

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

NPTEL Video Course - Computer Science and Engineering - NOC:Data Science for Engineers

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Co-ordinating Institute - IIT - Madras

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

Lecture 1 - Data science for engineers Course philosophy and expectation

Lecture 2 - Introduction to R

Lecture 3 - Introduction to R (Continued...)

Lecture 4 - Variables and datatypes in R

Lecture 5 - Data frames

Lecture 6 - Recasting and joining of dataframes

Lecture 7 - Arithmetic, Logical and Matrix operations in R

Lecture 8 - Advanced programming in R

Lecture 9 - Advanced Programming in R

Lecture 10 - Control structures

Lecture 11 - Data visualization in R Basic graphics

Lecture 12 - Linear Algebra for Data science

Lecture 13 - Solving Linear Equations

Lecture 14 - Solving Linear Equations (Continued...)

Lecture 15 - Linear Algebra - Distance, Hyperplanes and Halfspaces, Eigenvalues, Eigenvectors

Lecture 16 - Linear Algebra - Distance, Hyperplanes and Halfspaces, Eigenvalues, Eigenvectors (Continued... 1)

Lecture 17 - Linear Algebra - Distance, Hyperplanes and Halfspaces, Eigenvalues, Eigenvectors (Continued... 2)

Lecture 18 - Linear Algebra - Distance, Hyperplanes and Halfspaces, Eigenvalues, Eigenvectors (Continued... 3)

Lecture 19 - Statistical Modelling

Lecture 20 - Random Variables and Probability Mass/Density Functions

Lecture 21 - Sample Statistics

Lecture 22 - Hypotheses Testing

Lecture 23 - Optimization for Data Science

Lecture 24 - Unconstrained Multivariate Optimization

Lecture 25 - Unconstrained Multivariate Optimization (Continued...)

Lecture 26 - Gradient (Steepest) Descent (OR) Learning Rule

Lecture 27 - Multivariate Optimization With Equality Constraints

Lecture 28 - Multivariate Optimization With Inequality Constraints

Lecture 29 - Introduction to Data Science

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

- Lecture 30 - Solving Data Analysis Problems - A Guided Thought Process
- Lecture 31 - Module
- Lecture 32 - Linear Regression
- Lecture 33 - Model Assessment
- Lecture 34 - Diagnostics to Improve Linear Model Fit
- Lecture 35 - Simple Linear Regression Model Building
- Lecture 36 - Simple Linear Regression Model Assessment
- Lecture 37 - Simple Linear Regression Model Assessment (Continued...)
- Lecture 38 - Multiple Linear Regression
- Lecture 39 - Cross Validation
- Lecture 40 - Multiple Linear Regression Modelling Building and Selection
- Lecture 41 - Classification
- Lecture 42 - Logistic Regression
- Lecture 43 - Logistic Regression (Continued...)
- Lecture 44 - Performance Measures
- Lecture 45 - Logistic Regression Implementation in R
- Lecture 46 - K-Nearest Neighbors (kNN)
- Lecture 47 - K-Nearest Neighbors implementation in R
- Lecture 48 - K-means Clustering
- Lecture 49 - K-means implementation in R
- Lecture 50 - Data Science for engineers - Summary