

# K-Means Clustering

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UTKARSH GAIKWAD

CLASS STARTING IN FEW MINUTES

# Supervised vs Unsupervised Machine Learning

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# Example where clustering is used

Similar products grouped together in Amazon website


Products related to this item

Sponsored


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HP Victus Gaming Laptop AMD Ryzen 5 5600H 15.6 inch(39.6 cm) FHD IPS Gaming...  
★★★★☆ 42  
Deal of the Day  
₹57,990.00 ✓prime  
List: ₹77,354.00 (25% off)




HP Pavilion 14 12th Gen Intel Core i5 16GB RAM/512GB SSD 14 inch(35.6cm) IPS Micro...  
★★★★☆ 331  
Deal of the Day  
₹66,990.00 ✓prime  
List: ₹77,142.00 (13% off)




HP Laptop 15s, 12th Gen Intel Core i5-1235U, 15.6-inch (39.6 cm), FHD, 8GB DDR4, 51...  
★★★★☆ 485  
₹55,990.00 ✓prime




Lenovo IdeaPad Slim 3 Intel Core i7 11th Gen 15.6" (39.62cm) FHD Laptop (16GB/512GB...  
₹62,990.00 ✓prime



Lenovo IdeaPad Slim 3 Intel Core i5 11th Gen 15.6" (39.62cm) FHD Laptop (16GB/512GB...  
★★★★☆ 27  
Deal of the Day  
₹53,000.00 ✓prime  
List: ₹80,290.00 (34% off)



Lenovo IdeaPad Gaming 3 Intel Core i5 11th Gen 15.6" (39.62cm) FHD IPS Gaming Lapto...  
★★★★☆ 577  
₹55,990.00 ✓prime



Dell Vostro 3420 Laptop, 12th Gen Core i3-1215U/8GB & 512GB SSD/14.0"...  
★★★★☆ 123  
Deal of the Day  
₹41,490.00 ✓prime  
List: ₹61,817.00 (33% off)

# Similar Cars at car dekho website

## Kia Seltos Comparison with similar cars



Skoda Kushaq  
₹ 11.59 - 19.69 Lakh\*

[View Offers](#)



Hyundai Creta  
₹ 10.87 - 19.20 Lakh\*

[Seltos vs Creta](#)

