

NPTEL Video Lecture Topic List - Created by LinuXpert Systems, Chennai

NPTEL Video Course - Electrical Engineering - NOC:Modern Computer Vision

Subject Co-ordinator - Prof. A. N. Rajagopalan

Co-ordinating Institute - IIT - Madras

Sub-Titles - Available / Unavailable | MP3 Audio Lectures - Available / Unavailable

Lecture 1 - Course introduction - 1
Lecture 2 - Course introduction - 2
Lecture 3 - Introduction to Deep Learning - 1
Lecture 4 - Introduction to Deep Learning - 2
Lecture 5 - Introduction to Deep Learning - 3
Lecture 6 - Introduction to Neuron - 1
Lecture 7 - Introduction to Neuron - 2
Lecture 8 - Introduction to Neuron - 3
Lecture 9 - Multilayer Perceptron
Lecture 10 - Regression and classification losses
Lecture 11 - Training a neural network
Lecture 12 - Gradient descent
Lecture 13 - Activation function
Lecture 14 - Backpropagation in MLP - 1
Lecture 15 - Backpropagation in MLP - 2
Lecture 16 - Optimization and Regularization - 1
Lecture 17 - Optimization and Regularization - 2
Lecture 18 - Regularization
Lecture 19 - Dropout
Lecture 20 - Pre-processing
Lecture 21 - Convolutional Neural Networks - 1
Lecture 22 - Convolutional Neural Networks - 2
Lecture 23 - Convolutional Neural Networks - 3
Lecture 24 - CNN Properties
Lecture 25 - Alexnet
Lecture 26 - CNN Architectures - 1
Lecture 27 - CNN Architectures - 2
Lecture 28 - CNN Architectures - 3
Lecture 29 - Introduction to RNN - 1

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- Lecture 30 - Introduction to RNN - 2
- Lecture 31 - Encoder-Decoder models in RNN
- Lecture 32 - LSTM
- Lecture 33 - Low-level vision - 1
- Lecture 34 - Low-level vision - 2
- Lecture 35 - Low-level vision - 3
- Lecture 36 - Spatial Domain Filtering
- Lecture 37 - Frequency Domain Filtering
- Lecture 38 - Edge Detection - 1
- Lecture 39 - Edge Detection - 2
- Lecture 40 - DeepNets for Edge Detection
- Lecture 41 - Line detection
- Lecture 42 - Feature detectors
- Lecture 43 - Harris Corner Detector - 1
- Lecture 44 - Harris Corner Detector - 2
- Lecture 45 - Harris Corner Detector - 3
- Lecture 46 - Blob detection - 1
- Lecture 47 - Blob detection - 2
- Lecture 48 - Blob detection - 3
- Lecture 49 - SIFT - 1
- Lecture 50 - SIFT - 2
- Lecture 51 - Feature descriptors - 1
- Lecture 52 - Feature descriptors - 2
- Lecture 53 - SURF - 1
- Lecture 54 - SURF - 2
- Lecture 55 - Single-View Geometry - 1
- Lecture 56 - Single-View Geometry - 2
- Lecture 57 - 2D Geometric transformations - 1
- Lecture 58 - 2D Geometric transformations - 2
- Lecture 59 - Camera intrinsics and extrinsics - 1
- Lecture 60 - Camera intrinsics and extrinsics - 2
- Lecture 61 - Two-view stereo - 1
- Lecture 62 - Two-view stereo - 2
- Lecture 63 - Two-view stereo - 3
- Lecture 64 - Algebraic representation of epipolar geometry - 1
- Lecture 65 - Algebraic representation of epipolar geometry - 2
- Lecture 66 - Fundamental matrix computation - 1
- Lecture 67 - Fundamental matrix computation - 2
- Lecture 68 - Structure from Motion - 1

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- Lecture 69 - Structure from Motion - 2
- Lecture 70 - Structure from Motion - 3
- Lecture 71 - Batch processing in SFM
- Lecture 72 - Multi-view SFM
- Lecture 73 - Factorization methods in SFM
- Lecture 74 - Bundle adjustment
- Lecture 75 - Dense 3D reconstruction
- Lecture 76 - Some results in Stereo and SFM
- Lecture 77 - Deepnets for stereo and SFM - 1
- Lecture 78 - Deepnets for stereo and SFM - 2
- Lecture 79 - Mid-level vision - 1
- Lecture 80 - Mid-level vision - 2
- Lecture 81 - Lucas-Kanade method for OF
- Lecture 82 - Handling large motion in optical flow
- Lecture 83 - Image segmentation
- Lecture 84 - GMM for clustering
- Lecture 85 - Deepnets for Segmentation and OF -1
- Lecture 86 - Deepnets for Segmentation and OF -2
- Lecture 87 - Deepnets for Segmentation and OF -3
- Lecture 88 - Deepnets for Object Detection - 1
- Lecture 89 - Deepnets for Object Detection - 2
- Lecture 90 - Vision and Language