0.622) total time=
                        0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.721,
test=0.746) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.749,
test=0.732) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.770,
test=0.803) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.724,
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test=0.790) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.742,
test=0.727) total time=
                        0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.704,
test=0.697) total time=
                        0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.749,
test=0.655) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.712,
test=0.725) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.636, test=0.713)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.673, test=0.608)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.691, test=0.676)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.614, test=0.613)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.735, test=0.711)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.682, test=0.734)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.756, test=0.713)
total time=
              0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.758, test=0.775)
total time=
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.767, test=0.662)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.660, test=0.704)
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.772, test=0.846)
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.815, test=0.727)
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0.0s
total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.814, test=0.782)
total time= 0.0s
[CV 4/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.807, test=0.768)
total time=
            0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.749, test=0.746)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.756, test=0.797)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.789, test=0.699)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.770, test=0.775)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.781, test=0.732)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.791, test=0.838)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.715,
test=0.762) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.625,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.719,
test=0.739) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.789,
test=0.824) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.717,
test=0.797) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.773,
test=0.741) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.723,
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test=0.711) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.786,
test=0.711) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.730,
test=0.746) total time= 0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.652, test=0.706)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.701, test=0.664)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.618, test=0.613)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.800, test=0.739)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.775, test=0.810)
             0.0s
total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.745, test=0.853)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.703, test=0.671)
total time=
              0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.744, test=0.761)
              0.0s
total time=
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.728, test=0.669)
total time=
              0.0s
[CV 5/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.660, test=0.704)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.764, test=0.867)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.819, test=0.741)
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.796, test=0.803)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.791, test=0.746)
```

```
0.0s
total time=
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.700, test=0.690)
total time=
            0.0s
[CV 1/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.750, test=0.867)
total time=
            0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.773, test=0.720)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.786, test=0.768)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.788, test=0.732)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.772, test=0.817)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.684,
test=0.769) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.794,
test=0.727) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.807,
test=0.789) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.753,
test=0.711) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.556,
test=0.563) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.743,
test=0.762) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.759,
test=0.734) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.712,
test=0.704) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.756,
test=0.662) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.633,
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test=0.655) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.657, test=0.727)
total time= 0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.313, test=0.308)
total time=
            0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.626, test=0.648)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.668, test=0.662)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.311, test=0.359)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.668, test=0.727)
total time=
             0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.380, test=0.322)
total time=
             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.332, test=0.324)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.314, test=0.359)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.682, test=0.671)
total time=
              0.0s
[CV 2/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.641, test=0.664)
total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.611, test=0.606)
total time=
             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.705, test=0.648)
            0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.347, test=0.394)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.323, test=0.273)
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0.0s
total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.668, test=0.664)
total time= 0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.354, test=0.338)
total time=
            0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.311, test=0.352)
total time=
             0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.394,
test=0.399) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.689,
test=0.683) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.375,
test=0.331) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.649,
test=0.720) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.672,
test=0.683) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.695,
test=0.676) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.703, test=0.699) total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.779, test=0.727) total time=
[CV 3/5] END alpha=0.01, early stopping=False, fit intercept=False, loss=huber,
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penalty=12, shuffle=True;, score=(train=0.796, test=0.775) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=12, shuffle=True;, score=(train=0.725, test=0.697) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=12, shuffle=True;, score=(train=0.695, test=0.711) total time= 0.0s [CV 1/5] END alpha=0.01, early stopping=False, fit intercept=False, loss=huber, penalty=12, shuffle=False;, score=(train=0.743, test=0.832) total time= [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=12, shuffle=False;, score=(train=0.719, test=0.657) total time= [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=12, shuffle=False;, score=(train=0.798, test=0.782) total time= 0.0s [CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=12, shuffle=False;, score=(train=0.775, test=0.704) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=12, shuffle=False;, score=(train=0.644, test=0.634) total time= [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=True;, score=(train=0.612, test=0.608) total time= 0.0s [CV 2/5] END alpha=0.01, early stopping=False, fit intercept=False, loss=huber, penalty=11, shuffle=True;, score=(train=0.401, test=0.392) total time= 0.0s [CV 3/5] END alpha=0.01, early stopping=False, fit intercept=False, loss=huber, penalty=11, shuffle=True;, score=(train=0.612, test=0.634) total time= [CV 4/5] END alpha=0.01, early stopping=False, fit intercept=False, loss=huber, penalty=11, shuffle=True;, score=(train=0.398, test=0.401) total time= [CV 5/5] END alpha=0.01, early stopping=False, fit intercept=False, loss=huber, penalty=11, shuffle=True;, score=(train=0.589, test=0.606) total time= 0.0s [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time= 0.0s [CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time= 0.0s [CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.618, test=0.613) total time= 0.0s[CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.609, test=0.620) total time= [CV 1/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.557, test=0.594) total time= 0.0s

[CV 2/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.812, test=0.755) total time= 0.0s

[CV 3/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.807, test=0.761) total time= 0.0s

[CV 4/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.809, test=0.803) total time= 0.0s

[CV 5/5] END alpha=0.01, early stopping=False, fit intercept=False, loss=huber,

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0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.801, test=0.860) total time=
0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.814, test=0.755) total time=
0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.814, test=0.761) total time=
0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.798, test=0.817) total time=
0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.793, test=0.845) total time=
0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.603,
test=0.594) total time=
                         0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.388,
test=0.329) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.382,
test=0.387) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                        0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.621,
test=0.676) total time=
                        0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.668,
test=0.671) total time=
                        0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.453,
test=0.427) total time=
                         0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.388,
test=0.394) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.719,
test=0.662) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
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penalty=elasticnet, shuffle=True;, score=(train=0.718, test=0.711) total time=

