In [ ]:
```
pip install interpret
```

In [22]:
```
import pandas as pd
import numpy as np
from interpret.glassbox import ExplainableBoostingClassifier
from sklearn.model_selection import train_test_split
from interpret import show
from sklearn.metrics import plot_roc_curve, roc_auc_score
import warnings
warnings.filterwarnings('ignore')
```

In [6]:
```
df_7 = pd.read_csv('penguins_trunc.csv')
df_7.head()
```

Out[6]:

	CulmenLength	CulmenDepth	FlipperLength	Species
0	39.1	18.7	181.0	0
1	39.5	17.4	186.0	0
2	40.3	18.0	195.0	0
3	36.7	19.3	193.0	0
4	39.3	20.6	190.0	0

In [8]:
```
X_7 = df_7.drop(columns=['Species'])
y_7 = df_7['Species']
```

In [9]:
```
X_train7, X_test7, y_train7, y_test7 = train_test_split(X_7, y_7, test_size=0.20, random_state=10)
```

In [10]:
```
ebm = ExplainableBoostingClassifier(random_state=15)
ebm.fit(X_train7, y_train7)
```

```
WARNING:interpret.utils.all:Passing a numpy array to schema autogen when it should be dataframe.
WARNING:interpret.utils.all:Passing a numpy array to schema autogen when it should be dataframe.
```

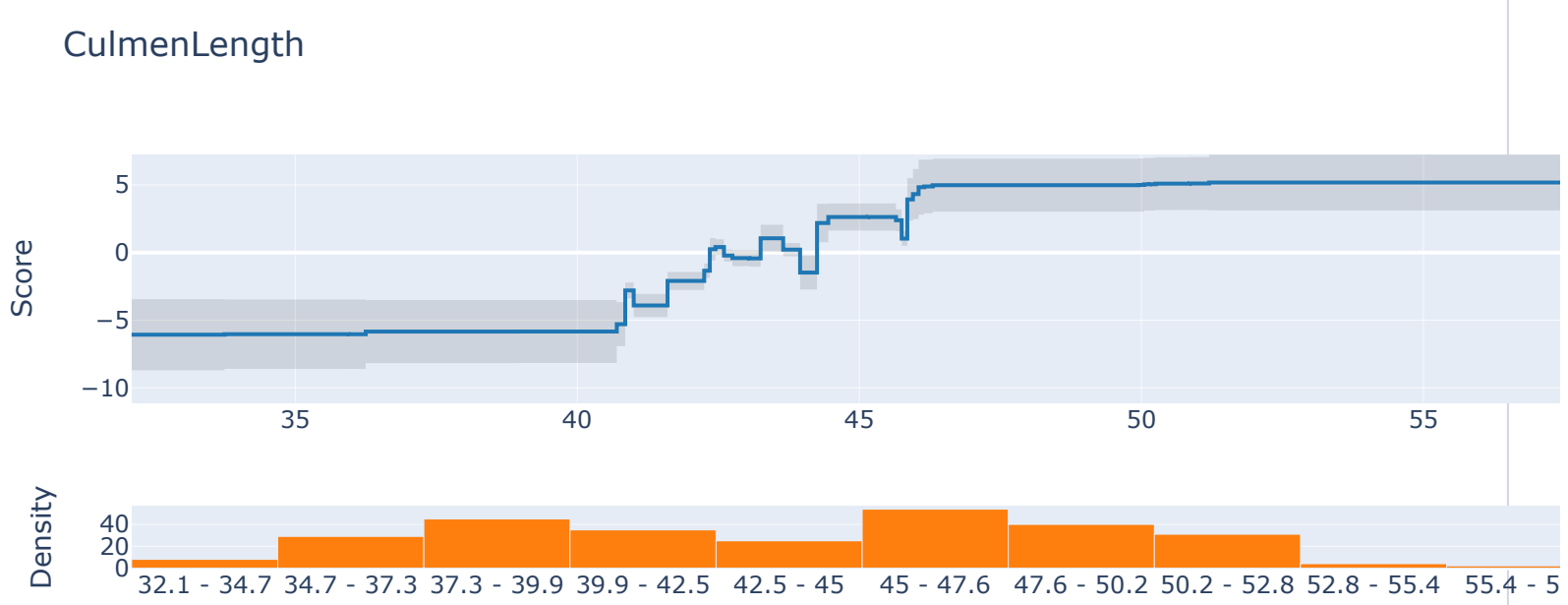
Out[10]:
```
ExplainableBoostingClassifier(feature_names=['CulmenLength', 'CulmenDepth',
                                             'FlipperLength',
                                             'CulmenLength x FlipperLength',
                                             'CulmenLength x CulmenDepth',
                                             'CulmenDepth x FlipperLength'],
                              feature_types=['continuous', 'continuous',
                                             'continuous', 'interaction',
                                             'interaction', 'interaction'],
                              random_state=15)
```

