No.
Date. / /

Penambangan Data | Praktisi | Tugas Kmeng

Data

No	Y1	Y2
1	2	2
2	3	2
3	1	1
4	3	1
5	1.5	0.5

memilih centroid

- Centroid 1: (1,1)
- centroid 2 = (1.5, 0.5)

Pengelompokan dan update centroid

1. Data Point (2.2)

- Jarak ke centroid 1: $\sqrt{(2-1)^2+(2-1)^2} = \sqrt{1+1} = \sqrt{2} \simeq 1.91$

~~Jarak ke Centroid~~

- Jarak ke centroid 2: $\sqrt{(2-1.5)^2+(2-0.5)^2} = \sqrt{0.25+2.25} = \sqrt{2.5} \simeq 1.58$

- Masuk ke centroid 1
- Update centroid 1: $\left(\frac{1+2}{2}, \frac{1+2}{2}\right) = (1.5, 1.5)$

Wengu文谷

No.

Date. / /

2. Dari Point (3,2):

- Jarak ke centroid 1: $\sqrt{(3-1.5)^2+(2-1.5)^2} = \sqrt{2.25+0.25} = \sqrt{2.5} \approx 1.58$

- Jarak ke centroid 2: $\sqrt{(3-1.5)^2+(2-0.5)} = \sqrt{2.25+2.25} = \sqrt{4.5} \approx 2.12$

- masuk ke centroid 1

- Update centroid 1 $\left(\frac{1.5+3}{2}, \frac{1.5+2}{2}\right) 2.25, 1.75$

No.
Date. / /

3. Data Point (1.1)

- Jarak ke centroid 1 = $\sqrt{(1-2.25)^2+(1-1.75)^2} = \sqrt{1.5625+0.5625} =$

$\sqrt{2.125} \simeq 1.46$

- Jarak ke centroid 2 = $\sqrt{(1-1.5)^2+(1-0.5)^2} = \sqrt{0.25+0.25}$

$= \sqrt{0.5} \simeq 0.71$

- masuk ke centroid 2

- update centroid 2 $\left(\frac{1.5+1}{2}\right), \left(\frac{0.5+1}{2}\right) = (1.25, 0.75)$

4. Data Point (3.1)

- Jarak ke centroid 1 : $\sqrt{(3-2.25)^2+(1-1.75)^2} = \sqrt{0.5625+0.5625} =$

$= \sqrt{1.125} \simeq 1.06$

- Jarak ke centroid 2 : $\sqrt{(3-1.25)^2+(1-0.75)^2} = \sqrt{3.0625+0.0625}$

$= \sqrt{3.125} \simeq 1.77$

- masuk ke centroid 1

- update centroid 1 : $\left(\frac{2.25+3}{2}, \frac{1.75+1}{2}\right) =$

$= (2.625, 1.375)$

Wengu文谷

No.
Date. / /

5. Data Point (1.5 0.5):

- Jarak ke centroid 1:

$\sqrt{(1.5-2.625)^2+(0.5-1.375)^2} = \sqrt{1.265625+0.765625} = \sqrt{2.03125} \simeq 1.43$

- Jarak ke centroid 2:

$\sqrt{(1.5-1.25)^2+(0.5-0.75)^2} = \sqrt{0.0625+0.0625} = \sqrt{0.125} \simeq 0.35$

- masuk ke cluster 2

- Update centroid 2:

$\left(\frac{1.25+1.5}{2}, \frac{0.75+0.5}{2}\right) = (1.375, 0.625)$

Hasil

- Data Point (2.2) -> Cluster 1 (centroid: (2.2))
- Data Point (3.2) -> Cluster 1 (centroid: (2.5, 2))
- Data Point (1.1) -> Cluster 2 (centroid: (1.25, 0.75))
- Data Point (3.1) -> Cluster 1 (centroid: (2.625, 1.375))
- Data Point (1.5, 0.5) -> Cluster 2 (centroid: (1.375, 0.625))