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loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.622,
test=0.622) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.649,
test=0.650) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.746,
test=0.718) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.795,
test=0.796) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.791,
test=0.824) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.692,
test=0.685) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.749,
test=0.718) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.630,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.399,
test=0.427) total time=
                        0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.680,
test=0.706) total time= 0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.812,
test=0.761) total time=
                         0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.423,
test=0.401) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.646,
test=0.662) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.680, test=0.762) total time=
                                              0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
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loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.817, test=0.748) total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.619, test=0.613) total time=
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.686, test=0.620) total time=
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.735, test=0.775) total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.680,
test=0.678) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.592,
test=0.601) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.439,
test=0.415) total time=
                          0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.312,
test=0.359) total time=
                         0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.314,
test=0.366) total time=
                          0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.677, test=0.692) total time=
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.617, test=0.615) total time=
                                             0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.684, test=0.676) total time= 0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=False;,
score=(train=0.674, test=0.606) total time=
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.339,
test=0.287) total time=
                          0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.339,
test=0.322) total time=
                          0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
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loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.382,
test=0.387) total time=
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.682,
test=0.634) total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.634, test=0.706) total time=
                                              0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.357, test=0.315) total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.323, test=0.338) total time=
                                              0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.449, test=0.430) total time=
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.383, test=0.385) total time=
                                              0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.383, test=0.385) total time=
                                              0.0s
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.618, test=0.613) total time=
                                             0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.479, test=0.514) total time= 0.0s
[CV 5/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.391, test=0.373) total time=
                                             0.0s
[CV 1/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.322, test=0.315) total time=
                                             0.0s
[CV 2/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.355, test=0.357) total time=
[CV 3/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.326, test=0.331) total time=
                                              0.0s
[CV 4/5] END alpha=0.01, early_stopping=False, fit_intercept=False,
```

loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.365, test=0.430) total time= [CV 5/5] END alpha=0.01, early\_stopping=False, fit\_intercept=False, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time= [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.722, test=0.720) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time= [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.435, test=0.437) total time= [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.735, test=0.748) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.714, test=0.720) total time= 0.0s [CV 3/5] END alpha=0.1, early stopping=True, fit intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.707, test=0.683) total time= [CV 4/5] END alpha=0.1, early stopping=True, fit intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.716, test=0.634) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.631, test=0.678) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.617, test=0.615) total time= [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.711, test=0.711) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.686, test=0.641) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.621, test=0.648) total time= [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.395, test=0.413) total time= [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.724, test=0.713) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.716, test=0.690) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.709, test=0.697) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.621, test=0.620) total time= [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s

- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.732, test=0.732) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.765, test=0.711) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.723, test=0.704) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.712, test=0.811) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.404, test=0.399) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.761, test=0.732) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.718, test=0.725) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.575, test=0.570) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.659, test=0.727) total time= [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.742, test=0.769) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.704, test=0.669) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.756, test=0.718) total time= 0.0s [CV 5/5] END alpha=0.1, early stopping=True, fit intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.679, test=0.683) total time= [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.626, test=0.671) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.724, test=0.706) total time= [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.635, test=0.648) total time= [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.705, test=0.732) total time= [CV 5/5] END alpha=0.1, early stopping=True, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log,

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penalty=11, shuffle=True;, score=(train=0.671, test=0.741) total time=
                                                                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=True;, score=(train=0.703, test=0.713) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=True;, score=(train=0.656, test=0.683) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=True;, score=(train=0.419, test=0.401) total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=True;, score=(train=0.691, test=0.718) total time=
                                                                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=False;, score=(train=0.395, test=0.420) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=False;, score=(train=0.705, test=0.699) total time=
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=True, loss=log,
penalty=11, shuffle=False;, score=(train=0.700, test=0.669) total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=False;, score=(train=0.723, test=0.662) total time=
                                                                          0.0s
[CV 5/5] END alpha=0.1, early stopping=True, fit_intercept=True, loss=log,
penalty=11, shuffle=False;, score=(train=0.628, test=0.627) total time=
[CV 1/5] END alpha=0.1, early stopping=True, fit intercept=True, loss=log,
penalty=elasticnet, shuffle=True;, score=(train=0.770, test=0.797) total time=
0.0s
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- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.645, test=0.657) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.625, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.704, test=0.669) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.642, test=0.648) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.705, test=0.741) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.715, test=0.664) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.730, test=0.718) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.700, test=0.732) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time=

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0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.768, test=0.846)
total time=
            0.0s
[CV 2/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.743, test=0.713)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.737, test=0.690)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.681, test=0.676)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.649, test=0.648)
total time=
              0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.710, test=0.720)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.763, test=0.769)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.618, test=0.613)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.716, test=0.704)
total time=
              0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
              0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.770, test=0.860)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.402, test=0.399)
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.795, test=0.754)
              0.0s
total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.732, test=0.732)
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.746, test=0.739)
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.750, test=0.860)
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0.0s
total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.692, test=0.636)
total time=
            0.0s
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.765, test=0.746)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.765, test=0.711)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.770, test=0.796)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.787,
test=0.769) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.760,
test=0.697) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.737,
test=0.775) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.733,
test=0.720) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.673,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.670,
test=0.648) total time= 0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.702,
test=0.718) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.665,
test=0.690) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.617, test=0.615)
total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.417, test=0.406)
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0.0s
total time=
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.411, test=0.387)
total time=
            0.0s
[CV 4/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.709, test=0.669)
total time=
            0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.787, test=0.762)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.626, test=0.629)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.733, test=0.732)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.661, test=0.655)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.712, test=0.755)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.714, test=0.699)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.793, test=0.810)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.767, test=0.669)
total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.758, test=0.789)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.694, test=0.727)
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.796, test=0.727)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.775, test=0.775)
```

```
0.0s
total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.798, test=0.718)
total time=
            0.0s
[CV 5/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.781, test=0.831)
total time=
            0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.675,
test=0.776) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.724,
test=0.727) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.712,
test=0.718) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.747,
test=0.676) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.656,
                          0.0s
test=0.634) total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.698,
test=0.706) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.578,
test=0.573) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.723,
test=0.732) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.725,
test=0.683) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.765,
test=0.789) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.707, test=0.706)
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.747, test=0.718)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.695, test=0.697)
```

```
0.0s
total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
            0.0s
[CV 1/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.689, test=0.685)
total time=
            0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.698, test=0.727)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.414, test=0.408)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.628, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.675, test=0.685)
             0.0s
total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.471, test=0.441)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.618, test=0.613)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.679, test=0.641)
             0.0s
total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.691, test=0.655)
              0.0s
total time=
[CV 1/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.643, test=0.699)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.714, test=0.706)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.625, test=0.627)
             0.0s
[CV 4/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.681, test=0.690)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.623, test=0.620)
```

