

## Lesson 29: K-Means Clustering

Data Science with Python – BSc Course

45 Minutes

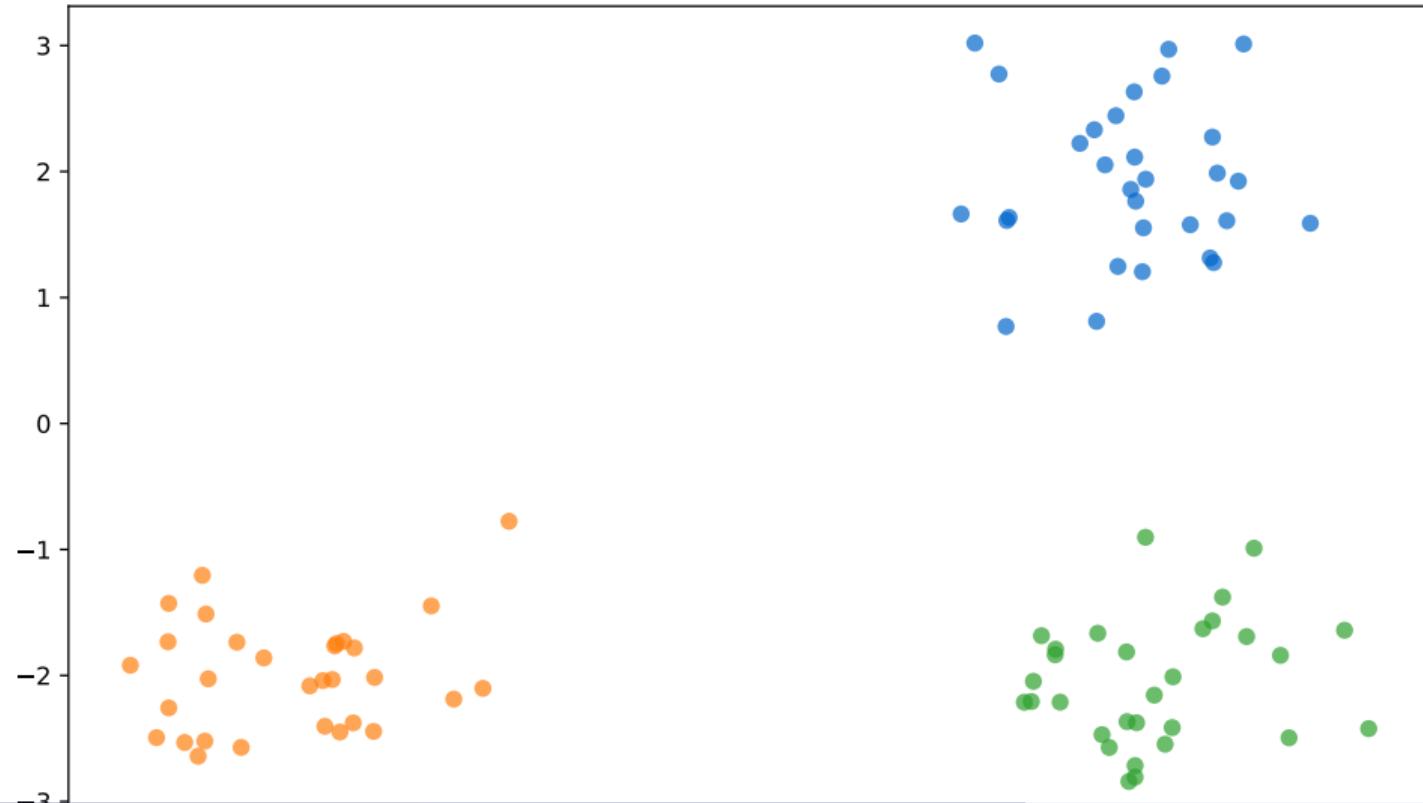
**After this lesson, you will be able to:**

