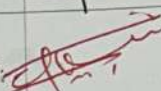
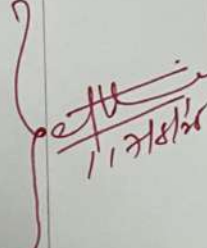


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Serial. No.	Topic.	Date.	Signature.
1	Exploring the Deep Learning Platforms & Frameworks	31/07/2025	
2	Implement a Classifier using an open-source dataset	7/8/2025	
3	Study of Classifiers with respect to Statistical Parameter	7/8/2025	

Experiment 3 - Study of Classifiers with Respect to Statistical Parameters

6/8/25

Aim:

To study the performance of different classifiers using statistical parameters like accuracy, precision, recall & F1 score.

Pseudocode:

- 1) Import required libraries.
 - pandas, scikit-learn, metrics, train-test split.
- 2) Load the dataset (open-source). (Iris dataset).
- 3) Split into features & labels.
- 4) Divide data into train and test sets.
- 5) For each classifier:
 - Instantiate.
 - Fit on training data.
 - Predict.
 - Calculate metrics.
- 6) Compare statistical results.

Observation:-

- Statistical parameters like accuracy, precision, recall, and F1 score are displayed for each classifier.

Result:-

- Performance metrics for each classifier are tabulated & compared.
- Random Forest classifier may outperform others on the chosen dataset.

~~2/11/25~~
~~11/11/25~~

20/01/20

Classifier	Accuracy	Precision	Recall	F-1
Random Forest	1	1	1	1
Decision Tree	1	1	1	1
Naïve Bayes	0.977	0.9761	0.974	0.974

Random Forest & Decision Tree appear to have same ^{perfect} results.

It seems to have been overfitted but the simplicity of 'iris' dataset makes this occur.

```
jupyter-ra2311047010014@cintel:~/DLT$ python knn-week2.py
```

```
Random Forest Results:
```

```
Accuracy : 1.0
```

```
Precision: 1.0
```

```
Recall    : 1.0
```

```
F1 Score  : 1.0
```

```
Decision Tree Results:
```

```
Accuracy : 1.0
```

```
Precision: 1.0
```

```
Recall    : 1.0
```

```
F1 Score  : 1.0
```

```
Naive Bayes Results:
```

```
Accuracy : 0.9777777777777777
```

```
Precision: 0.9761904761904763
```

```
Recall    : 0.9743589743589745
```

```
F1 Score  : 0.974320987654321
```