

# Individual Assignment-2



**NIDN : 0318017001**

# Assignment-2 Instruction

1. *Assignment in Jupyter Notebook (file \*.ipynb)*
2. *In Jupyter Notebook Write your Identity (NIM, Name, Class and Assignment Number) in Markdown format.*
3. *Print file \*.ipynb to pdf then send email to [Johannes.simatupang@binus.ac.id](mailto:Johannes.simatupang@binus.ac.id) (DueDate Mar 24, 2024 23:59 WIB)*
4. *Weighted value of assignment: 2%*

# Assignment-2

No 1.

Fitting & Predict given data of Home Price using Multiple Linear Regression without Scikit-Learn Library

|   | size | bedroom | price  |
|---|------|---------|--------|
| 0 | 2104 | 3       | 399900 |
| 1 | 1600 | 3       | 329900 |
| 2 | 2400 | 3       | 369000 |
| 3 | 1416 | 2       | 232000 |
| 4 | 3000 | 4       | 539900 |

dataset



|   | size      | bedroom   | price     |
|---|-----------|-----------|-----------|
| 0 | 0.130010  | -0.223675 | 0.475747  |
| 1 | -0.504190 | -0.223675 | -0.084074 |
| 2 | 0.502476  | -0.223675 | 0.228626  |
| 3 | -0.735723 | -1.537767 | -0.867025 |
| 4 | 1.257476  | 1.090417  | 1.595389  |

normalized dataset

# Assignment-2. No 1

## *Multiple Linear Regression without Scikit-Learn Library*

- *Normalize or standardize numerical features that you deem necessary, and explain the reason for your choice of method.*
- *Fitting the MLR model to the training set*
- *Predicting the training & test set result*
- *Evaluation Metrics : RMSE, MAE and R2*

# Assignment-2. No 2

*Based on GSLC 9-10*

- *How to avoid the overfitting in Model Supervise Learning ?*
- *Explain of Limitations of Cross-Validation !*
- *Calculate output k-fold Cross-Validation*  
*for dataset = [[6], [7], [8], [9], [10], [11], [12], [13], [14], [15]]*

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Good Luck