Tentative schedule of Deep Learning Coure on PadhAI				
From	To	Content Type	Content	
Jan-29	Jan-31	Theory	Jargon Busting	
Feb-1	Feb-1	Gyaan	Kickoff	
Feb-2	Feb-3	Hands-on	Python Basics 1, 2	
Feb-4	Feb-6	Theory	Expert Systems, 6 jars	vectors and matrices
Feb-7	Feb-8	Hands-on	Python Linear Algebra	
Feb-9	Feb-10	Theory	MP Neuron, Perceptron	**Live Session**
Feb-11	Feb-13	Hands-on	Python MP Neuron, Perceptron, Test/Train	
Feb-14	Feb-15	Gyaan	Kaggle, Github, Reproducability, Test/Train, Google Facet	
Feb-16	Feb-17	Contest	1.1 Mobile phone like/dislike predictor	
Feb-18	Feb-20	Theory	Sigmoid Neuron, Gradient Descent	
Feb-21	Feb-22	Hands-on	Python Sigmoid, Gradient Descent	
Feb-23	Feb-24	Theory	Probability Theory	Cross Entropy, KL Divergence, Sigmoid with CE, Live Session
Feb-25	Feb-27	Hands-on	Engineering best practices: setting learning rate, initial weights, data augmentation, normalization, class imbalance	
Feb-28	Mar-1	Contest	1.2 Binary Text/NoText Classification	
Mar-2	Mar-3	Contest	1.3 Binary Text/NoText Classification Advanced	
Mar-4	Mar-6	Theory	Derivatives, Partial Derivatives, Gradients	Representation Power of functions, Feedforward Neural Networks, Multiclass classification
Mar-7	Mar-8	Hands-on	Contest 1.2 analysis	Contest 1.3 analysis
Mar-9	Mar-10	Theory	Backpropagation (scalar), mini-batch training	**Live Session**
Mar-11	Mar-13	Theory	Backpropagation (vectorized)	
Mar-14	Mar-15	Hands-on	Numpy Feedforward Neural Networks, Backpropagation	Numpy Backpropagation (vectorized)
Mar-16	Mar-17	Contest	2.1 Classify Language of the text	
Mar-18	Mar-20	Theory	Optimization Algorithms (Momentum, Nesterov, AdaGrad, RMSProp, Adam)	Bias correction in Adam
Mar-21	Mar-22	Hands-on	Numpy Optimization Algorithms	
Mar-23	Mar-24	Theory	Activation Functions, Initialization Methods, Hyperparameter Tuning, Bias Variance Tradeoff, Regularization (L2)	
Mar-25	Mar-27	Hands-on	MLFlow, Experimenting with Deep models	
Mar-28	Mar-29	Contest	2.2 All characters of English	
Mar-30	Mar-31	Contest	2.3 All glyphs in Hindi	**Live Session**
			Loss function plot analysis	
Apr-1	Apr-3	Theory	Convolutional Neural Networks, AlexNet, ZFNet, VGGNet, Visulaization	
Apr-4	Apr-5	Hands-on	Contest 2.2, 2.3 analysis	PyTorch Basics, PyTorch CNN, PyTorch VGG, PyTorch visualization
Apr-6	Apr-7	Theory	GoogleNet, ResNet, Dropout, Batch Normalization (insight: just a scalar operation)	
Apr-8	Apr-10	Hands-on	PyTorch GoogleNet, ResNet, Dropout, BN	
Apr-11	Apr-12	Theory	Datasets, Crucial for benchmarking, Transfer Learning	PyTorch: Transfer Learning, Live Session
Apr-13	Apr-14	Contest	3.1 CNN based character/glyph recognition	
Apr-15	Apr-17	Theory	Object Detection (RCNN, Fast RCNN)	Object Detection (SSD, YOLO)
Apr-18	Apr-19	Hands-on	PyTorch RCNN, Fast RCNN	PyTorch SSD, YOLO
Apr-20	Apr-21	Contest	3.2 Object detection + CNN classifier for single character in image	**Live Session**
Apr-22	Apr-24	Contest	3.2 Object detection + CNN classifier for single character in image	
Apr-25	Apr-26	Theory	Sequence Modeling, Recurrent Neural Networks, BPTT	Vanishing Gradient Problem
Apr-27	Apr-28	Hands-on	Contest 3.1, 3.2 analysis	
Apr-29	May-1	Theory	LSTMs, GRUs	How LSTMs solve the Vanishing Gradient problem
May-2	May-3	Hands-on	PyTorch RNN, LSTM, GRUs	
May-4	May-5	Theory	Encoder decoder models, attention mechanism	**Live Session**
May-6	May-8	Hands-on	PyTorch Attention models	
May-9	May-10	Contest	4.1 English to Hindi transliteration with provided data	
May-11	May-12	Contest	4.2 Scrape dataset for Hindi to Tamil transliteration	
May-13	May-15	Capstone	Problem Setting	
May-16	May-17	Hands-on	Contest 4.1, 4.2 analysis	
May-18	May-19	Thoery	PixelLink, CRNN	History of Deep Learning, Current trends
May-20	May-22	Hands-on	Overview of Tensorflow, Keras	
May-23	May-24	Hands-on	Tensorflow PixelLink, CRNN	
May-25	May-26	Hands-on	Tensorflow Lite	**Live Session**
May-27	May-29	Capstone	Problem Solving	
May-30	May-31	Gyaan	Announcement of winners of garage, discussion of next steps	