- Apply K-Means algorithm
- Choose optimal K (elbow method)
- Interpret cluster centers
- Segment financial assets

**Building towards your final project**

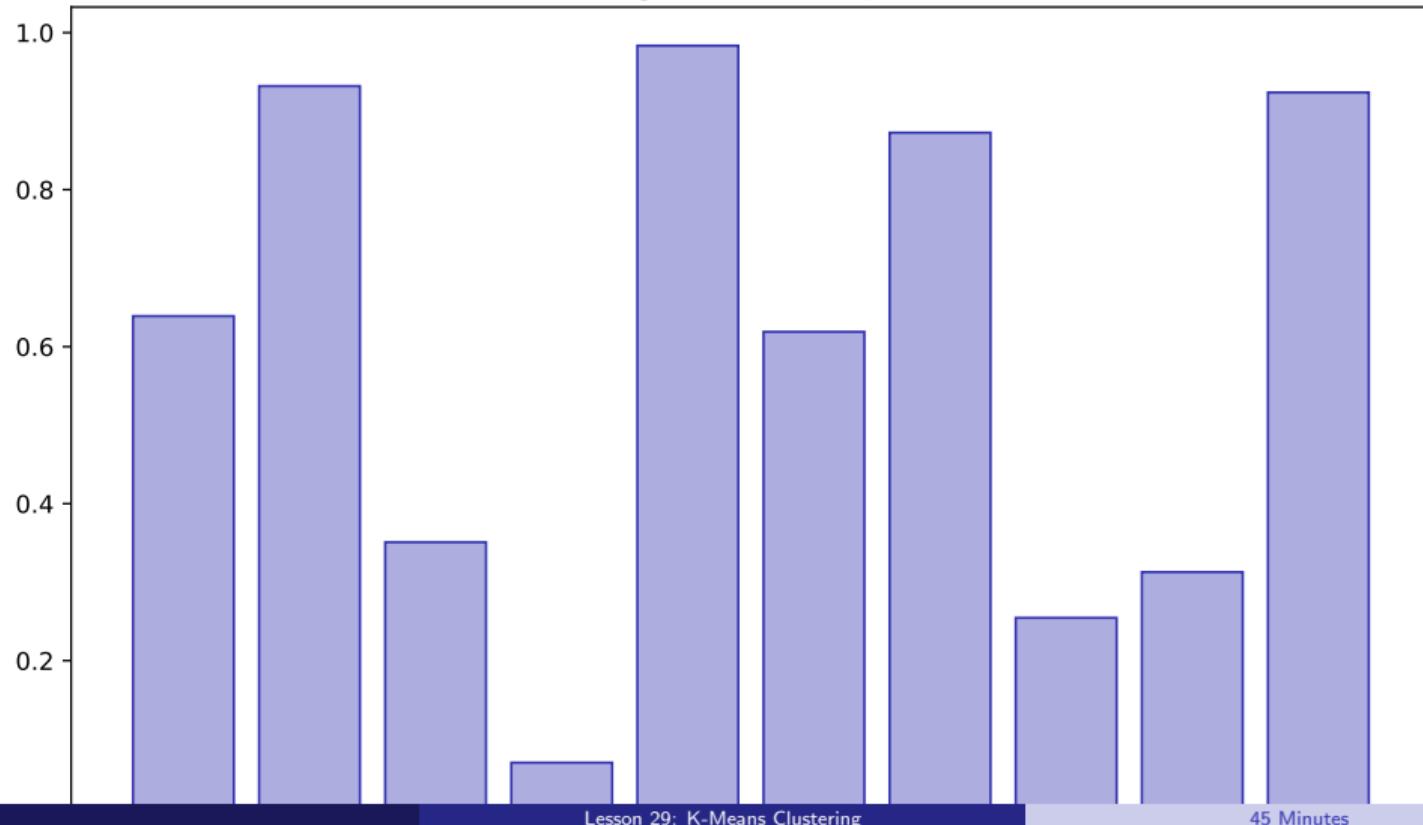
## Kmeans Concept

