

TECHGENX

Machine Learning/ Artificial Intelligence with R

Please Note: All below course content will be covered in practical scenarios and regular assignments will be shared. All sessions will be recorded and shared with student for future reference (free of cost). Along with below course.

1. Applications of Machine Learning
2. Regression Types
3. Why Machine Learning is the Future
4. Presentation of the ML A-Z folder, Colaboratory, Jupyter Notebook and Spyder
5. Installing R and R Studio (Mac, Linux & Windows)
6. Data Preprocessing in R
7. Getting Started
8. Preparation of dataset
9. Dataset Description
10. Importing the Dataset
11. Taking care of Missing Data
12. Encoding Categorical Data
13. Splitting the dataset into the Training set and Test set
14. Feature Scaling
15. Data Preprocessing Template
16. Regression
17. Simple Linear Regression
18. Simple Linear Regression Intuition - Step 1
19. Simple Linear Regression Intuition - Step 2
20. Machine Learning A-Z folder
21. Simple Linear Regression in R - Step 1
22. Simple Linear Regression in R - Step 2
23. Simple Linear Regression in R - Step 3
24. Simple Linear Regression in R - Step 4
25. Multiple Linear Regression
26. Dataset + Business Problem Description
27. Multiple Linear Regression Intuition - Step 1
28. Multiple Linear Regression Intuition - Step 2
29. Multiple Linear Regression Intuition - Step 3
30. Multiple Linear Regression Intuition - Step 4
31. Understanding the P-Value
32. Multiple Linear Regression Intuition - Step 5
33. Multiple Linear Regression in R - Step 1
34. Multiple Linear Regression in R - Step 2

35. Multiple Linear Regression in R - Step 3
36. Multiple Linear Regression in R - Backward Elimination – Assignment
37. Multiple Linear Regression in R - Automatic Backward Elimination
38. Polynomial Regression
39. Polynomial Regression Intuition
40. Polynomial Regression in R - Step 1
41. Polynomial Regression in R - Step 2
42. Polynomial Regression in R - Step 3
43. Polynomial Regression in R - Step 4
44. R Regression Template
45. Support Vector Regression (SVR)
46. SVR Intuition (Updated!)
47. Heads-up on non-linear SVR
48. SVR in R
49. Decision Tree Regression
50. Decision Tree Regression Intuition
51. Decision Tree Regression in R
52. Random Forest Regression
53. Random Forest Regression Intuition
54. Random Forest Regression in R
55. Evaluating Regression Models Performance
56. R-Squared Intuition
57. Adjusted R-Squared Intuition
58. Preparation of the Regression Code Templates
59. Demo of powerful regression module.
60. Conclusion of Part 2 – Regression
61. Regression Model Selection in R
62. Evaluating Regression Models Performance – Assignment
63. Interpreting Linear Regression Coefficients
64. Regression
65. Classification
66. Welcome to Part 3 – Classification
67. Logistic Regression
68. Logistic Regression Intuition
69. Logistic Regression in R - Step 1
70. Logistic Regression in R - Step 2
71. Logistic Regression in R - Step 3
72. Logistic Regression in R - Step 4
73. Logistic Regression in R - Step 5
74. R Classification Template
75. Machine Learning Regression and Classification BONUS
76. Logistic Regression- Assignment

77. Logistic Regression Practical Case Study
78. K-Nearest Neighbors (K-NN)
79. K-Nearest Neighbor Intuition
80. K-NN in R
81. Support Vector Machine (SVM)
82. K-Nearest Neighbor- Assignment
83. SVM Intuition
84. SVM in R
85. Kernel SVM
86. Kernel SVM Intuition
87. Mapping to a higher dimension
88. The Kernel Trick
89. Types of Kernel Functions
90. Non-Linear Kernel SVR (Advanced)
91. Kernel SVM in R
92. Naive Bayes
93. Bayes Theorem
94. Naive Bayes Intuition
95. Naive Bayes Intuition (Challenge Reveal)
96. Naive Bayes Intuition (Extras)
97. Naive Bayes in R
98. Decision Tree Classification
99. Decision Tree Classification Intuition
100. Decision Tree Classification in R
101. Random Forest Classification
102. Random Forest Classification Intuition
103. Random Forest Classification in R
104. Demo of the POWERFUL CLASSIFICATION Code Templates
105. Evaluating Classification Models Performance
106. False Positives & False Negatives
107. Confusion Matrix
108. Accuracy Paradox
109. CAP Curve
110. CAP Curve Analysis
111. Conclusion of Part 3 – Classification
112. Clustering
113. K-Means Clustering
114. K-Means Clustering Intuition
115. K-Means Random Initialization Trap
116. K-Means Selecting The Number Of Clusters
117. K-Means Clustering in R
118. Hierarchical Clust

