Name: Huayue Hua

USC ID: 9817961224

Email: huayuehu@usc.edu

Lab6

1. For Mandatory part 1 Linear Least Squares:
2. To run “LLSR\_9817961224.py”, the following command should be entered:

**python3 LLSR\_9817961224.py**

1. Result:

A picture containing food

Description automatically generated

A close up of a map

Description automatically generated

Parameter w in this question is

The expected profits in the cities of 20,000 population is $-15097.135899326668

The expected profits in the cities of 50,000 population is $20693.873426361144

1. For Mandatory part 2 Unsupervised Image Clustering:
2. I take

<https://blog.csdn.net/simple_the_best/article/details/75267863>

<https://blog.csdn.net/panrenlong/article/details/81736754>

<https://zhuanlan.zhihu.com/p/30608230>

as a reference.

1. To run “kmeans.py”, the following command should be entered:

python3 kmeans.py [N] [Flag\_of\_Reading], where N can be any number you want and Flag\_of\_Reading can be chosen from 0 or 1

e.g. **python3 kmeans.py 1000 1**

1. The result.txt stores the cluster label for each sample