24-787: Machine Learning and Artificial Intelligence for Engineers

Ryan Wu

ID: weihuanw

Homework 11

Due: April 13, 2024

**Concept Questions:**

Problem 1

Q1: 5 points for Cluster Center 1, and 4 points for Cluster Center 2.

Q2: 2. Left, Right.

Problem 2

The natural number of clusters for this dataset is around 12. We can observe an elbow point where increasing the number of clusters is not informative or meaningful. The decrease in the sum of squared distances becomes relatively constant.