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0.0s
total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                        0.0s
[CV 2/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.610,
test=0.566) total time= 0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.691,
test=0.697) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.732,
test=0.697) total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.714,
test=0.690) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.617,
test=0.615) total time=
[CV 2/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.680,
test=0.727) total time=
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.618,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.700,
test=0.718) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.383, test=0.385)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.591, test=0.594)
total time=
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.616, test=0.606)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
             0.0s
[CV 5/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.384, test=0.380)
total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.511, test=0.448)
```

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0.0s
total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.605, test=0.636)
total time= 0.0s
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.382, test=0.387)
total time=
            0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.663, test=0.655)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.532, test=0.592)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.596, test=0.613)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.672, test=0.627)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.434, test=0.483)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.666, test=0.643)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.389, test=0.387)
total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.372, test=0.373)
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.492,
test=0.538) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.617,
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test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.404,
test=0.408) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.318,
test=0.294) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.624,
test=0.622) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.346,
test=0.338) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early stopping=True, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.614,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.689, test=0.727) total time=
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time=
                                                                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.626, test=0.648) total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.647, test=0.636) total time=
                                                                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.705, test=0.711) total time=
                                                                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.712, test=0.704) total time=
                                                                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=12, shuffle=False;, score=(train=0.700, test=0.662) total time=
                                                                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
penalty=11, shuffle=True;, score=(train=0.395, test=0.413) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True, loss=huber,
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- penalty=11, shuffle=True;, score=(train=0.671, test=0.734) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.625, test=0.655) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s [CV 5/5] END alpha=0.1, early stopping=True, fit intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.609, test=0.620) total time= [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.462, test=0.510) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.618, test=0.613) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.677, test=0.662) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.622, test=0.615) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.682, test=0.634) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.668, test=0.662) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.691, test=0.641) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True,

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loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.343,
test=0.329) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.348,
test=0.301) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.621,
test=0.627) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.553,
test=0.592) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.385,
test=0.385) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.334,
test=0.301) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.460,
test=0.408) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.395,
test=0.380) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.633,
test=0.685) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.591,
test=0.601) total time=
                        0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.382,
test=0.387) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.632,
test=0.599) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.402,
test=0.394) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.383,
test=0.385) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
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loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.661,
test=0.678) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.618,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.395,
test=0.437) total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.406,
test=0.434) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.623,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.787, test=0.853) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.402, test=0.392) total time=
                                              0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.414, test=0.430) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.686, test=0.613) total time=
                                             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.409,
test=0.441) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.596,
test=0.601) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
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loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.670,
test=0.669) total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.402,
test=0.401) total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.637,
test=0.634) total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.401, test=0.378) total time=
                                              0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.383, test=0.385) total time=
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.432, test=0.465) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.616, test=0.620) total time= 0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.369,
test=0.399) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.657,
test=0.594) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.440,
test=0.437) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.623,
test=0.606) total time=
                        0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.467,
test=0.507) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.624, test=0.587) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.302, test=0.294) total time=
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.616, test=0.613) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=True,
```

loss=squared\_epsilon\_insensitive, penalty=11, shuffle=False;, score=(train=0.295, test=0.331) total time= [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=11, shuffle=False;, score=(train=0.607, test=0.613) total time= [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.670, test=0.685) total time= [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.659, test=0.650) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.400, test=0.394) total time= [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.630, test=0.634) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.329, test=0.280) total time= [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.617, test=0.643) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.382, test=0.387) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.375, test=0.373) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=True, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.656, test=0.678) total time= [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.402, test=0.423) total time= 0.0s [CV 4/5] END alpha=0.1, early stopping=True, fit intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.663, test=0.662) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.723, test=0.704) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.728, test=0.769) total time= [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge,

penalty=12, shuffle=False;, score=(train=0.707, test=0.699) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.670, test=0.648) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.761, test=0.704) total time= 0.0s [CV 5/5] END alpha=0.1, early stopping=True, fit intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.726, test=0.839) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.699, test=0.650) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.684, test=0.690) total time= 0.0s [CV 4/5] END alpha=0.1, early stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.698, test=0.662) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.730, test=0.761) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.450, test=0.503) total time= 0.0s [CV 2/5] END alpha=0.1, early stopping=True, fit intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.743, test=0.699) total time= [CV 3/5] END alpha=0.1, early stopping=True, fit intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.742, test=0.732) total time= [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.725, test=0.690) total time= 0.0s [CV 5/5] END alpha=0.1, early stopping=True, fit intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.644, test=0.620) total time= [CV 1/5] END alpha=0.1, early stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.684, test=0.713) total time= 0.0s

[CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.800, test=0.734) total time= 0.0s

[CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.647, test=0.634) total time=0.0s

[CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.398, test=0.401) total time= 0.0s

[CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.430, test=0.394) total time= 0.0s

[CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.770, test=0.846) total time= 0.0s

[CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.689, test=0.727) total time= 0.0s

[CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.411, test=0.423) total time= 0.0s

[CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.704, test=0.711) total time= 0.0s

[CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s

[CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.685, test=0.762) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.770, test=0.769) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.700, test=0.690) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early stopping=True, fit intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.719, test=0.755) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.610, test=0.580) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.768, test=0.775) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.719, test=0.754) total time= [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.395, test=0.420) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.673, test=0.678) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.612, test=0.641) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.700, test=0.627) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.625, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.678, test=0.713) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.707, test=0.706) total time= [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.693, test=0.697) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.721, test=0.669) total time= [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log,

- penalty=11, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.757, test=0.853) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.696, test=0.727) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.775, test=0.775) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.732, test=0.669) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.703, test=0.790) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.780, test=0.769) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.711, test=0.711) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.742, test=0.704) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.691, test=0.713) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.668, test=0.622) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.646, test=0.669) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.700, test=0.676) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.384, test=0.380) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=False;, score=(train=0.714, test=0.755)

