

Deep Learning Workshop Daily Schedule: TENTATIVE/DRAFT				
Date	Day	Event	Lecture Topic	Lab Topics
Day 0	Sun	Students Arrive		
Day 1	Mon	Arrival, Welcome	Lecture: Intro to Machine Learning, What is Machine Learning? What is Deep Learning? Application areas	No lab
Day 2	Tues	Lectures, Lab 1	Part 1: History of Neural Networks and the Perceptron; Part 2: The Perceptron Learning Algorithm	Introduction - Introduction to Python, Implement perceptron learning algorithm
Day 3	Wed	Lectures, Lab 2	Feed-forward Neural Networks	Introduction to Pytorch
Day 4	Thur	Lectures, Lab 3	Basics of Backpropagation	Implementing initial NN architectures in Pytorch and training
	Fri	TBD		
	Sat	TBD		
	Sun	TBD		
Day 5	Mon	Lectures, Lab 4	Experimental Design and Parameter tuning; What is overfitting?	Implement and compare performance of pre-trained to newly trained architectures on a small/moderate dataset
Day 6	Tues	Lectures, Lab 5	Deep Learning training strategies: Batch/mini-batch/Online; Drop-out; Normalization and batch normalization	Apply and compare training strategies on a moderately-sized data set in Pytorch
Day 7	Wed	Lectures, Lab 6	Deep Learning training strategies continued: Data set curation; Pre-training/Transfer learning	Apply and compare training strategies on a moderately-sized data set in Pytorch
Day 8	Thur	Lectures, Lab 7	Introduction to Deep Convolutional Networks	Implementation of CNNs in Pytorch
	Fri	TBD		
	Sat	TBD		
	Sun	TBD		
Day 9	Mon	Lectures, Lab 8	Overview of additional deep learning architectures	Distribute competition data: Examine data sets; determine training/testing strategies; discuss/plan architecture to be used
Day 10	Tues	Lectures, Lab 9	Adversarial Examples in Deep Learning	Begin to create NN for competition
Day 11	Wed	Lectures, Start of Competition	Application of DL in Remote Sensing	Continue competition preparation and training/testing
Day 12	Thur	End of competition, Awards assembly	N/A	Demonstration of systems created for competition
	Fri	Leave		