

# Homework #1

Due: 23:59pm November 1, 2024

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## Problem 1 (5pts)

Train a simple linear regression model to predict house prices as a function of their floor size, by running gradient descent for 500 epochs with a learning rate of 0.1. Use the dataset provided (train.txt and test.txt).

- Plot  $J(w)$  vs. the number of epochs.
- After training print the parameters and compare with solution from normal equations.
- Show your results using plot by plotting the train data using the default blue circles and test data using green xs. On the same graph show the linear solution line.

**NOTE: Implement your solution on skeleton files that are provided. (simple\_regression.py and scaling.py)**