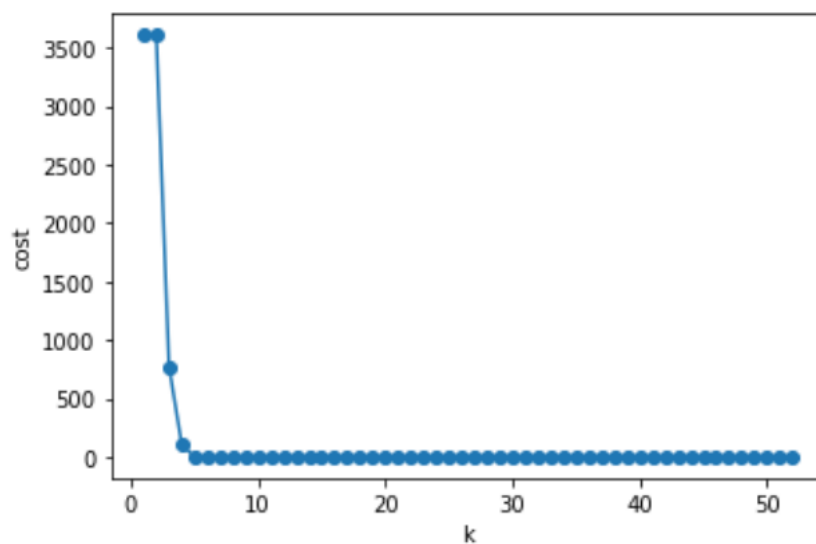# COMPSCI 589 Machine Learning
Assignment 1 Report

Task 1

- Result of both *weight_history* and *cost_history*

```
Weight History= [array([-2]), array([-2]), array([-1.]), array([0.]), array([0.]),
array([0.]), array([0.])]
Cost History= [array([4]), array([4]), array([1.]), array([0.]), array([0.]),
array([0.]), array([0.])]
```
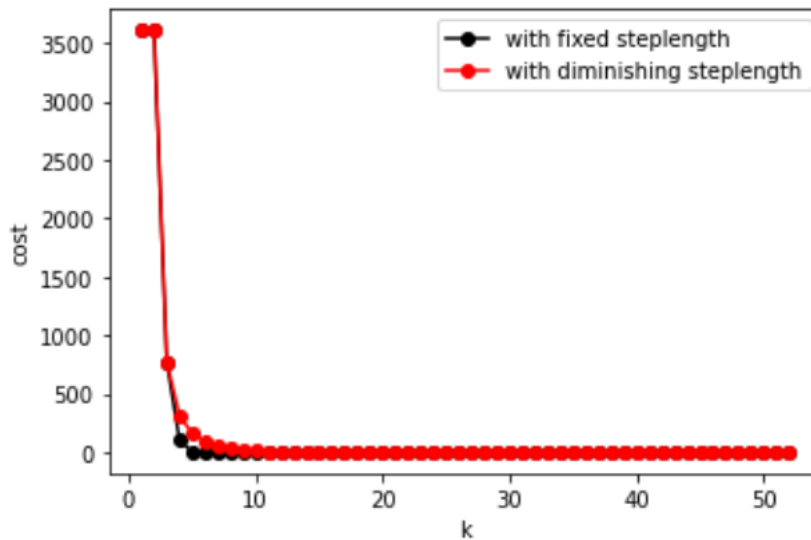
Task 2

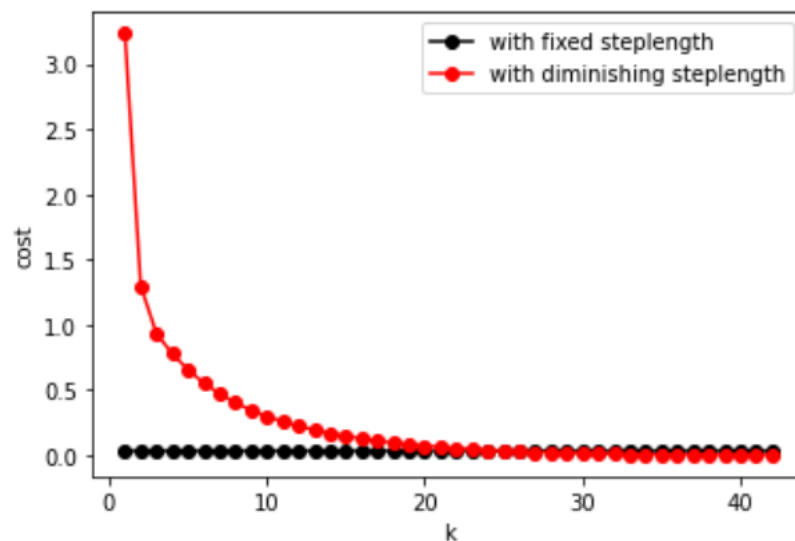- Cost history plot by running Task 2

<u>Task 3</u>

- Cost history plots that compare random search with fixed step length and random search with diminishing steplength generated by using all data

- Cost history plots that compare random search with fixed step length and random search with diminishing steplength generated by using the data starting from the 10th data

- Final cost using a fixed step length
- Final cost using a diminishing step length

```
Final cost using fixed steplength =  0.030711730212761735
Final cost using diminshing steplength =  7.817722462873834e-06
```