

Problem Statement

Use the k-means algorithm to return the k means (or centroids) for the provided user features. These user features are the result of a dimensionality reduction by PCA on some user-app interaction data. You'll have access to a `USER_FEATURE_MAP` dictionary, mapping each user "uid_i" to a respective list of 4 features associated with the user in question.

Note that:

The initial centroid locations are selected for you to ensure consistency when verifying your solution. You should execute at least 10 iterations of the k-means algorithm, not including the initialization of the centroids. You should use the Manhattan distance as the distance metric. You shouldn't use any libraries that implement k-means for you. Your output values will automatically be rounded to the fourth decimal.