Data Mining

Under Guidance: Dr.BFM

Upload dataset here

Drag and drop file here

Limit 200MB per file • CSV

Browse files

iris.csv 3.9KB

Dataset loaded Table

	sepal.leng	sepal.wid	petal.leng	petal.wid	variety
76	6.8000	2.8000	4.8000	1.4000	Versico
77	6.7000	3.0000	5.0000	1.7000	Versico
78	6.0000	2.9000	4.5000	1.5000	Versico
79	5.7000	2.6000	3.5000	1.0000	Versico
80	5.5000	2.4000	3.8000	1.1000	Versico
81	5.5000	2.4000	3.7000	1.0000	Versico
82	5.8000	2.7000	3.9000	1.2000	Versico
83	6.0000	2.7000	5.1000	1.6000	Versico
84	5.4000	3.0000	4.5000	1.5000	Versico
85	6.0000	3.4000	4.5000	1.6000	Versico
86	6.7000	3.1000	4.7000	1.5000	Versico
87	6.3000	2.3000	4.4000	1.3000	Versico
88	5.6000	3.0000	4.1000	1.3000	Versico
89	5.5000	2.5000	4.0000	1.3000	Versico

Select Assignment

- Assignment No.1
- Assignment No.2
- Assignment No.3 and 4
- Assignment No.5

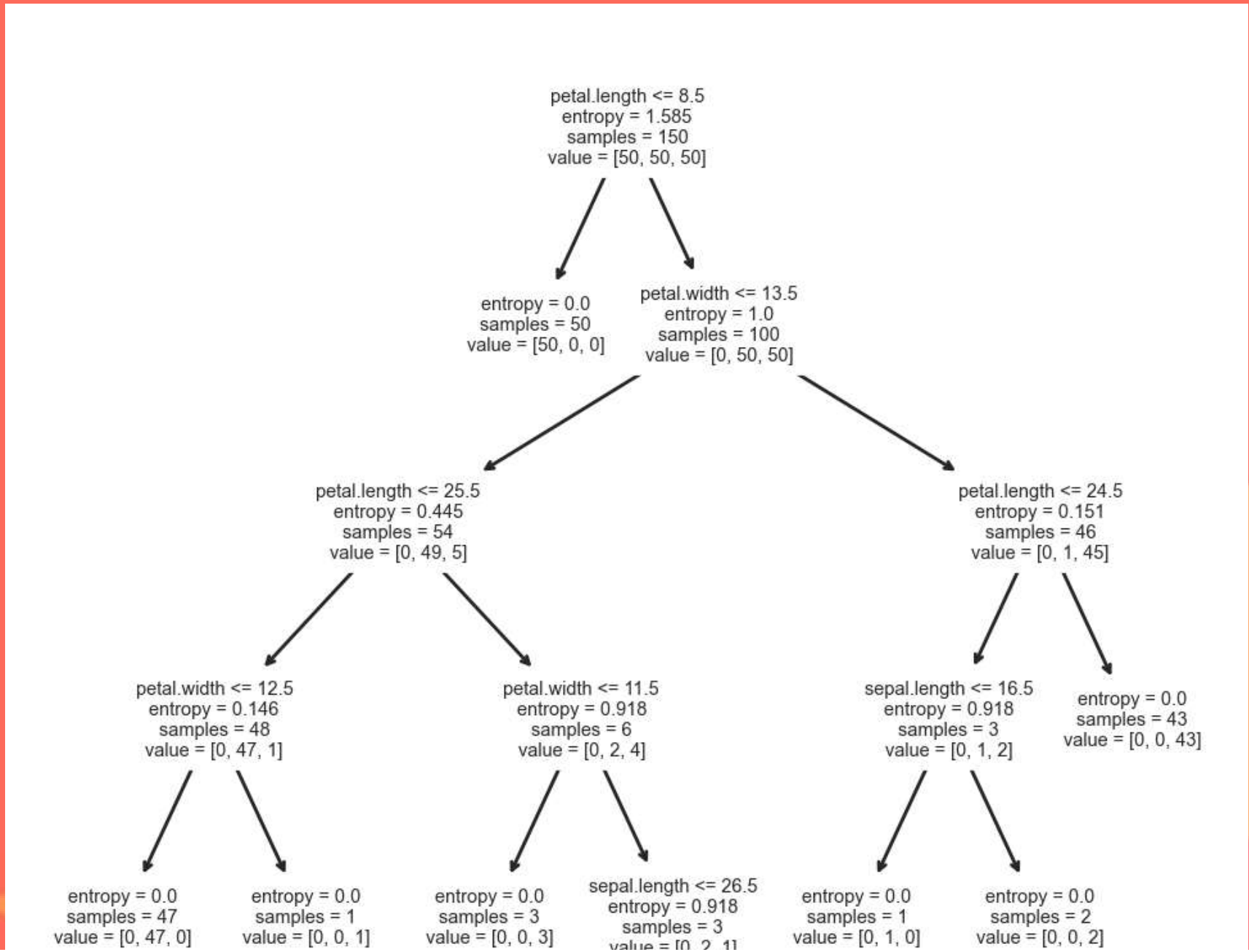
Assignment 3

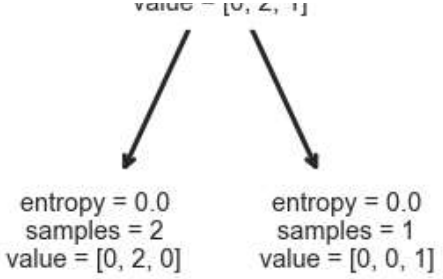
Information gain

Gini Index

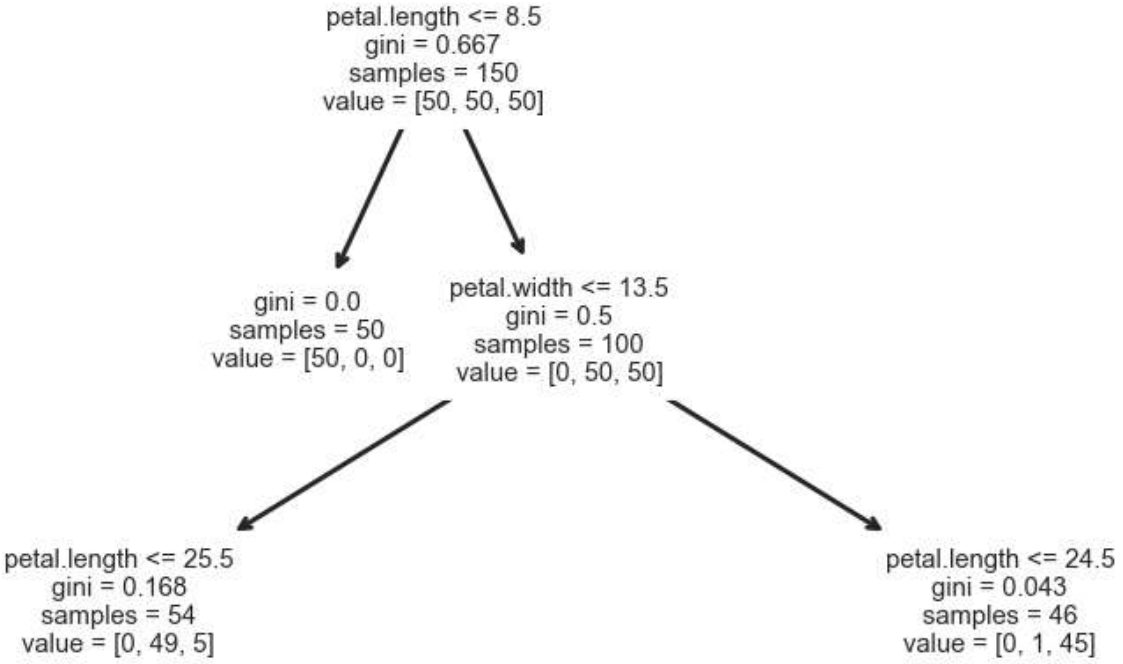
Decision Tree

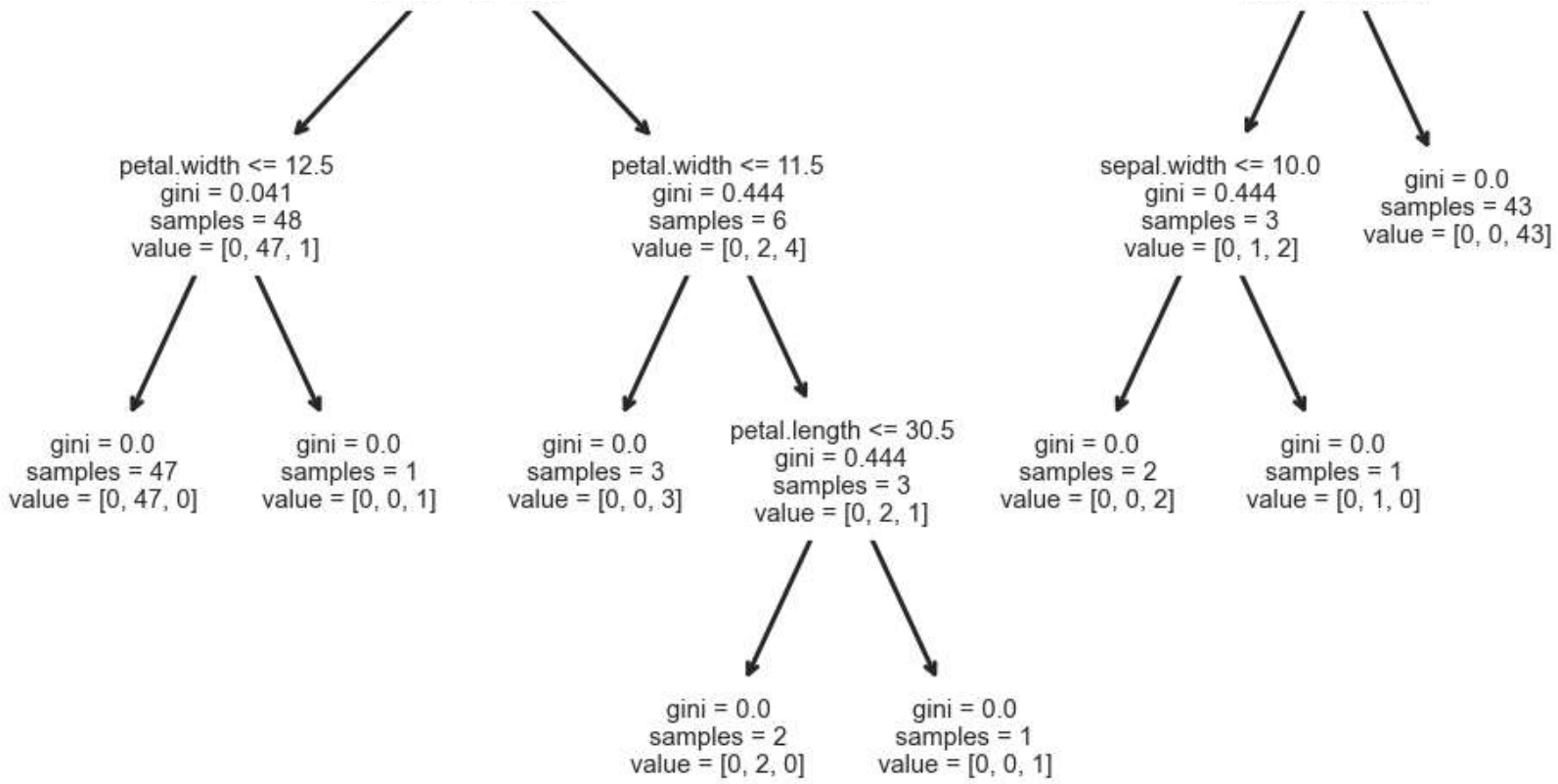
Criteria:Information Gain



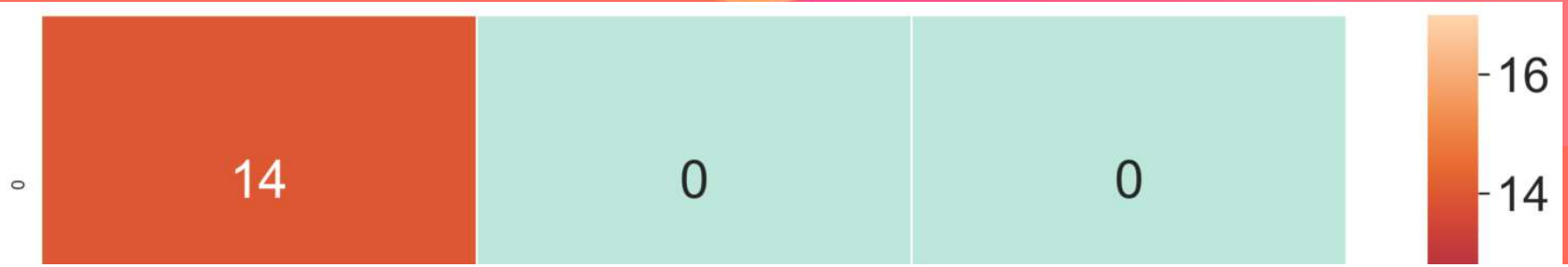


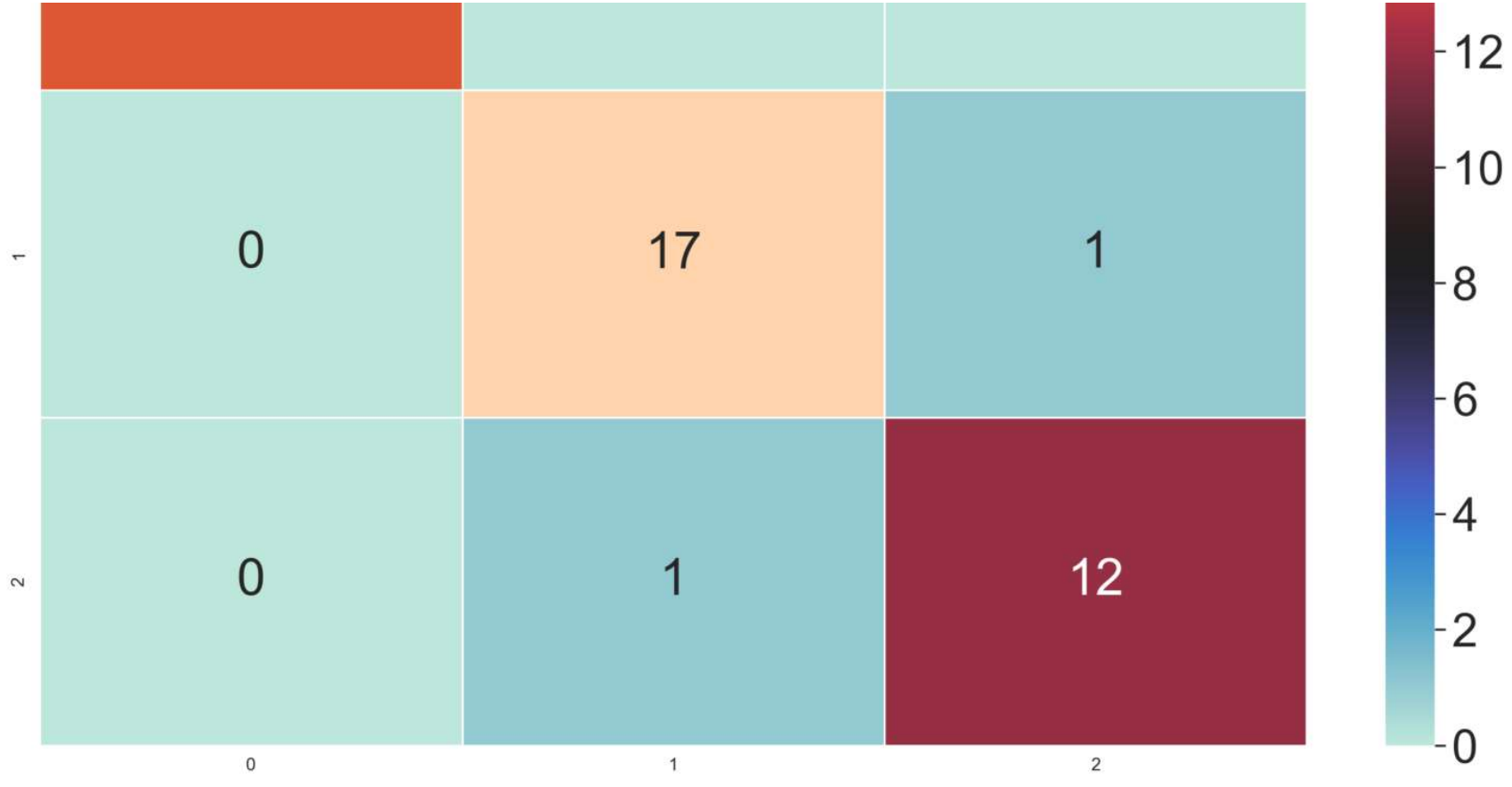
Criteria:Gini Index





Confusion Matrix:





Performance :

Accuracy score : `0.9555555555555556`

Misclassification Rate : `0.0444444444444444`

Precision score : `0.9558404558404558`

Recall(Sensitivity): 0.9558404558404558

Specificity: 0.9558404558404558

Rule Base Classifier

```
|--- petal.width <= 0.80
|   |--- class: Setosa
|--- petal.width >  0.80
|   |--- petal.width <= 1.65
|   |   |--- class: Versicolor
|   |--- petal.width >  1.65
|   |   |--- class: Virginica
```

Extract Code Rules

```
def predict(sepal.l, sepal., petal.l, petal.):

if petal.length <= 8.5:

return [[50.  0.  0.]]

else:  # if petal.length > 8.5

if petal.width <= 13.5:

if petal.length <= 25.5:
```

```
        if petal.width <= 12.5:
        return [[ 0. 47.  0.]]

        else:  # if petal.width > 12.5

        return [[0. 0. 1.]]

        else:  # if petal.length > 25.5

        if petal.width <= 11.5:

        return [[0. 0. 3.]]

        else:  # if petal.width > 11.5

        if petal.length <= 30.5:

        return [[0. 2. 0.]]

        else:  # if petal.length > 30.5

        return [[0. 0. 1.]]

        else:  # if petal.width > 13.5

        if petal.length <= 24.5:

        if sepal.width <= 10.0:

        return [[0. 0. 2.]]

        else:  # if sepal.width > 10.0
```

```
        return [[0. 1. 0.]]

    else:  # if petal.length > 24.5

        return [[ 0.  0. 43.]]
```

Made with Streamlit