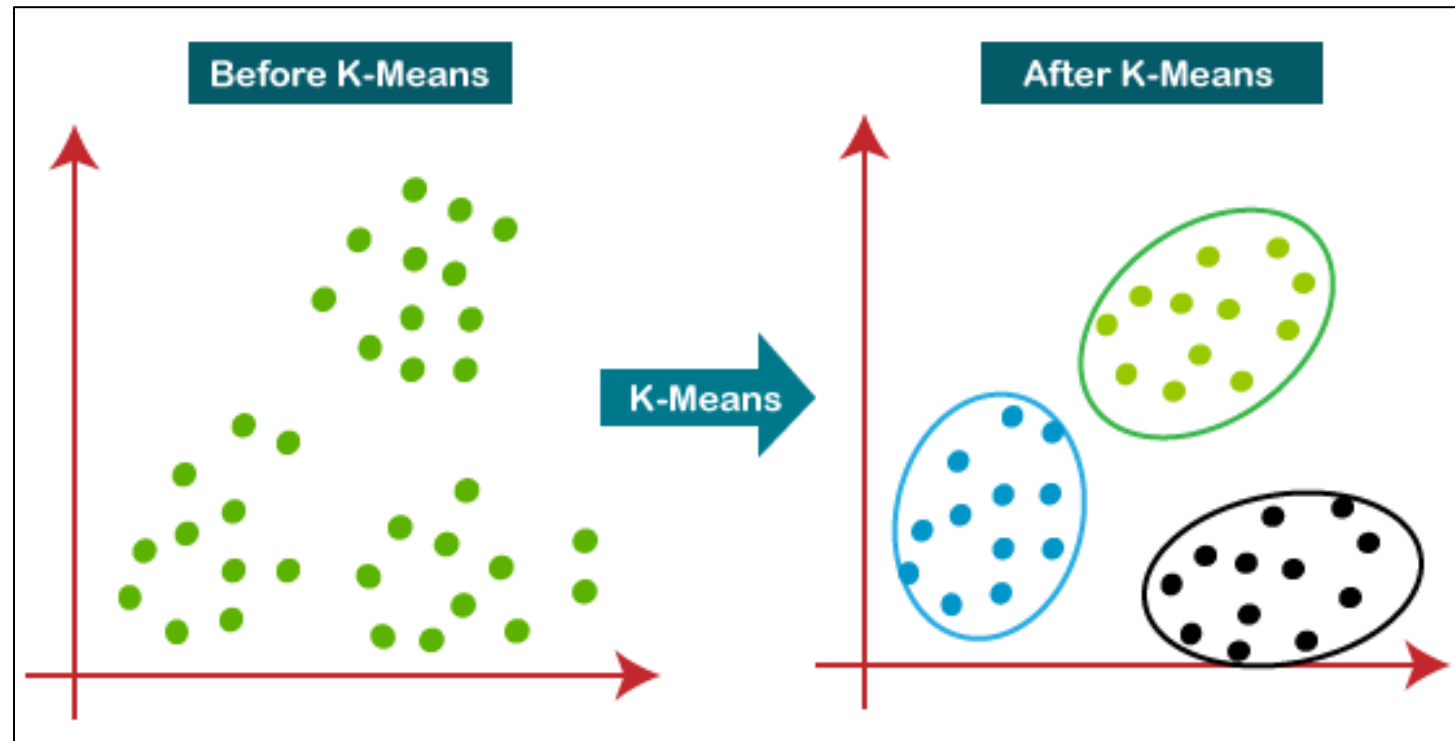


Kia Sonet  
₹ 7.79 - 14.89 Lakh\*

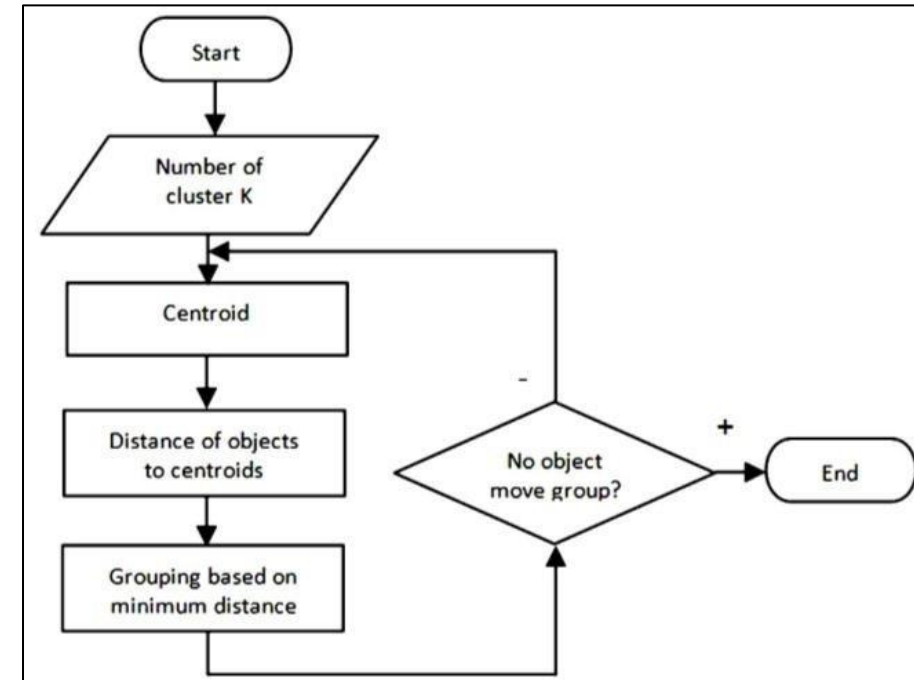
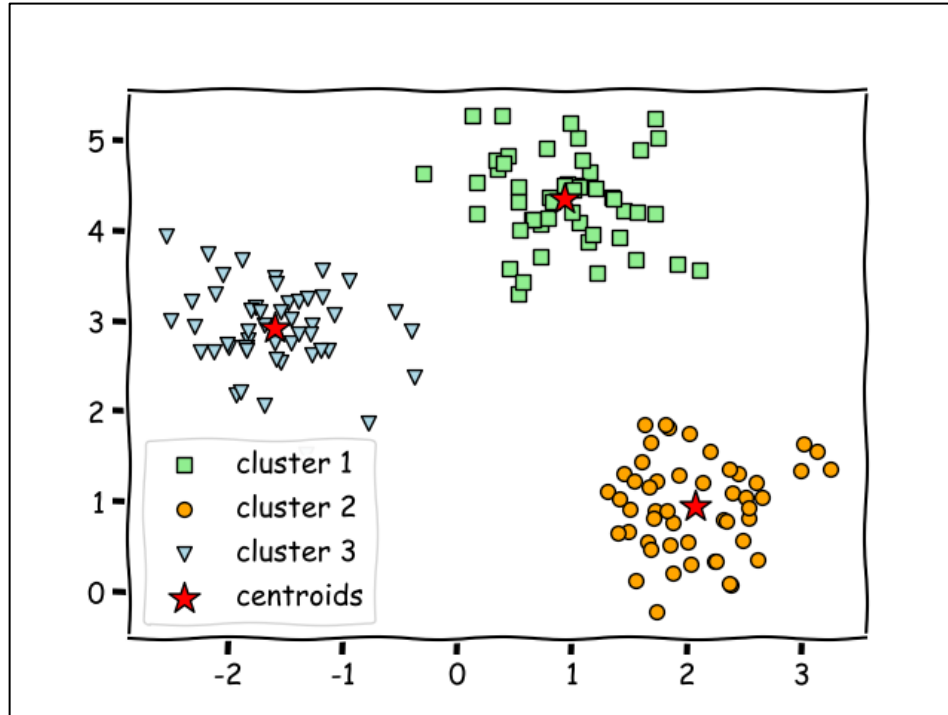
[Seltos vs Sonet](#)

