

1. What is Machine Learning
2. What is Supervised Learning, Unsupervised Learning, Reinforcement Learning
3. Features, Labels, and Dataset Splitting (Training, Validation, Testing)
4. Handling Missing Data
5. Data Normalization/Standardization
6. Encoding Categorical Data (One-Hot Encoding, Label Encoding)
7. Feature Selection and Engineering
8. Data Augmentation
9. Supervised Learning
10. Regression
 - a. Linear Regression
 - b. Gradient descent
 - c. Logistic regression
 - d. Polynomial Regression
 - e. Ridge and Lasso Regression
11. Classification
 - a. Logistic Regression
 - b. Decision Trees- ID3, CART, C4.5
 - c. Random Forest
 - d. Support Vector Machines (SVMs)
 - e. Naive Bayes
 - f. KNN

Unsupervised Learning

- Clustering
 - K-Means
 - Hierarchical Clustering
 - DBSCAN
- Dimensionality Reduction
 - Principal Component Analysis (PCA)
 - t-SNE
- Anomaly Detection

12. K medoids, single linkage, complete linkage