Experiment 1
24/7/2025

EXPLORING DEEP LEARNING PLATFORMS

1. TENSOR FLOW :-

Creator: Google brain (2015)

Main Features:
- → Supports CPUs, GPUs, TPUs
- → Large ecosystem
- → Production ready

Use Cases:
- → Large Scale ML/DL deployment
- → Image classification
- → NLP

2. PYTORCH :-

Creator: Facebook AI Research (2016)

Main Features:
- → Dynamic Computation graphs
- → Pythonic & easy debugging
- → Strong community support

Use Cases:
- → Research experiments
- → Computer vision
- → NLP

3. GOOGLE COLAB :-

Creator: Google (2017)

Main Features
- → Cloud based jupyter environment
- → Free GPU/TPU support
- → easy sharing via google drive

Use Cases
- → Quick prototyping
- → Learning deep learning without local setup

4. Jupyter Notebook (Open Source)

Main Features → Interactive Coding
→ Markdown + visualization support
→ Works with multiple languages

Use Cases → Data science workflows
→ Teaching & documentation

Platform	Key Differences
TensorFlow	Uses static computation graphs. More production-ready with strong deployment support
PyTorch	Uses dynamic computation graphs.
Google Colab	Cloud-based, free GPU/TPU support, no installation needed
Jupyter Notebook	Local interactive environment supports multiple languages

Result: Successfully explored different platforms

1/31/2025