- 119. K-Means Clustering- Assignment
- 120. Hierarchical Clustering Intuition
- 121. Hierarchical Clustering How Dendrograms Work
- 122. Hierarchical Clustering Using Dendrograms
- 123. Hierarchical Clustering in R - Step 1
- 124. Hierarchical Clustering in R - Step 2
- 125. Hierarchical Clustering in R - Step 3
- 126. Hierarchical Clustering in R - Step 4
- 127. Hierarchical Clustering in R - Step 5
- 128. Hierarchical Clustering- Assignment
- 129. Conclusion of Part 4 – Clustering
- 130. Association Rule Learning
- 131. Welcome to Part 5 - Association Rule Learning.
- 132. Apriori
- 133. Apriori Intuition
- 134. Apriori in R - Step 1
- 135. Apriori in R - Step 2
- 136. Apriori in R - Step 3
- 137. Eclat
- 138. Eclat Intuition
- 139. Eclat in R
- 140. Reinforcement Learning
- 141. Upper Confidence Bound (UCB)
- 142. The Multi-Armed Bandit Problem
- 143. Upper Confidence Bound (UCB) Intuition
- 144. Upper Confidence Bound in R - Step 1
- 145. Upper Confidence Bound in R - Step 2
- 146. Upper Confidence Bound in R - Step 3
- 147. Upper Confidence Bound in R - Step 4
- 148. Thompson Sampling
- 149. Thompson Sampling Intuition
- 150. Algorithm Comparison: UCB vs Thompson Sampling
- 151. Thompson Sampling in R - Step 1
- 152. Thompson Sampling in R - Step 2
- 153. Natural Language Processing
- 154. NLP Intuition
- 155. Types of Natural Language Processing
- 156. Classical vs Deep Learning Models
- 157. Bag-Of-Words Model
- 158. Natural Language Processing in R - Step 1
- 159. Natural Language Processing in R - Step 2
- 160. Natural Language Processing in R - Step 3

- 161. Natural Language Processing in R - Step 4
- 162. Natural Language Processing in R - Step 5
- 163. Natural Language Processing in R - Step 6
- 164. Natural Language Processing in R - Step 7
- 165. Natural Language Processing in R - Step 8
- 166. Natural Language Processing in R - Step 9
- 167. Natural Language Processing in R - Step 10
- 168. Assignment
- 169. NLP BERT
- 170. Deep Learning
- 171. What is Deep Learning?
- 172. Artificial Neural Network
- 173. Plan of attack
- 174. The Neuron
- 175. The Activation Function
- 176. How do Neural Networks work?
- 177. How do Neural Networks learn?
- 178. Gradient Descent
- 179. Stochastic Gradient Descent
- 180. Backpropagation
- 181. Business Problem Description
- 182. ANN in R - Step 1
- 183. ANN in R - Step 2
- 184. ANN in R - Step 3
- 185. ANN in R - Step 4 (Last step)
- 186. BONUS: ANN Case Study
- 187. Convolutional Neural Networks
- 188. Plan of attack
- 189. What are convolutional neural networks?
- 190. Step 1 - Convolution Operation
- 191. Step 1(b) - ReLU Layer
- 192. Step 2 – Pooling
- 193. Step 3 – Flattening
- 194. Step 4 - Full Connection
- 195. Softmax & Cross-Entropy
- 196. Dimensionality Reduction
- 197. Principal Component Analysis (PCA)
- 198. Principal Component Analysis (PCA) Intuition
- 199. PCA in R - Step 1
- 200. PCA in R - Step 2
- 201. PCA in R - Step 3
- 202. Linear Discriminant Analysis (LDA)

- 203. Linear Discriminant Analysis (LDA) Intuition
- 204. LDA in R
- 205. Kernel PCA
- 206. Kernel PCA in R
- 207. Model Selection & Boosting
- 208. Model Selection
- 209. k-Fold Cross Validation in R
- 210. Grid Search in R
- 211. XGBoost
- 212. XGBoost in R