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0.0s
total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.427, test=0.413)
total time=
            0.0s
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.707, test=0.718)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.667, test=0.683)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.777, test=0.846)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.757, test=0.671)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.679, test=0.676)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.788, test=0.732)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.793, test=0.845)
total time=
              0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.787, test=0.776)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.763, test=0.685)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.770, test=0.761)
total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.798, test=0.704)
total time=
              0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.732, test=0.775)
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.633,
test=0.664) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.682,
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test=0.685) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.805,
test=0.782) total time=
                        0.0s
[CV 4/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.782,
test=0.697) total time=
                        0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.400,
test=0.394) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.687,
test=0.664) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.719,
test=0.706) total time=
                        0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.709,
test=0.690) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.626,
test=0.634) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.684, test=0.755)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.701, test=0.727)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.688, test=0.683)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.437, test=0.408)
total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.675, test=0.678)
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.743, test=0.720)
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.667, test=0.648)
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0.0s
total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.753, test=0.641)
total time=
            0.0s
[CV 5/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
            0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.714, test=0.776)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.729, test=0.692)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.818, test=0.782)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.733, test=0.718)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.756, test=0.803)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.747, test=0.832)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.789, test=0.741)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.791, test=0.775)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.791, test=0.718)
total time=
              0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.763, test=0.796)
total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.708,
test=0.713) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.685,
test=0.629) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.754,
test=0.739) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.616,
```

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test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.654,
test=0.671) total time=
                        0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.719,
test=0.713) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.716,
test=0.718) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.749,
test=0.641) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.657, test=0.727)
             0.0s
total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.615, test=0.615)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.618, test=0.613)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.630, test=0.620)
              0.0s
total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.698, test=0.669)
              0.0s
total time=
[CV 1/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.406, test=0.441)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.707, test=0.685)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.658, test=0.634)
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.628, test=0.634)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.418, test=0.394)
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0.0s
total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.661, test=0.762)
total time=
            0.0s
[CV 2/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.661, test=0.699)
total time=
            0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.689, test=0.683)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.696, test=0.690)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.684, test=0.662)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.715, test=0.692)
             0.0s
total time=
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.646, test=0.641)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.716, test=0.655)
total time=
              0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.618, test=0.620)
              0.0s
total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.619,
test=0.622) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.712,
test=0.720) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.411,
test=0.423) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.627) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.760,
test=0.768) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.694,
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test=0.685) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.664,
test=0.678) total time=
                        0.0s
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.477,
test=0.451) total time=
                        0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.589,
test=0.563) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.616,
test=0.620) total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.367, test=0.343)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.606, test=0.622)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.586, test=0.592)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.553, test=0.577)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.649, test=0.613)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.383, test=0.385)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.381, test=0.392)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.393, test=0.387)
total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.321, test=0.373)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.682, test=0.641)
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.617, test=0.615)
total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.309, test=0.364)
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0.0s
total time=
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.656, test=0.641)
total time= 0.0s
[CV 4/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.291, test=0.317)
total time=
            0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.682, test=0.697)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.692, test=0.706)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.660, test=0.655)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.386, test=0.430)
             0.0s
total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.393, test=0.387)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.390,
test=0.371) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.603,
test=0.622) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.347,
test=0.324) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.632,
test=0.577) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.316,
test=0.287) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.332,
test=0.280) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.377,
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test=0.345) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.682,
test=0.662) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early stopping=True, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                        0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.627, test=0.615) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.384, test=0.387) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.696, test=0.627) total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time=
                                                                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.1, early stopping=True, fit intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.671, test=0.692) total time=
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.714, test=0.662) total time=
                                                                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.721, test=0.718) total time=
                                                                          0.0s
[CV 1/5] END alpha=0.1, early stopping=True, fit intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.612, test=0.608) total time=
                                                                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.629, test=0.650) total time=
                                                                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.684, test=0.683) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.647, test=0.585) total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.612, test=0.608) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.617, test=0.615) total time=
[CV 3/5] END alpha=0.1, early stopping=True, fit intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.609, test=0.620) total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False, loss=huber,
penalty=11, shuffle=False;, score=(train=0.609, test=0.620) total time=
[CV 1/5] END alpha=0.1, early stopping=True, fit_intercept=False, loss=huber,
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penalty=elasticnet, shuffle=True;, score=(train=0.668, test=0.720) total time= 0.0s
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- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.664, test=0.706) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.635, test=0.655) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.682, test=0.627) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.609, test=0.620) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.612, test=0.608) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.677, test=0.713) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.611, test=0.613) total time=0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.609, test=0.620) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.672, test=0.634) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.666, test=0.720) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.672, test=0.676) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.698, test=0.627) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=epsilon\_insensitive, penalty=12, shuffle=False;, score=(train=0.457, test=0.469) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False,

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loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.677,
test=0.704) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.323,
test=0.380) total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.615,
test=0.629) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.594,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.667,
test=0.683) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.689,
test=0.669) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.609,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.612,
test=0.608) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                        0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.618,
test=0.613) total time=
                        0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.726,
test=0.748) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.624,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
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loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.661,
test=0.606) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.617, test=0.615) total time=
                                              0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.814, test=0.727) total time=
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.665, test=0.690) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.398, test=0.401) total time= 0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.621, test=0.620) total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.431,
test=0.413) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.673,
test=0.734) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.358,
test=0.380) total time=
                        0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.369, test=0.371) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.629, test=0.643) total time=
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.667, test=0.676) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
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loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.311, test=0.338) total time=
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.384, test=0.380) total time=
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.617,
test=0.615) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.638,
test=0.587) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.312,
test=0.324) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.400,
test=0.451) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.660,
test=0.655) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.617, test=0.615) total time=
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.464, test=0.483) total time=
                                              0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.693, test=0.704) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.665, test=0.648) total time=
                                              0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.542, test=0.521) total time=
                                              0.0s
[CV 1/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.383, test=0.385) total time=
                                             0.0s
[CV 2/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.617, test=0.615) total time=
                                              0.0s
[CV 3/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.618, test=0.613) total time=
[CV 4/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.579, test=0.592) total time=
                                              0.0s
[CV 5/5] END alpha=0.1, early_stopping=True, fit_intercept=False,
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loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.586, test=0.599) total time= [CV 1/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.670, test=0.720) total time= [CV 2/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.617, test=0.615) total time= [CV 3/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.396, test=0.387) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.616, test=0.620) total time= [CV 5/5] END alpha=0.1, early\_stopping=True, fit\_intercept=False, loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=False;, score=(train=0.384, test=0.380) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.728, test=0.741) total time= 0.0s [CV 2/5] END alpha=0.1, early stopping=False, fit intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.743, test=0.720) total time= [CV 3/5] END alpha=0.1, early stopping=False, fit intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.793, test=0.768) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.781, test=0.697) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=True;, score=(train=0.605, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.719, test=0.825) total time= [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.768, test=0.720) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.767, test=0.761) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.770, test=0.704) total time= [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=12, shuffle=False;, score=(train=0.796, test=0.838) total time= [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.698, test=0.748) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.625, test=0.613) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.707, test=0.662) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=True;, score=(train=0.705, test=0.676) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge,

- penalty=11, shuffle=False;, score=(train=0.629, test=0.699) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.759, test=0.720) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.733, test=0.732) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.702, test=0.669) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=11, shuffle=False;, score=(train=0.777, test=0.796) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.757, test=0.846) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.737, test=0.725) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.756, test=0.655) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.705, test=0.683) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.705, test=0.790) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.745, test=0.685) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.732, test=0.761) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.765, test=0.690) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.784, test=0.838) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.726, test=0.713) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.746, test=0.754) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=True;, score=(train=0.796, test=0.775) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log,

penalty=12, shuffle=True;, score=(train=0.726, test=0.768) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.761, test=0.818) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.782, test=0.748) total time= [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.775, test=0.775) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.789, test=0.725) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=12, shuffle=False;, score=(train=0.779, test=0.782) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.692, test=0.699) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.622, test=0.608) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.665, test=0.669) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.647, test=0.648) total time= 0.0s [CV 5/5] END alpha=0.1, early stopping=False, fit intercept=True, loss=log, penalty=11, shuffle=True;, score=(train=0.630, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early stopping=False, fit intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.629, test=0.692) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.759, test=0.755) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.693, test=0.697) total time= [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.686, test=0.634) total time= [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=11, shuffle=False;, score=(train=0.698, test=0.676) total time= [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.794, test=0.832) total time= 0.0s

[CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.740, test=0.734) total time= 0.0s

[CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.725, test=0.704) total time= 0.0s

[CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.484, test=0.451) total time= 0.0s

[CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.656, test=0.655) total time= 0.0s

[CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.740, test=0.832) total time=

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0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.779, test=0.706) total time=
0.0s
[CV 3/5] END alpha=0.1, early stopping=False, fit intercept=True, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.761, test=0.768) total time=
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.770, test=0.704) total time=
0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=log,
penalty=elasticnet, shuffle=False;, score=(train=0.728, test=0.704) total time=
0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.680, test=0.678)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.619, test=0.566)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.618, test=0.613)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.739, test=0.711)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.660, test=0.683)
total time=
              0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.724, test=0.832)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.779, test=0.727)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.772, test=0.768)
total time=
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.775, test=0.718)
total time=
              0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.804, test=0.852)
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.786, test=0.860)
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
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loss=modified huber, penalty=11, shuffle=True;, score=(train=0.784, test=0.699)

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0.0s
total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.805, test=0.754)
total time=
            0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.782, test=0.782)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.702, test=0.725)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.678, test=0.706)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.779, test=0.678)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.760, test=0.761)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.772, test=0.732)
total time=
              0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.772, test=0.817)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.747,
test=0.790) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.721,
test=0.671) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.763,
test=0.775) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.735,
test=0.655) total time= 0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.621,
test=0.627) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.712,
test=0.699) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.761,
test=0.720) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.784,
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test=0.775) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.768,
test=0.718) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.737,
test=0.768) total time= 0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.418, test=0.462)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.784, test=0.790)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.618, test=0.613)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.618, test=0.634)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.613, test=0.685)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.752, test=0.727)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.781, test=0.754)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.758, test=0.746)
total time=
              0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.791, test=0.831)
total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.736, test=0.811)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.828, test=0.734)
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.809, test=0.789)
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.793, test=0.739)
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0.0s
total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.802, test=0.817)
total time=
            0.0s
[CV 1/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.759, test=0.860)
total time=
            0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.798, test=0.713)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.800, test=0.775)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.796, test=0.732)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.777, test=0.810)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.413,
test=0.462) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.761,
test=0.699) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.770,
test=0.761) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.779,
test=0.697) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.627) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.622,
test=0.685) total time=
                        0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.789,
test=0.741) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.777,
test=0.761) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.714,
test=0.739) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.751,
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test=0.739) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.786, test=0.818)
total time=
            0.0s
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.782, test=0.776)
total time=
            0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.756, test=0.746)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.744, test=0.768)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.747, test=0.839)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.724, test=0.699)
             0.0s
total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.714, test=0.711)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.753, test=0.662)
total time=
              0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.677, test=0.704)
             0.0s
total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.638, test=0.664)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.439, test=0.427)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.709, test=0.718)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.651, test=0.599)
            0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.456, test=0.430)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.617, test=0.622)
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0.0s
total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.469, test=0.448)
total time=
            0.0s
[CV 3/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.618, test=0.613)
total time=
            0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.688, test=0.669)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.692,
test=0.755) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.715,
test=0.657) total time=
[CV 3/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.721,
test=0.711) total time=
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.765,
test=0.697) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.725,
test=0.761) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.721,
test=0.832) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.629,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.698,
test=0.669) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.439,
test=0.444) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.686,
test=0.704) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.545, test=0.566)
total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.550, test=0.524)
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0.0s
total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.405, test=0.465)
total time= 0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.377, test=0.394)
total time=
            0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.496, test=0.500)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.404, test=0.399)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.350, test=0.364)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.493, test=0.521)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.544, test=0.549)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.571, test=0.545)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.373, test=0.308)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.342, test=0.275)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.323, test=0.324)
total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.298, test=0.373)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.395, test=0.434)
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.561, test=0.566)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.409, test=0.380)
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0.0s
total time=
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.416, test=0.401)
total time=
            0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.612, test=0.606)
total time=
            0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.664,
test=0.699) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.612,
test=0.587) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.375,
test=0.359) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.546,
test=0.521) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.673,
test=0.657) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.634,
test=0.622) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.453,
test=0.465) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.686,
test=0.655) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=True,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.624, test=0.622) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.671, test=0.685) total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.712, test=0.711) total time=
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.695, test=0.711) total time=
                                                                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=huber,
penalty=12, shuffle=True;, score=(train=0.718, test=0.718) total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=huber,
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penalty=12, shuffle=False;, score=(train=0.714, test=0.762) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.736, test=0.713) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.735, test=0.711) total time= [CV 4/5] END alpha=0.1, early stopping=False, fit intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.732, test=0.697) total time= [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=12, shuffle=False;, score=(train=0.704, test=0.676) total time= [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.626, test=0.636) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.642, test=0.676) total time= [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.626, test=0.634) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=True;, score=(train=0.616, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early stopping=False, fit intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.657, test=0.706) total time= [CV 2/5] END alpha=0.1, early stopping=False, fit intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.645, test=0.685) total time= [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.668, test=0.669) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.632, test=0.620) total time= [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=11, shuffle=False;, score=(train=0.667, test=0.676) total time= [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.684, test=0.692) total time=

[CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.617, test=0.615) total time= 0.0s

[CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.651, test=0.662) total time= 0.0s

[CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.693, test=0.648) total time= 0.0s

[CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.679, test=0.641) total time= 0.0s

[CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.666, test=0.685) total time= 0.0s

[CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=True, loss=huber,

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penalty=elasticnet, shuffle=False;, score=(train=0.652, test=0.727) total time=
0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.682, test=0.669) total time=
0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.675, test=0.634) total time=
0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True, loss=huber,
penalty=elasticnet, shuffle=False;, score=(train=0.674, test=0.641) total time=
0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.768,
test=0.832) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.714,
test=0.664) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.816,
test=0.782) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.789,
test=0.754) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.777,
test=0.824) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.782,
test=0.818) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.736,
test=0.685) total time=
                        0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.809,
test=0.768) total time=
                        0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.791,
test=0.810) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.679,
test=0.711) total time=
                        0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.649,
test=0.699) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
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loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.619,
test=0.620) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.665,
test=0.613) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.618,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.685,
test=0.720) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.742,
test=0.685) total time=
                        0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.700,
test=0.669) total time=
                        0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                        0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.772,
test=0.817) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.791, test=0.846) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.717, test=0.671) total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.816, test=0.761) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
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loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.800, test=0.810) total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.630, test=0.627) total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.659,
test=0.664) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.573,
test=0.587) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.579,
test=0.514) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.384,
test=0.380) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=12, shuffle=False;,
score=(train=0.306, test=0.273) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.696, test=0.671) total time=
                                              0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.658, test=0.585) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.609, test=0.613) total time=
                                              0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.616, test=0.620) total time= 0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.362,
test=0.280) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.455,
test=0.469) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.619,
test=0.613) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.604,
test=0.585) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
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loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.640,
test=0.620) total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.404, test=0.448) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.359, test=0.322) total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.407, test=0.380) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.354, test=0.373) total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.616, test=0.620) total time=
                                              0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.315, test=0.329) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.448, test=0.469) total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.316, test=0.275) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.332, test=0.373) total time=
                                              0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
score=(train=0.386, test=0.408) total time=
                                              0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.311, test=0.322) total time=
                                            0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.571, test=0.531) total time=
                                             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.568, test=0.570) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.628, test=0.627) total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=True,
loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.384, test=0.380) total time=
                                              0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=hinge,
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penalty=12, shuffle=True;, score=(train=0.724, test=0.825) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.780, test=0.734) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.788, test=0.768) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.732, test=0.739) total time= [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=True;, score=(train=0.740, test=0.782) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.664, test=0.713) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.749, test=0.692) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.746, test=0.725) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.744, test=0.697) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=12, shuffle=False;, score=(train=0.800, test=0.838) total time= 0.0s [CV 1/5] END alpha=0.1, early stopping=False, fit intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.743, test=0.804) total time= [CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.724, test=0.713) total time= 0.0s [CV 3/5] END alpha=0.1, early stopping=False, fit intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.756, test=0.739) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.789, test=0.775) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=True;, score=(train=0.777, test=0.817) total time= [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.680, test=0.790) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.740, test=0.692) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.737, test=0.718) total time= [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.749, test=0.683) total time= [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=11, shuffle=False;, score=(train=0.753, test=0.796) total time= [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.808, test=0.832) total time= 0.0s

[CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.761, test=0.734) total time= 0.0s

[CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.770, test=0.761) total time= 0.0s

[CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.753, test=0.718) total time= 0.0s

[CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=True;, score=(train=0.765, test=0.796) total time= 0.0s

[CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.692, test=0.762) total time= 0.0s

[CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.752, test=0.713) total time= 0.0s

[CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.742, test=0.732) total time= 0.0s

[CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.733, test=0.697) total time=

[CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=hinge, penalty=elasticnet, shuffle=False;, score=(train=0.789, test=0.838) total time= 0.0s

[CV 1/5] END alpha=0.1, early stopping=False, fit intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.729, test=0.804) total time= [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.773, test=0.706) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.739, test=0.739) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.798, test=0.761) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=True;, score=(train=0.719, test=0.732) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.766, test=0.825) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.782, test=0.748) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.779, test=0.775) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.795, test=0.711) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=12, shuffle=False;, score=(train=0.800, test=0.817) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.619, test=0.629) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.691, test=0.650) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.618, test=0.613) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log,

- penalty=11, shuffle=True;, score=(train=0.689, test=0.669) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=True;, score=(train=0.609, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.647, test=0.706) total time= 0.0s [CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.726, test=0.720) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.684, test=0.690) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.670, test=0.634) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=11, shuffle=False;, score=(train=0.705, test=0.676) total time= [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.740, test=0.839) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.814, test=0.762) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.809, test=0.796) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.784, test=0.725) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=True;, score=(train=0.723, test=0.690) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.747, test=0.839) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.775, test=0.706) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.763, test=0.782) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.775, test=0.704) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=log, penalty=elasticnet, shuffle=False;, score=(train=0.751, test=0.768) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.408, test=0.441) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=modified\_huber, penalty=12, shuffle=True;, score=(train=0.383, test=0.385)

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0.0s
total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=True;, score=(train=0.681, test=0.599)
total time=
            0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=True;, score=(train=0.811, test=0.845)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.743, test=0.832)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.773, test=0.727)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=12, shuffle=False;, score=(train=0.768, test=0.768)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.774, test=0.718)
total time=
              0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=12, shuffle=False;, score=(train=0.805, test=0.845)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=modified huber, penalty=11, shuffle=True;, score=(train=0.789, test=0.832)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.812, test=0.748)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.800, test=0.796)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=11, shuffle=True;, score=(train=0.781, test=0.725)
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=l1, shuffle=True;, score=(train=0.768, test=0.803)
              0.0s
total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.808, test=0.818)
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.801, test=0.685)
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.774, test=0.768)
```

