

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Even Semester – 2021-22  
 LESSON PLAN

Teacher : Dr. Srinath.S Semester Starting: 07.03.2022  
 Class & Section : VIII Sem. 'A', 'B' & 'C' Section Semester Ending on: 26.06.2022  
 Subject with Code : CS812 – Deep Learning Architecture

Sl. #	Date	Unit	Topic/s to be covered
1.	11/03/2022	Unit - 1	Introduction
2.	12/03/2022		Biological to Artificial Neuron
3.	12/03/2022		Training MLP
4.	18/03/2022		Training a DNN with Tensorflow
5.	19/03/2022		Fine Tuning Hyper parameters
6.	19/03/2022		NN Hyper parameter fine tuning
7.	25/03/2022		Up and running with Tensorflow
8.	26/03/2022	Unit - 2	Deep Neural Network
9.	26/03/2022		Introduction
10.	01/04/2022		Vanishing Gradient Problem
11.	08/04/2022		Reusing Pretrained Layers
12.	09/04/2022		Reusing Pretrained Layers
13.	16/04/2022		Faster Optimizers
14.	16/04/2022		Faster Optimizers
15.	22/04/2022	CO-3	Avoiding overfitting through regularization
16.	23/04/2022		Distributing Tensor flow across devices and servers
17.	23/04/2022		Multiple devices on a single machine
18.	29/04/2022		Multiple servers
19.	30/04/2022		Parallelizing NN on tensor flow
20.	30/04/2022		Cluster convolution neural network
21.	06/05/2022		Cluster convolution neural network
22.	07/05/2022	CO-4	Architecture of the visual cortex
23.	07/05/2022		Convolution layer, pooling layer, CNN architecture
24.	13/05/2022		Recurrent Neural Network
25.	14/05/2022		Recurrent Neurons
26.	14/05/2022		Basic RNN in Tensor flow
27.	20/05/2022		Training RNN
28.	21/05/2022		Training RNN
29.	21/05/2022		Deep RNN
30.	27/05/2022		LSTM Cell
31.	28/05/2022	GRU Cell, NLP	

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32.	28/05/2022	CO-5	Autoencoders Efficient data representation
33.	03/06/2022		Performing PCA
34.	04/06/2022		Stacked autoencoders, Unsupervised pertaining using SA
35.	04/06/2022		Denoising, Sparse autoencoders
36.	10/06/2022		Variational and other autoencoders
37.	11/06/2022		Reinforcement learning
38.	11/06/2022		Learning to optimize, reward policy search OPEN AI
39.	17/06/2022		Markov Decision processes, TDL and Q learning Deep Q Learning

### Plan of action

- **Continuous Internal Evaluation process will be conducted for 50marks**

3 tests and 2 events will be conducted

TEST 1	EVENT 1	TEST 2	EVENT 2	TEST 3	Total
20 marks	Test based on the problems in Unit 1 & 2 (20 Marks)	20 marks	Mini Project- Considering the topics of Supervised and Unsupervised classifier (20 Marks)	20 marks	Total marks will be reduced to 50 marks

Teaching Methodology: Black board, Multimedia projector, Digital smart board, Mini Project Presentation

Dr. Srinath.S

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