### Kmeans Concept

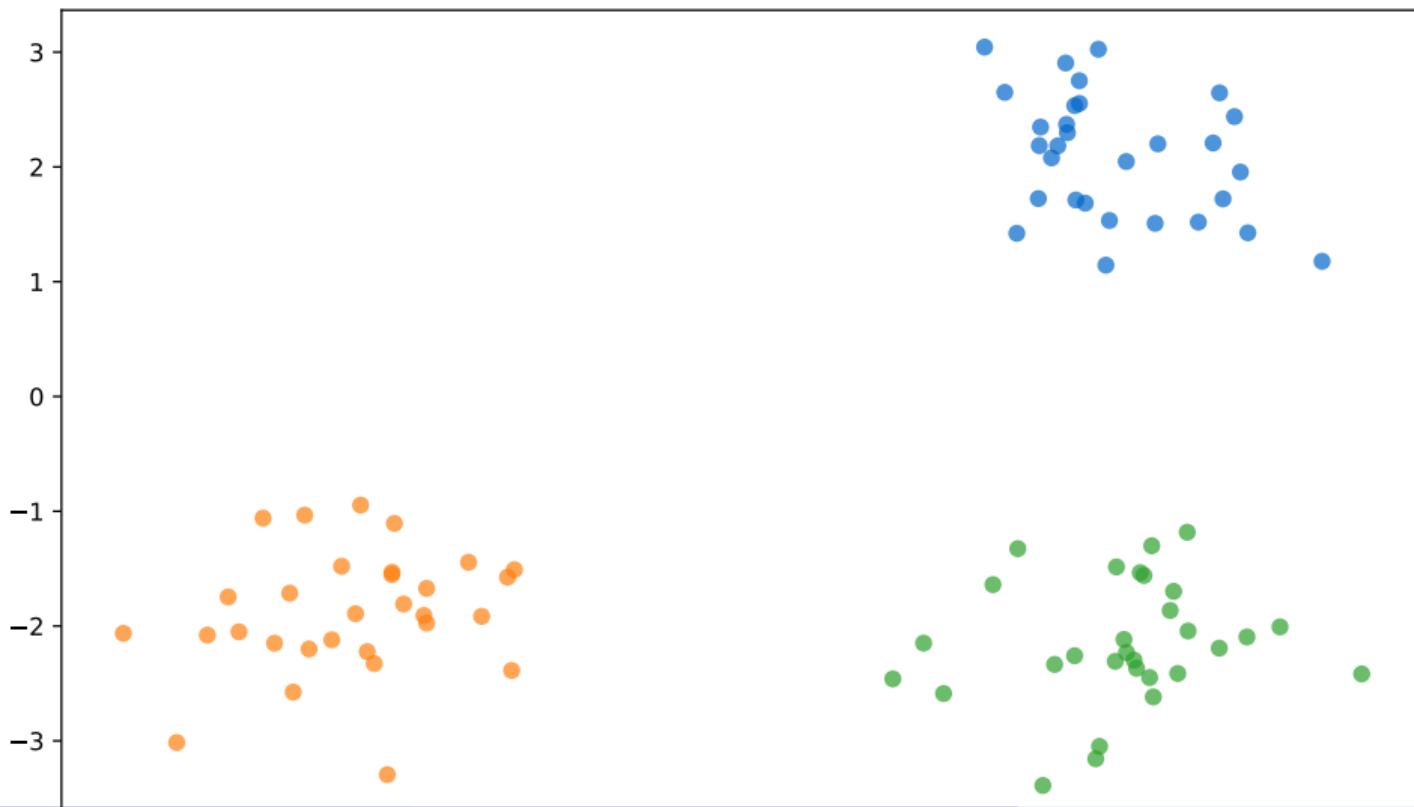


## Algorithm Steps

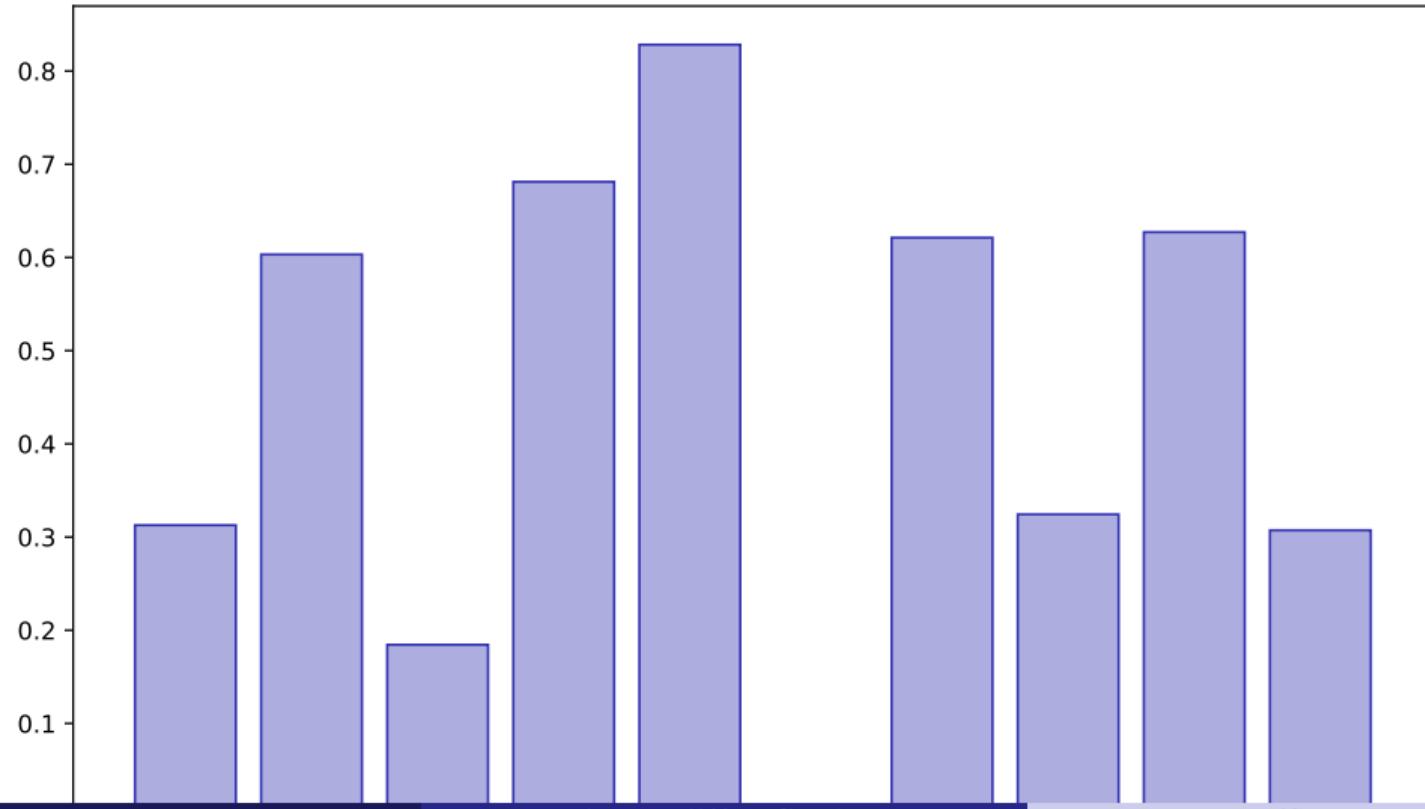
