Assignment

1. Explain the main assumptions of Linear Regression in detail.
2. What is the difference between R-squared and Adjusted R-squared?
3. What are the different types of Regularization techniques in Regression. Explain in detail with cost functions of each technique.
4. How logistic regression works for multiclass classification. Explain in detail.
5. Explain the performance metrics of logistic regression.
6. Use the Mobile price prediction dataset from below Kaggle link and create an end to end project on Jupyter/Colab.

<https://www.kaggle.com/datasets/mohannapd/mobile-price-prediction/data>

1. Download the dataset from above link and load it into your Python environment.
2. Perform the EDA and do the visualizations.
3. Check the distributions/skewness in the variables and do the transformations if required.
4. Check/Treat the outliers and do the feature scaling if required.
5. Create a ML model to predict the price of the phone based on the specifications given.
6. Check for overfitting and use the Regularization techniques if required
7. Compare the performance metrics of training dataset and testing dataset for all the different algorithms used (Linear/Ridge/Lasso/ElasticNet)