

1. Implementation of K-means Clustering

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RGui (64-bit) - [R Console]
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> lab=read.csv("lab.csv")
> View(lab)
> results<-kmeans(lab,3)
> results
K-means clustering with 3 clusters of sizes 28, 20, 14

Cluster means:
  Student.ID ES.1.1...2.points. ES.1.2...3.points. ES.2.1..2.points.
1   32.85714         1.803571         2.928571         1.392857
2   82.75000         1.900000         2.725000         1.225000
3   53.50000         2.000000         2.857143         1.321429
  ES.2.2..3.points. ES.3.1..1.points. ES.3.2..2.points. ES.3.3..2.points.
1   0.8928571         0.9464286         1.857143         0.8392857
2   1.0500000         1.0000000         1.800000         1.0750000
3   1.6428571         0.9642857         1.857143         1.8571429
  ES.3.4..2.points. ES.3.5..3.points. ES.4.1..15.points. ES.4.2..10.points.
1   1.714286         1.928571         7.142857         2.821429
2   1.900000         2.350000         8.950000         4.400000
3   2.000000         2.785714         14.857143         8.964286
  ES.5.1..2.points. ES.5.2..10.points. ES.5.3..3.points. ES.6.1..25.points.
1   0.6428571         2.982143         1.089286         3.071429
2   0.5250000         2.775000         0.825000         7.750000
3   1.7500000         8.142857         2.357143         22.500000
  ES.6.2..15.points. TOTAL..100.points.
1   2.428571         34.48214
2   3.950000         44.20000
3   12.392857         88.25000

Clustering vector:
[1] 3 1 1 1 3 1 1 1 1 1 3 1 3 1 1 1 1 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1 3 1 2 1 1 2 2
[39] 2 3 3 2 2 3 2 3 2 3 2 2 2 2 2 3 2 2 2 2 2 3 2

Within cluster sum of squares by cluster:
[1] 17946.20 13950.43 14414.46
(between_SS / total_SS =  57.5 %)

Available components:

[1] "cluster"      "centers"      "totss"        "withinss"     "tot.withinss"
[6] "betweenss"    "size"         "iter"         "ifault"
> |

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2. Implementation of weather API

