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Homework 2

CSE 190

A10730199

**Task 1**

1. 5-d Mean = [3.88871, 3.92225, 3.87152, 3.8984, 3.85267]
2. Reconstruction Error = 113183.4337049781
3. Centroid0 = [4.19821338, 4.25983918, 4.15755422, 4.0951781, 4.1408347]

Centroid1 = [3.14419016, 3.11016891, 3.18345593, 3.42504427, 3.159481]

1. Closest to c1 = 36534

Closest to c2 = 13466

1. Reconstruction Error = 63420.42653275129

**Task 2**

1. Nodes = 61, Edges = 540
2. Total Connected Components in G = 3

Number of Nodes in Largest CC = 40

1. Communities Discovered = 5

Number of Nodes in each community = [24, 6, 12, 8, 4]

**C[0]** = [769, 747, 708, 774, 840, 713, 719, 856, 772, 805, 800, 869, 745, 810, 811, 880, 753, 819, 823, 697, 890, 828, 830, 703]

**C[1]** = [870, 871, 879, 881, 858, 895]

**C[2]** = [804, 876, 878, 888, 753, 882, 886, 729, 856, 889, 861, 863]

**C[3]** = [867, 872, 873, 874, 877, 776, 885, 887]

**C[4]** =[857, 868, 862, 865]