Machine Learning: Theory Assignment 1

1. What is data? Classify different types of data with proper examples.
2. Differentiate between nominal and ordinal data and discrete data and continuous data.
3. Differentiate between Supervised & Unsupervised Learning.
4. Why is data pre-processing important? How do you handle missing or corrupted data in a dataset?
5. What are outliers in machine learning? How can outliers be detected?
6. What is the significance of using pandas? What is Dataframe in pandas?
7. Why is NumPy faster than lists? What are the functions of the following: i) dot( ), ii) linang.inv( ), iii) flatten( )
8. What are the differences between vectors and tensors? Write the functions of scatter( ) and subplot( ) with example. What are Percentiles?
9. What is Regularisation in ML? Discuss the following terms: i) Overfitting, ii) Undercutting, iii) Bias, iv) Variance
10. Discuss different types of Regularisation Techniques. What is Elastic Net?
11. What is Data Distribution? What is the significance of Distplots in data distribution?
12. What is 'training set' and 'test set' in a ML model? How much data will you allocate for your training, validation, and test sets?