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0.0s
total time=
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=11, shuffle=False;, score=(train=0.791, test=0.768)
total time=
            0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=11, shuffle=False;, score=(train=0.774, test=0.810)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.782,
test=0.853) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.714,
test=0.692) total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.751,
test=0.732) total time=
                        0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=True;, score=(train=0.786,
test=0.669) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=True;, score=(train=0.760,
test=0.754) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.701,
test=0.720) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.772,
test=0.720) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.726,
test=0.711) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=modified huber, penalty=elasticnet, shuffle=False;, score=(train=0.774,
test=0.718) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=modified_huber, penalty=elasticnet, shuffle=False;, score=(train=0.618,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.786, test=0.783)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.705, test=0.713)
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=True;, score=(train=0.695, test=0.655)
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.646, test=0.662)
```

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0.0s
total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=True;, score=(train=0.732, test=0.754)
total time=
            0.0s
[CV 1/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.763, test=0.860)
total time=
            0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.793, test=0.748)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.789, test=0.754)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=12, shuffle=False;, score=(train=0.760, test=0.761)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=12, shuffle=False;, score=(train=0.756, test=0.796)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.764, test=0.783)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.812, test=0.720)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.772, test=0.782)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=True;, score=(train=0.777, test=0.746)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=True;, score=(train=0.793, test=0.852)
total time=
              0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.742, test=0.832)
total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.789, test=0.706)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.788, test=0.782)
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=11, shuffle=False;, score=(train=0.782, test=0.725)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=11, shuffle=False;, score=(train=0.781, test=0.803)
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```
0.0s
total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.562,
test=0.601) total time=
                        0.0s
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.826,
test=0.748) total time=
                        0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.614,
test=0.556) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=True;, score=(train=0.800,
test=0.761) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=True;, score=(train=0.656,
test=0.655) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.757,
test=0.867) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.789,
test=0.741) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_hinge, penalty=elasticnet, shuffle=False;, score=(train=0.789,
test=0.754) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.760,
test=0.761) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared hinge, penalty=elasticnet, shuffle=False;, score=(train=0.770,
test=0.817) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.401, test=0.434)
              0.0s
total time=
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.429, test=0.399)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.772, test=0.768)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
             0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=perceptron, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.736, test=0.839)
```

```
0.0s
total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.779, test=0.741)
total time=
            0.0s
[CV 3/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.726, test=0.718)
total time=
            0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.791, test=0.725)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=12, shuffle=False;, score=(train=0.626, test=0.648)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.617, test=0.615)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.671, test=0.741)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.618, test=0.613)
             0.0s
total time=
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.725, test=0.662)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=True;, score=(train=0.693, test=0.655)
total time=
              0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.673, test=0.685)
              0.0s
total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.708, test=0.706)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.661, test=0.655)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.714, test=0.690)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=11, shuffle=False;, score=(train=0.616, test=0.620)
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.787,
test=0.860) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.759,
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```
test=0.685) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.805,
test=0.768) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.661,
test=0.620) total time=
                        0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=True;, score=(train=0.772,
test=0.817) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.735,
test=0.727) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.638,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.696,
test=0.655) total time=
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.742,
test=0.732) total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=perceptron, penalty=elasticnet, shuffle=False;, score=(train=0.626,
test=0.627) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.429, test=0.462)
total time=
              0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.698, test=0.692)
total time=
              0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.591, test=0.577)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.616, test=0.620)
total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=12, shuffle=True;, score=(train=0.384, test=0.380)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.346, test=0.336)
             0.0s
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.620, test=0.587)
total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.542, test=0.500)
```

