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Trusted

Python 3 (ipykernel)



```
# Plot ROC Curve and calculate AUC
```

```
y_pred_proba = model.predict_proba(X_test)[: ,1]
fpr, tpr, _ = roc_curve(y_test, y_pred_proba)
roc_auc = roc_auc_score(y_test, y_pred_proba)
```

```
plt.figure()
plt.plot(fpr, tpr, color='darkorange', lw=2, label='ROC curve (area = %0.2f)' % roc_auc)
plt.plot([0, 1], [0, 1], color='navy', lw=2, linestyle='--')
plt.xlabel('False Positive Rate')
plt.ylabel('True Positive Rate')
plt.title('Receiver Operating Characteristic (ROC) Curve')
plt.legend(loc="lower right")
plt.show()
```

```
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 1599 entries, 0 to 1598
```

```
Data columns (total 12 columns):
```

| # | Column               | Non-Null Count | Dtype   |
|---|----------------------|----------------|---------|
| 0 | fixed acidity        | 1599 non-null  | float64 |
| 1 | volatile acidity     | 1599 non-null  | float64 |
| 2 | citric acid          | 1599 non-null  | float64 |
| 3 | residual sugar       | 1599 non-null  | float64 |
| 4 | chlorides            | 1599 non-null  | float64 |
| 5 | free sulfur dioxide  | 1599 non-null  | float64 |
| 6 | total sulfur dioxide | 1599 non-null  | float64 |
| 7 | density              | 1599 non-null  | float64 |