

## Tutorial 04

### Lasso and Ridge Regression

Submit your Tutorial03 assignment, run the code and create the plots as desired along with performance measure evaluation.

**Data set:** Realestate.csv

**URL:** <https://www.kaggle.com/quantbruce/real-estate-price-prediction>

**Attributes:**

1. transaction date
2. house age
3. distance to the nearest MRT station
4. number of convenience stores
5. latitude
6. longitude

**Output:** house price of unit area

**Ridge and Lasso linear regression**

**Independent Variable:** House age, Longitude, Latitude, distance to the nearest MRT station, number of convenience stores

**Dependent Variable:** House Price.

**Ques1:** Fit Lasso regression for alpha ( $\alpha$ ) values 1, 0.01, and 10 and write your observations for regularization of all independent variables of given dataset.

**Ques2:** Fit Ridge regression for alpha ( $\alpha$ ) values 0.01 and 100 and write your observations for regularization of all independent variables of given dataset.

**Ques3:** Plot independent variables and coefficient magnitude plot for both Lasso and Ridge regression for comparison among linear, Ridge, and Lasso Regression techniques.