

Assignment 4

1.description

Data transformation: Normalize all attributes, transform the original attributes to attributes with at most 2 degree polynomial features.

Regression method: Ridge

Grid CV: choose optimal hyper-parameter
alpha and *normalize*

2.best hyper-parameter

alpha=0.0129
normalize=True

3. performance

baseline model:

$R^2 = -1.037$
RSS = 131.164

best model:

$R^2 = -0.840$
RSS = 114.976

4 Collaboration and Online Sources

Github used for online collaboration.

5 Specifications

Python version: 3.8.6 Libraries used: sys, pandas, numpy, scikit-learn, matplotlib