Deep Learning Course Schedule

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1. Intro to supervised learning.

2. Overfitting, underfitting

3. What is a neural network?

4. Gradient Descent

5. Linear Regression, Logistic Regression

6. Activation functions

7. Softmax classifier

8. Data normalization

9. Back propagation

10. Random Initialization

11. Regularization

12. Dropout

13. Batch normalization

14. Data augmentation

15. Vanishing / Exploding gradients

16. Mini-batch gradient descent

17. Gradient descent with momentum

18. RMSprop

19. Adam optimization algorithm

20. Learning rate tricks

21. Batch normalization

22. Introduction to TensorFlow

23. Convolutional neural networks

24. ResNets

25. Inceptions

26. VGG

27. Transfer learning

28. Autoencoders

29. GANs

30. Multitask learning

31. Basic Recurrent Neural Networks

32. GRU

33. LSTM

34. Bidirectional RNN

35. Multicell RNNs

36. Attention models

37. Bayesian neural networks

38. Word2vec

39. Sequence to sequence models

40. GPU optimisations for Neural Networks