1. import startup data set

2. build multiple linear regression model, polynomial regression model, ridge regression model and lasso regression model. Use same set of independent variables and target models for building all models

3. For each of the above created models, calculate and record the following evaluation metrics on the testing data

* Mean Absolute Error (MAE)
* Root Mean Square Error (RMSE)
* R-squared
* Adjusted R-squared

4. Create a table to summarize values for all metrics for each model.(Word document)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sr.No | Model Name | Mean Absolute Error (MAE) | Root Mean Square Error (RMSE) | R-squared | Adjusted R-squared |
| 1 | Multiple linear | 6503.356192847071 | 8500.406284589773 | 0.948 | 0.943 |
| 2 | Polynomial | 80596654.09 | 9054.922470470265 | 0.954 | 0.947 |
| 3 | Ridge regression | 84731799.39 | 9054.922470470265 | 0.954 | 0.947 |
| 4 | Lasso regression | 81991620.95 | 9054.922470470265 | 0.954 | 0.947 |

5. Discuss the results and provide explanations for differences in model performance.(one paragraph)

Submission

1. Jupyter Notebook
2. Word document which will contain summary table and paragraph describing finding drawn from the table