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0.0s
total time=
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=12, shuffle=False;, score=(train=0.749, test=0.704)
total time= 0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=12, shuffle=False;, score=(train=0.616, test=0.620)
total time=
            0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.374, test=0.399)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.515, test=0.510)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.602, test=0.592)
total time=
             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.598, test=0.641)
total time=
             0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=True;, score=(train=0.526, test=0.528)
total time=
             0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.402, test=0.497)
total time=
             0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.448, test=0.420)
total time=
             0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.418, test=0.373)
total time=
              0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=11, shuffle=False;, score=(train=0.423, test=0.408)
total time=
              0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=11, shuffle=False;, score=(train=0.607, test=0.599)
total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.385,
test=0.413) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.617,
test=0.615) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.593,
test=0.606) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=True;, score=(train=0.444,
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test=0.423) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=True;, score=(train=0.389,
test=0.387) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_loss, penalty=elasticnet, shuffle=False;, score=(train=0.315,
test=0.231) total time=
                        0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.576,
test=0.566) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.274,
test=0.352) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.588,
test=0.599) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared loss, penalty=elasticnet, shuffle=False;, score=(train=0.386,
test=0.380) total time=
[CV 1/5] END alpha=0.1, early stopping=False, fit intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.707, test=0.706) total time=
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.640, test=0.678) total time=
[CV 3/5] END alpha=0.1, early stopping=False, fit intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.733, test=0.711) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.616, test=0.620) total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=True;, score=(train=0.721, test=0.690) total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.728, test=0.762) total time=
                                                                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.736, test=0.720) total time=
                                                                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.744, test=0.711) total time=
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.730, test=0.697) total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=12, shuffle=False;, score=(train=0.714, test=0.669) total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.650, test=0.636) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.626, test=0.678) total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.611, test=0.613) total time=
                                                                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
penalty=11, shuffle=True;, score=(train=0.667, test=0.655) total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False, loss=huber,
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- penalty=11, shuffle=True;, score=(train=0.609, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.666, test=0.720) total time= 0.0s [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.671, test=0.741) total time= 0.0s [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.686, test=0.676) total time= 0.0s [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.686, test=0.641) total time= 0.0s [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=11, shuffle=False;, score=(train=0.658, test=0.620) total time= 0.0s [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.638, test=0.629) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.671, test=0.741) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.611, test=0.613) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.609, test=0.620) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=True;, score=(train=0.672, test=0.634) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.664, test=0.706) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.670, test=0.727) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.670, test=0.704) total time= 0.0s
- [CV 4/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.684, test=0.641) total time= 0.0s
- [CV 5/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=huber, penalty=elasticnet, shuffle=False;, score=(train=0.681, test=0.634) total time= 0.0s
- [CV 1/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.675, test=0.650) total time= 0.0s
- [CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False, loss=epsilon\_insensitive, penalty=12, shuffle=True;, score=(train=0.780, test=0.741) total time= 0.0s
- [CV 3/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False,

