

# Personalized Learning Plan

## Create Study Schedule

Study Plan for B.Tech. Artificial Intelligence and Data Science - Deep Learning Techniques

Week 1-2:

Module I - Introduction to Deep Learning:

- Learn about learning algorithms, maximum likelihood estimation, neural networks, multilayer perceptron, back-propagation algorithm, and stochastic gradient descent.

Week 3-4:

Module II - Deep Learning Architectures:

- Explore machine learning and deep learning, representation learning, neural network width and depth, activation functions, unsupervised training, and deep learning applications.

Week 5-6:

Module III - Deep Learning Networks:

- Study the historical context of deep learning, classes of deep learning networks, unsupervised and supervised learning, and hybrid deep networks.

Week 7-8:

Module IV - CNN Architecture & Sequence Modelling:

- Delve into CNN architecture, sequence modeling, popular CNN architectures like ResNet and AlexNet, recurrent neural networks, bidirectional RNNs, LSTM networks, and applications.

Week 9-10:

Module V - Practical Methodology and Application:

- Learn about cross-validation, feature selection, regularization, baseline models, selecting hyperparameters, debugging strategies, and practical examples in computer vision, speech recognition, and NLP.

Note: Each week corresponds to approximately 9 hours of study time. Total hours for the course is 45 hours.

## **End of Plan**

Thank you for using Aura's Learning Plan Generator!