

accuracy :- 96.67

confusion matrix

$$\begin{bmatrix} 1 & 0 & 0 \end{bmatrix}$$

$$\begin{bmatrix} 0 & 12 & 1 \end{bmatrix}$$

$$\begin{bmatrix} 0 & 0 & 6 \end{bmatrix}$$

classification Report:-

	Precision	recall	f1score	support
setosa	1.00	1.00	1.00	11
Versicolor	1.00	0.92	0.96	13
virginica	0.86	1.00	0.92	6

	Precision	recall	f1score	support
accuracy	1.00	1.00	0.97	30
macroavg	0.95	0.97	0.96	30
weightedavg	0.97	0.97	0.97	30

# 1 Exploring Deep learning platforms

Aim:-

To explore Deep learning platforms

objective:-

To explore various deep learning tools such as tensorflow; pytorch; keras and google colab and understand their key features.

platforms explored:-

1) Jupyter notebook :- Interactive code execution visualization. supports many languages via kernels; data science visualization model testing

2) Keras :- A high level API that runs on top of tensor and flow easy to use for beginners.

3) Tensor flow:- Developed by google, support both cpu & gpu processing used for building training neural network.

4) ~~google colab~~ :- cloud based jupyter notebook with free access to gpus, support tensor flow

5) Pytorch :- Developed by facebook; offers dynamic computational graphs, more flexible and pythonic.

Platform	Creator	Features	Purpose/Case
google colab.	google	Free GPU /TPU Browser Based, no setup needed	educational experiment training DL models
jupyter notebook	Project Jupyter	Interactive code execution/visualization	Data science visualization Model testing
Tensorflow	google	Scalable, production ready, supports TFLite, TensorFlow.js	mobile apps/NLP Image creation health care AI
PyTorch	facebook	Dynamic computation graph, easy debugging	Research, academic projects, real-time vision applications
Keras	TensorFlow, now part of TensorFlow	High level API, easy model building tools, TensorFlow backed	Quick prototyping, beginner projects

## graph type

- 1) Google Colab = N/A (platform not framework)
- 2) Jupyter notebook = N/A (IDE interface)
- 3) Tensorflow = static
- 4) PyTorch = Dynamic
- 5) Keras = Abstract

~~31/7/20~~  
~~conclusion:-~~

Exploring different DL platforms helped understanding their features setup and usage. Running basic scripts in tensorflow and pytorch gave hands on experience with model building.