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loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.800,
test=0.768) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.781,
test=0.732) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.721,
test=0.711) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.766,
test=0.832) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.779,
test=0.741) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.749,
test=0.718) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=12, shuffle=False;, score=(train=0.788,
test=0.775) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=12, shuffle=False;, score=(train=0.763,
test=0.775) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.612,
test=0.608) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.664,
test=0.699) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.618,
test=0.613) total time=
                        0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.686,
test=0.627) total time=
                        0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.612,
test=0.608) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.617,
test=0.615) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.798,
test=0.789) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early stopping=False, fit intercept=False,
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loss=epsilon insensitive, penalty=11, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=epsilon_insensitive, penalty=11, shuffle=False;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.722,
test=0.811) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.729,
test=0.727) total time=
                          0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.637,
test=0.620) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.402,
test=0.401) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=True;, score=(train=0.798,
test=0.852) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.793, test=0.853) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.796, test=0.755) total time=
                                              0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.814, test=0.761) total time=
                                             0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.796, test=0.803) total time=
                                              0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=epsilon_insensitive, penalty=elasticnet, shuffle=False;,
score=(train=0.626, test=0.620) total time=
                                              0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.332,
test=0.322) total time=
                         0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.640,
test=0.713) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.656,
test=0.648) total time=
                          0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=True;, score=(train=0.616,
test=0.620) total time=
                          0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
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loss=squared epsilon insensitive, penalty=12, shuffle=True;, score=(train=0.409,
test=0.394) total time=
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.313, test=0.252) total time=
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=12, shuffle=False;,
score=(train=0.534, test=0.538) total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.314, test=0.387) total time=
                                              0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.326, test=0.338) total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=12, shuffle=False;,
score=(train=0.616, test=0.620) total time=
[CV 1/5] END alpha=0.1, early stopping=False, fit intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.627,
test=0.692) total time=
                          0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.573,
test=0.650) total time=
                         0.0s
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.549,
test=0.521) total time=
                         0.0s
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=True;, score=(train=0.542,
test=0.570) total time=
                         0.0s
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=True;, score=(train=0.382,
test=0.380) total time=
                         0.0s
[CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.367, test=0.378) total time= 0.0s
[CV 2/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared epsilon insensitive, penalty=11, shuffle=False;,
score=(train=0.348, test=0.301) total time=
[CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.404, test=0.380) total time=
[CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.353, test=0.387) total time=
[CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
loss=squared_epsilon_insensitive, penalty=11, shuffle=False;,
score=(train=0.616, test=0.620) total time=
                                              0.0s
[CV 1/5] END alpha=0.1, early stopping=False, fit intercept=False,
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loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
    score=(train=0.525, test=0.524) total time=
    [CV 3/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
    loss=squared epsilon insensitive, penalty=elasticnet, shuffle=True;,
    score=(train=0.514, test=0.479) total time=
    [CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
    loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
    score=(train=0.609, test=0.620) total time=
                                                  0.0s
    [CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
    loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=True;,
    score=(train=0.667, test=0.613) total time=
    [CV 1/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
    loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
    score=(train=0.694, test=0.755) total time=
                                                  0.0s
    [CV 2/5] END alpha=0.1, early stopping=False, fit intercept=False,
    loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
    score=(train=0.383, test=0.385) total time=
                                                  0.0s
    [CV 3/5] END alpha=0.1, early stopping=False, fit intercept=False,
    loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
    score=(train=0.435, test=0.430) total time=
    [CV 4/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
    loss=squared_epsilon_insensitive, penalty=elasticnet, shuffle=False;,
    score=(train=0.374, test=0.373) total time=
                                                  0.0s
    [CV 5/5] END alpha=0.1, early_stopping=False, fit_intercept=False,
    loss=squared epsilon insensitive, penalty=elasticnet, shuffle=False;,
    score=(train=0.289, test=0.282) total time=
    SGDClassifier(alpha=0.01, fit_intercept=False, loss='huber',
                  penalty='elasticnet', shuffle=False) with the accuracy of: 0.81
[]: fig, axes = plt.subplots(1, 3, figsize=(20,6))
     train_sizes, train_scores, test_scores, = learning_curve(grid.best_estimator_,_
     →X_valid, y_valid, train_sizes=np.linspace(.1, 1, 5))
     train_scores_mean = np.mean(train_scores, axis=1)
     train scores std = np.std(train scores, axis=1)
     test_scores_mean = np.mean(test_scores, axis=1)
     test_scores_std = np.std(test_scores, axis=1)
     y_pred = grid.best_estimator_.predict(X_valid)
     cls_rep=classification_report(y_valid,y_pred)
     print(cls_rep)
     axes[0].fill_between(train_sizes, train_scores_mean - train_scores_std,
                         train_scores_mean + train_scores_std, alpha=0.1, color="r")
```

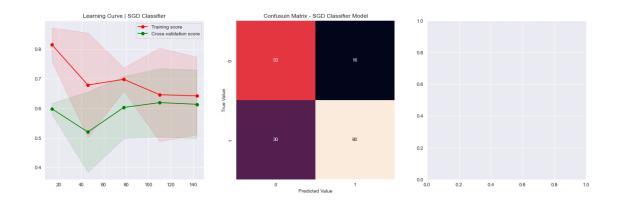
loss=squared\_epsilon\_insensitive, penalty=elasticnet, shuffle=True;,

[CV 2/5] END alpha=0.1, early\_stopping=False, fit\_intercept=False,

score=(train=0.617, test=0.615) total time=

