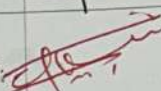
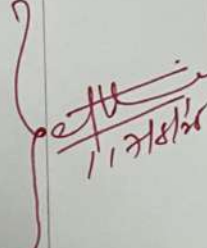


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Serial. No.	Topic.	Date.	Signature.
1	Exploring the Deep Learning Platforms & Frameworks	31/07/2025	
2	Implement a Classifier using an open-source dataset	7/8/2025	
3	Study of Classifiers with respect to Statistical Parameter	7/8/2025	

1. Jupyter Notebook.

Type: Local; open source.

An interactive coding interface where code is written in cells.

Advantages:-

Easy to use.

Supports Markdown and charts.

Works offline.

Disadvantages:-

No built in GPU unless you configure it;

Must manage libraries, drivers.

2. Google Colab.

Allows you to write and execute Python in your browser.

Type: Cloud-based Jupyter Notebook.

Advantages:-

Free GPU/TPU access

Auto-saves.

Pre-installed libraries.

Disadvantages:-

Limited GPU session time

Internet connection req.

Limited customisation compared to local setup

Ideal for: Students, quick prototyping.

3. Kaggle Kernels.

Allows you to write notebook using dataset from Kaggle

Type: Cloud-based Jupyter Notebook integrated into Kaggle.

Advantages:-

Free GPU

1-click access to thousands of public datasets.

Disadvantages:-

Less flexible than Colab

Some libraries may be outdated or require custom install

Ideal for: Data competitions, testing model on benchmark dataset.

Exploring the Deep Learning Framework.

31/07/25

Deep learning frameworks are software libraries that provide building blocks to create, train and deploy deep neural network. They handle mathematical operations automatically.

1. Tensor Flow

- Supports both static (graph-based) and eager execution.
- Scalable from mobile devices to large clusters.
- Offers tools like TensorBoard (visualization), TF HITS.

Language: Python, C++, JavaScript

Use cases

- Industry grade application, mobile AI.

2. PyTorch

- Uses dynamic graph computation graphs.
- Pythonic and beginner friendly.
- Supports distributed training.
- Preferred in research and academic.

Use cases:

Research experiments, quick prototyping

3. Keras

- Developed by Francois Chollet.
- High-level API built on top of TensorFlow
- Simple & intuitive interface.
- Fast model building with fewer lines of code.

Observation:

~~Observation:~~

All of these platforms are very user friendly and ultimately each of them is marginally different from the others.

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31/07/25