2CSDE61 - Deep Learning

Lesson Planning

Session No.	Topics	Mapped CLO
1	Overview of the Course, Discussion of Course Website/Moodle, Importance of the Course, Evaluation, Linkages of the Course with other Courses and Professional Relevance	-
2	Perceptron Learning	1
3	Feed Forward Neural Networks	1
4	Backpropagation	1
5	Unstable Gradient Problem	1
6	Limitations of Feed Forward Neural Networks for Computer Vision Problems	1
7, 8, 9	Convolution, Pooling, Batch Normalization	2
10	Dropout	2
11, 12	LeNet	3
13, 14, 15	AlexNet	3
17	Transfer Learning Scenarios and Applications of Transfer Learning	2
18	Transfer Learning Methods	2
19	Fine Tuning	2
20	Data Augmentation	2
21	Domain Adaptation	2
22	Image Classification	3
23	Image Classification with Localization	3
24-26	Semantic Segmentation	3
27-29	Object Detection	3
30-31	Recurrent Neural Networks (RNN)	2
32	Language Modeling	3

33	Long-Short Term Memory Network	2
34	Gated Recurrent Unit	2
35	Bi-directional RNN	2
36	Deep RNN	2
37	Applications of Sequence Models	3
38-39	Auto encoders and Stacked Auto encoders	2, 3
40-42	Generative Adversarial Networks	2, 3
43-44	Deep Reinforcement Learning	2, 3
45	Review of the course, Feedback related to the course, Linkages with advanced course/s in succeeding years.	-