# K-Means Clustering explained

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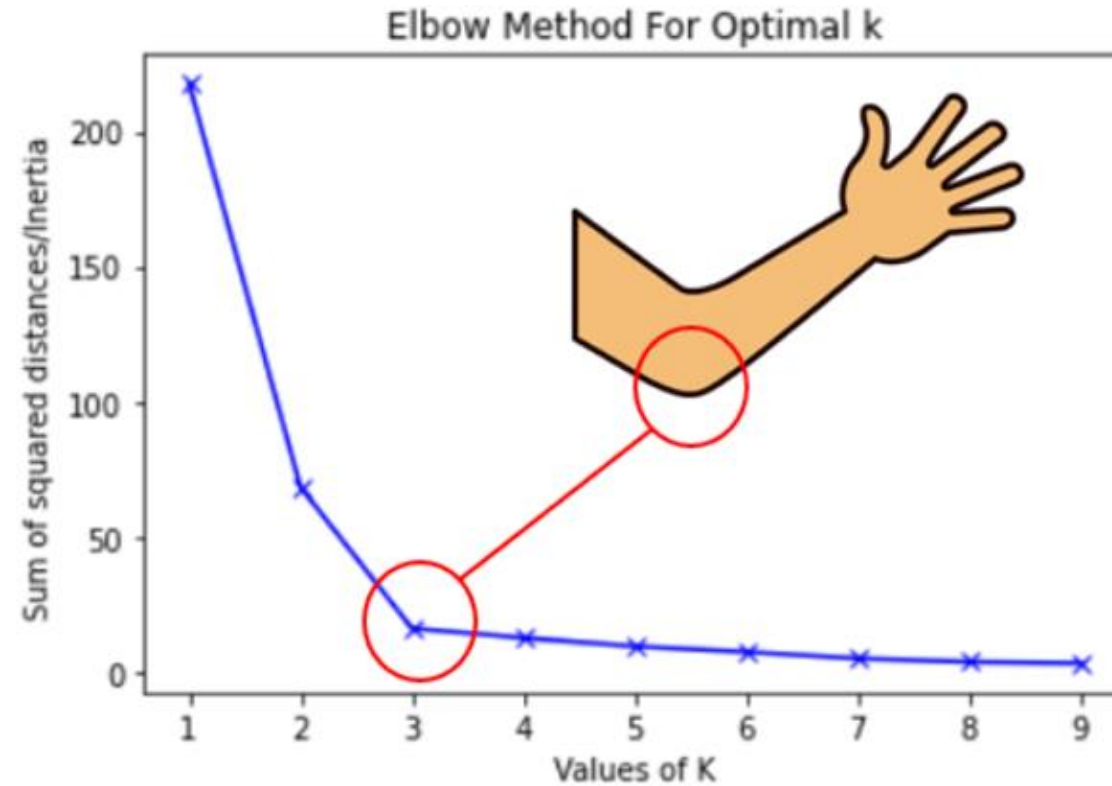


# What is Centroid In K-Means



<https://www.naftaliharris.com/blog/visualizing-k-means-clustering/>

# Determining Optimum Clusters Elbow method



Line plot between K and inertia

# K-Means Clustering in Sklearn

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```
from sklearn.cluster import KMeans  
km = KMeans(n_clusters=4)  
km.fit(X_pre)
```



Thank you

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