In [12]:
```
ebm_global = ebm.explain_global()
show(ebm_global)
```

Select Component to Graph

0 : Name (CulmenLength) | Type (continuous) | # Unique (145)

ExplainableBoostingClassifier_0

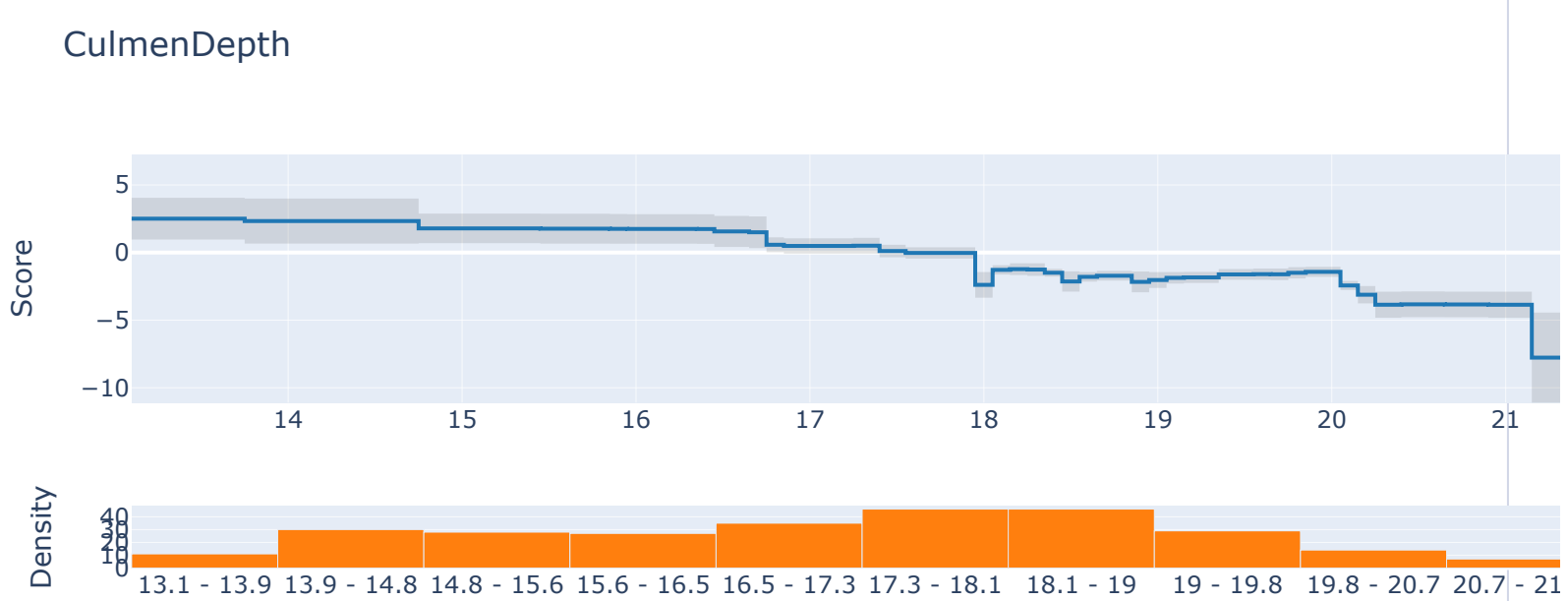


In [13]:
```
ebm_global = ebm.explain_global()
show(ebm_global)
```

Select Component to Graph

1 : Name (CulmenDepth) | Type (continuous) | # Unique (75)

ExplainableBoostingClassifier_1

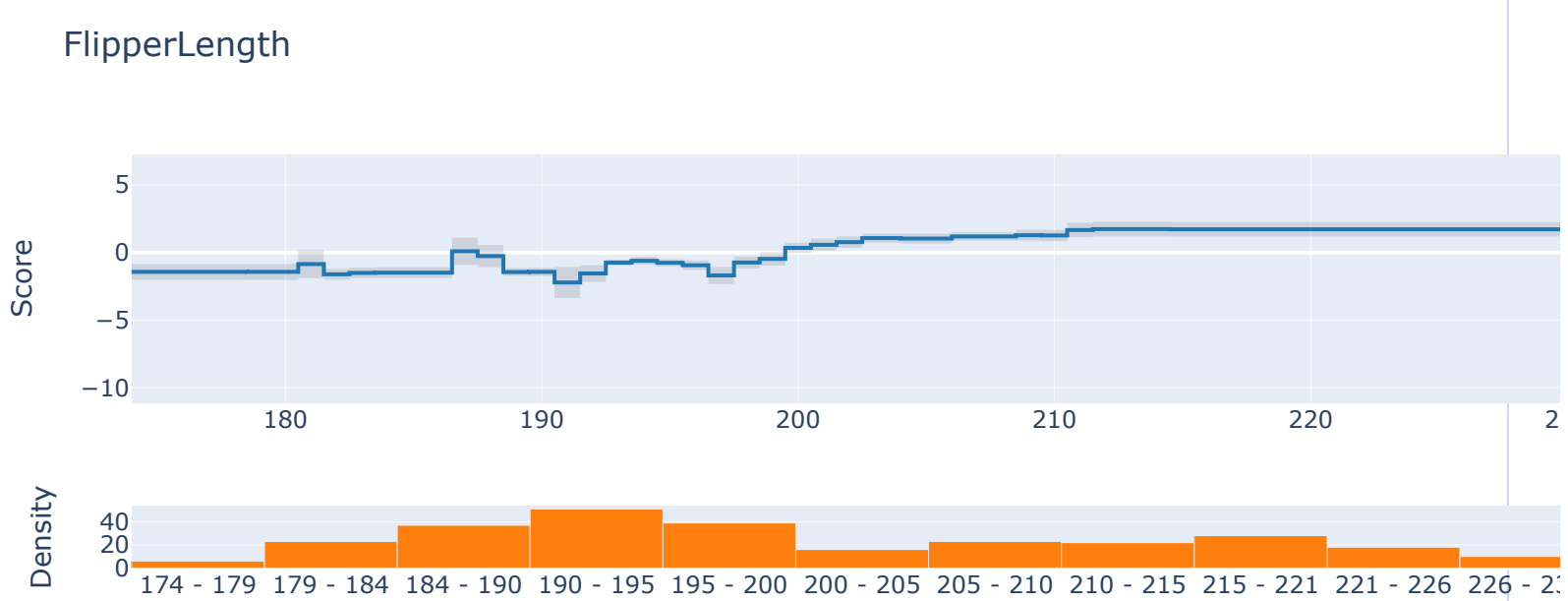


In [14]:
```
ebm_global = ebm.explain_global()
show(ebm_global)
```

Select Component to Graph

2 : Name (FlipperLength) | Type (continuous) | # Unique (53)

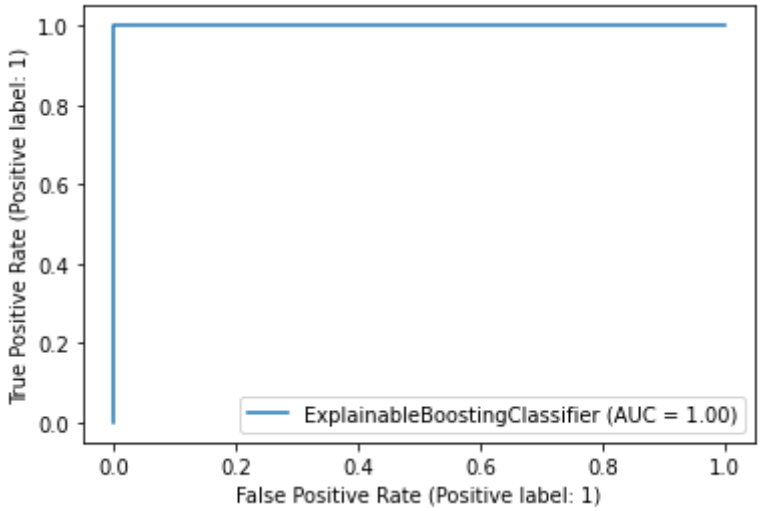
ExplainableBoostingClassifier_2

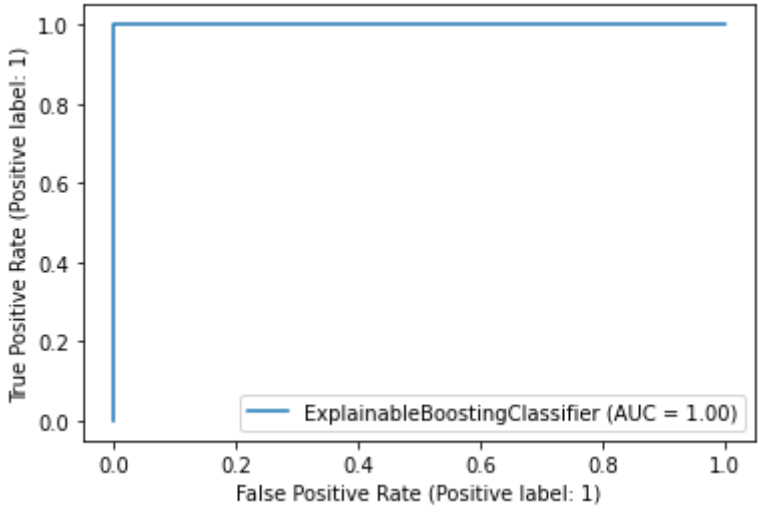


In [17]:
```
# training and test accuracy
training_accuracy = ebm.score(X_train7, y_train7)
test_accuracy = ebm.score(X_test7, y_test7)
print(training_accuracy)
print(test_accuracy)
```

```
1.0
1.0
```

In [23]:
```
plot_roc_curve(ebm, X_train7, y_train7);
plot_roc_curve(ebm, X_test7, y_test7);
```





In [ ]: