Wnioski jak parametry i wybrane kernele wpływają na wyniki:
W przypadku drzewa decyzyjnego widać że ustawienie max_depth na nieograniczony znacząco zwiększa accuracy dla zbioru uczącego się, ale już dla zbioru testowego nie ma takich istotnych zysków, oznacza że drzewo za bardzo dopasowuje się do zbioru na którym się uczy.
Dla klasyfikatora SVM widać że trzeba odpowiednio dobierać kernel to dostarczonych danych, dzielenie danych linią prostą radzi sobie słabo dla obu datasetów, accuracy zbioru testowanego można zwiększyć poprzez osłabianie regularyzacji, np rbf 1.04 daje 60% accuracy dla test zbioru kosztem zmniejszenia accuracy dla zbioru trenującego

```
criterion = 'gini'
max_depth = 6
kernel = 'rbf'
regularisation_c = 1.0
```

```
=== Decision Tree ===
Training accuracy : 0.591628381827463
Test accuracy     : 0.5663265306122449
=== SVM ===
Training accuracy : 0.6135783563042368
Test accuracy     : 0.5989795918367347
=== Decision Tree 2nd ===
Training accuracy : 0.971875
Test accuracy     : 0.85
=== SVM 2nd ===
Training accuracy : 0.9125
Test accuracy     : 0.8875
```

```
criterion = 'gini'
max_depth = None
kernel = 'rbf'
regularisation_c = 0.4
```

```
=== Decision Tree ===
Training accuracy : 1.0
Test accuracy     : 0.6408163265306123
=== SVM ===
Training accuracy : 0.5826952526799387
Test accuracy     : 0.5846938775510204
=== Decision Tree 2nd ===
Training accuracy : 0.996875
Test accuracy     : 0.85
=== SVM 2nd ===
Training accuracy : 0.915625
Test accuracy     : 0.875
```

```
criterion = 'entropy'
max_depth = None
kernel = 'linear'
regularisation_c = 1.0
```

```
=== Decision Tree ===
Training accuracy : 1.0
Test accuracy     : 0.6295918367346939
=== SVM ===
Training accuracy : 0.5224604389994896
Test accuracy     : 0.5214285714285715
=== Decision Tree 2nd ===
Training accuracy : 0.996875
Test accuracy     : 0.85
=== SVM 2nd ===
Training accuracy : 0.859375
Test accuracy     : 0.7875
```

```
criterion = 'entropy'
max_depth = 6
kernel = 'linear'
regularisation_c = 0.4
```

```
=== Decision Tree ===
Training accuracy : 0.5724859622256253
Test accuracy     : 0.539795918367347
=== SVM ===
Training accuracy : 0.5224604389994896
Test accuracy     : 0.5214285714285715
=== Decision Tree 2nd ===
Training accuracy : 0.9625
Test accuracy     : 0.875
=== SVM 2nd ===
Training accuracy : 0.853125
Test accuracy     : 0.7875
```

```
criterion = 'gini'
max_depth = 5
kernel = 'rbf'
regularisation_c = 1.04
```

```
=== Decision Tree ===
Training accuracy : 0.5684022460439
Test accuracy     : 0.5357142857142857
=== SVM ===
Training accuracy : 0.6125574272588055
Test accuracy     : 0.6
=== Decision Tree 2nd ===
Training accuracy : 0.95625
Test accuracy     : 0.85
=== SVM 2nd ===
Training accuracy : 0.9125
Test accuracy     : 0.8875
```