Using XGBoost to Classify Wine

```
Run the Model

[7] import numpy as np
    from sklearn.metrics import precision_score, recall_score, accuracy_score

    preds = model.predict(D_test)
    best_preds = np.asarray([np.argmax(line) for line in preds])

    print("Accuracy = {}".format(accuracy_score(Y_test, best_preds)))
    print("Precision = {}".format(precision_score(Y_test, best_preds, average='macro')))
    print("Recall = {}".format(recall_score(Y_test, best_preds, average='macro')))
```

You can see the model is producing high accuracy on test data

Plot the Decision Tree [8] from xgboost import plot tree import matplotlib.pyplot as plt plt.rcParams["figure.figsize"] = (50,6) plot tree(model) plt.show() ₽ f12<755 f2<2.8649997 f6<2.34000015 es, missing ves, missing leaf= 0.211614773 leaf- 7.66345476e 09 leaf - 0.170270279 f3<21.5 es, missing leaf-0.427624315 leaf-0.128571421

Attributions:

Original data provided by sklearn is <u>here</u>. My code is located at my <u>GitHub site</u>.

A graphical depiction of the decision tree provides immediate insights