```
axes[0].fill_between(train_sizes, test_scores_mean - test_scores_std,
                    test_scores_mean + test_scores_std, alpha=0.1, color="g")
axes[0].plot(train_sizes, train_scores_mean, 'o-', color="r", label="Training_
→score")
axes[0].plot(train_sizes, test_scores_mean, 'o-', color="g",_
→label="Cross-validation score")
axes[0].legend(loc="best")
axes[0].set_title('Learning Curve | SGD Classifier')
cnf_matrix = confusion_matrix(y_valid, y_pred, labels=[1,0])
sns.heatmap(cnf_matrix, square=True, annot=True, cbar=False, fmt='g',__
\rightarrowax=axes[1])
axes[1].set_xlabel('Predicted Value')
axes[1].set_ylabel('True Value')
axes[1].set_title('Confusuin Matrix - SGD Classifier Model')
# logit_roc_auc = roc_auc_score(y_valid, grid.predict(X_valid))
# fpr, tpr, thresholds = roc_curve(y_valid, grid.predict_proba(X_valid)[:,1],__
\rightarrow pos\_label=1)
# axes[2].plot(fpr, tpr, label='SGD Classifier (area = %0.2f)' % logit roc auc)
# axes[2].plot([0, 1], [0, 1], 'r--')
# axes[2].set xlim([0.0, 1.0])
# axes[2].set ylim([0.0, 1.05])
# axes[2].set_xlabel('False Positive Rate')
# axes[2].set_ylabel('True Positive Rate')
# axes[2].set_title('Receiver operating characteristic')
# axes[2].legend(loc="lower right")
plt.show()
```

	precision	recall	f1-score	support
0.0	0.83	0.73	0.78	110
1.0	0.64	0.77	0.70	69
accuracy			0.74	179
macro avg	0.74	0.75	0.74	179
weighted avg	0.76	0.74	0.75	179



[]: