ASSIGNMENT - 1

**Case Study on Stock market Predication**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Date** | **Open** | **High** | **Low** | **Close** | **Volume** | **Avg\_mov** | **Label** |
| **1-7-24** | **100.0** | **105.0** | **99.0** | **104.0** | **1500000** | **102.5** | **105.0** |
| **2-7-24** | **104.0** | **106.0** | **103.0** | **105.0** | **1200000** | **103.0** | **106.0** |
| **3-7-24** | **105.0** | **107.0** | **104.0** | **106.0** | **1300000** | **103.5** | **107.0** |

**List of Terminologies:**

1. **Feature :** In StockMarket Predication , takes a individual measurable property and their past market success ratio

As feature.

1. **Label :** Using the past ratios and predit the future ratio as label.
2. **Prediction :** The output produced by processing the input. It’s the model estimate of the label.
3. **Outlier :** An observation point differ from other observation point. Occur due to variability in datas(stock past ratio).
4. **Test Data :** Subset of data is used to train the model (stock market from last ratio and volume).
5. **Training Data :** Train the model using past ratio and volumes.
6. **Model :** A linear regression algorithm mpdel that predicts.
7. **Validation data :** Stock ratio from previous quarter used to validate the model.
8. **Hyperparameter :** The learning rate in neural networks.

**10. Epoch:** One complete pass through the entire dataset.

**11.Loss Function :** Mean Squared Error between predict and actual ratio and volume.

**12.Learning Rate :** A learning rate of 0.01 might be used for gradient descent in neural network.

**13. Overfitting** : A model perfect in predict training data and fails in actual data.

**14. Underfitting :** linear model trying to predict stock prices in high volatile market .

**15. Regularization :** Ridge regression applied to stock ratio and volumes prediction model.

**16. Cross -Validation :** A technique for accessing the result of analyses compare to independent dataset.

**17.Feature Engineering :** Creating a new feature to moving a average stock prices over past ratios.

**18. Dimensionality Reduction :** Process to reduce a stock volumes in dataset.

**19.Bias :** Predict on too high using model and doesn’t account for downdrums.

**20.Variance :** A stock prediction model that shows a wide in stock with small changes in training in datas.