

DEPARTMENT OF COMPUTER SCIENCE & DESIGN

Lesson Plan & Work-done Diary for AY: 2026-27, ODD Semester

Course with Code: Deep Learning (BCS714A)				Faculty: Mrs. Harshitha M K			Semester & Section: VII	
Class No.	Date Planned (DD/MM)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
MODULE-1								
1		Course Introduction & Deep Learning Overview	PPT	1				
2		Biological and Machine Vision: Biological Vision, Machine Vision: The Neocognitron, LeNet-5,	PPT	2				
3		The Traditional Machine Learning Approach, ImageNet and the ILSVRC, AlexNet, TensorFlow Playground.	PPT	3				
4		Human and Machine Language: Deep Learning for Natural Language Processing: Deep Learning Networks Learn Representations Automatically, Natural Language Processing,	PPT	4				
5		A Brief History of Deep Learning for NLP, Computational Representations of Language: One-Hot Representations of Words,	PPT	5				
6		Word Embeddings, Word2Vec,	PPT	6				
7		Word-Vector Arithmetic, word2viz, Localist Versus Distributed Representations,	PPT	7				
8		Elements of Natural Human Language	PPT	8				

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MODULE-2								
1		Parameter Norm Penalties, Norm Penalties as Constrained Optimization,	PPT	1				
2		Regularization and Under-Constrained Problems, Dataset Augmentation, Noise Robustness,	PPT	2				
3		Semi- Supervised Learning, Multi-Task Learning, Early Stopping,	PPT	3				
4		Parameter Tying and Parameter Sharing, Sparse Representations,	PPT	4				
5		Optimization for Training Deep Models: How Learning Differs from Pure Optimization,	PPT	5				
6		Basic Algorithms.	PPT	6				
7		Parameter Initialization Strategies,	PPT	7				
8		Algorithms with Adaptive Learning Rates	PPT	8				

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MODULE-3								
1		The Convolution Operation,	PPT	1				
2		Motivation,	PPT	2				
3		Pooling,	PPT	3				
4		Convolution and Pooling as an Infinitely Strong Prior,	PPT	4				
5		Variants of the Basic Convolution Function,	PPT	5				
6		Structured Outputs, Data Types,	PPT	6				
7		Efficient Convolution Algorithms	PPT	7				
8		Convolutional Networks and the History of Deep Learning.	PPT	8				

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MODULE-4								
1		Recurrent and Recursive Nets: Unfolding Computational Graphs,	PPT	1				
2		Recurrent Neural Networks,	PPT	2				
3		Recurrent Neural Networks,	PPT	3				
4		Bidirectional RNNs,	PPT	4				
5		Encoder-Decoder Sequence to-Sequence Architectures,	PPT	5				
6		Deep Recurrent Networks,	PPT	6				
7		Recursive Neural Networks.	PPT	7				
8		Long short-term memory.	PPT	8				

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MODULE-5								
1		Natural Language Processing: Preprocessing Natural Language Data: Tokenization,	PPT	1				
2		Converting All Characters to Lowercase, Removing Stop Words and Punctuation, Stemming, Handlingn-grams, Preprocessing the Full Corpus,	PPT	2				
3		Creating Word Embeddings with word2vec: The Essential Theory Behind word2vec, Evaluating Word Vectors, Running word2vec, Plotting Word Vectors,	PPT	3				
4		The Area under the ROC Curve: The Confusion Matrix, Calculating the ROC AUC Metric,	PPT	4				
5		Natural Language Classification with Familiar Networks: Loading the IMDb Film Reviews, Examining the IMDb Data, Standardizing the Length of the Reviews,	PPT	5				
6		Dense Network, Convolutional Networks	PPT	6				
7		Networks Designed for Sequential Data: Recurrent Neural Networks, Long Short-Term Memory Units,	PPT	7				
8		Bidirectional LSTMs, Stacked Recurrent Models, Seq2seq and Attention, Transfer Learning in NLP.	PPT	8				

	Activity	Planned	Actual	Remarks
1	Theory Classes	40		
2	Assignments/ Quizzes/ Self-study	02		
3	Tutorials/ Extra classes	05		
4	Internal Assessments	03		
5	ICT based Teaching (% of usage in Curriculum)	100%		
Planning			Execution	
Faculty Signature:			Faculty Signature:	
HoD Signature:			HoD Signature:	