Jodhpur Institute of Engineering & Technology
Scheme and Syllabus
Branch: CSE (AI and ML)

Syllabus - V Semester
5AIML4-22: Artificial Neural Networks Lab

Credits: 1.5   **Max. Marks: 75 (IA:45, ETE: 30)**
0L+0T+3P   **End Term Exam: 3 Hours**
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Unit	Objectives
1	Introduction to popular Machine Learning Toolkits such as NumPy, Scikit-learn, Python Pandas, TensorFlow and Keras.
2	Introduction to Streamlit for Machine Learning Applications.
3	Implement the Perceptron Model for Basic Logical Functions like Logical AND, Logical NOT and Logical OR.
4	Plot various types of Activation Functions used in Artificial Neural Networks.
5	Train a Feed Forward Neural Network.
6	Implement Hebb's Rule for Basic Logical Functions.
7	Train a Feed Forward Neural Network with Back Propagation.
8	Implement Self Organizing Map Algorithm.
9	Implement Learning Vector Quantization Algorithm.
10	Case Study: Comparative Study of Convolutional and Recurrent Neural Networks

Suggested References/Books:
1. Datasets to be considered from MNIST, UCI Library.
2. Hands-On Neural Networks by Leonardo De Marchi , Laura Mitchell , Packt Publications