CIS 635 Data Mining Name \_\_Dhynasah Çakir\_\_

Homework 9

Hand in sheet

Write in or copy and paste the answers for the following:

### Part 1

Descriptions for each cluster:

1. Cluster 1: contains the youngest people who’s annual spending on housing is near the lower end of the spectrum
2. Cluster 2: also contains younger people, but the defining factor is they have the lowest annual spending on housing
3. Cluster 3: This is defined by those who have spent the most of food and transport.
4. Cluster 4: this is defined by those who are spending the highest of housing annually with an average age of 35
5. Cluster 5: Spends the least on media and a lot on pets
6. Cluster 6: This group spends the most on media and the least on pets and have a young average age
7. Cluster 7: youngest age group
8. Cluster 8: those who spend the most on pets and have the highest average age

### Part 2

Paste your code for the main kmeans function (only) below:

my\_Kmeans=function(matrix,clustNum) {

set.seed(200)

temp=0

initCenters=initialCentroids(matrix,clustNum)

clust=assignClust(matrix,initCenters)

updated\_cent=initCenters

while (sum(temp)!=sum(updated\_cent)){

temp=updated\_cent

print(temp)

updated\_clust=assignClust(matrix,updated\_cent)

sse=sse(matrix ,temp, updated\_clust)

updated\_cent=calcCent(matrix, updated\_clust)

print(sse)

}

return(new\_centers)

}