

DEEP LEARNING LAB

IV Year B. Tech CSE (AI & ML) I Sem.

Course Code:

Course Outcomes:

Upon the Successful Completion of the Course, the Students would be able to:

1. Learn The Fundamental Principles of Deep Learning.
2. Identify The Deep Learning Algorithms for Various Types of Learning Tasks in various domains.
3. Implement Deep Learning Algorithms and Solve Real-world problems.

List of Programs:

1. Implementation of Linear Regression
2. Deep learning Packages Basics: TensorFlow, Keras and PyTorch
3. Implementation of Neural network
4. Face recognition using CNN
5. Sentiment Analysis using LSTM
6. Language Modeling using RNN
7. Sentiment Analysis using GRU
8. Image Classification with Transfer Learning

TEXT BOOKS:

1. Deep Learning by Ian Goodfellow, Yoshua Bengio and Aaron Courville, MIT Press.
2. The Elements of Statistical Learning. Hastie, R. Tibshirani, J. Friedman, Springer.
3. Probabilistic Graphical Models. Koller, and N. Friedman, MIT Press.

REFERENCE BOOKS:

1. Bishop, C., M., Pattern Recognition and Machine Learning, Springer, 2006.
2. Yegnanarayana, B., Artificial Neural Networks PHI Learning Pvt. Ltd, 2009.
3. Golub, G., H., and Van Loan, C., F., Matrix Computations, JHU Press, 2013.
4. Satish Kumar, Neural Networks: A Classroom Approach, Tata McGraw-Hill Education, 2004.