**Algorithm Steps**



## Sklearn Kmeans

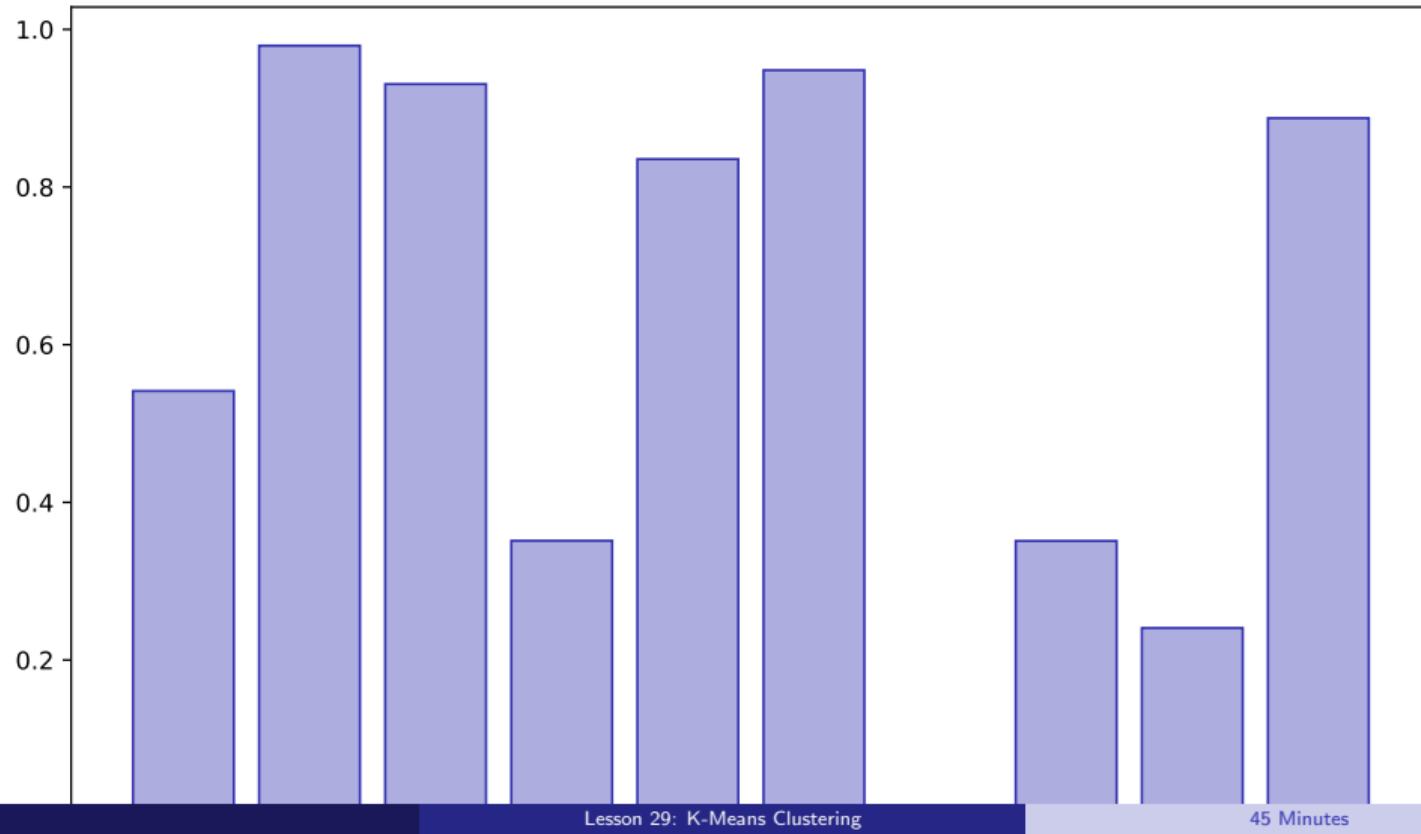


### Elbow Method

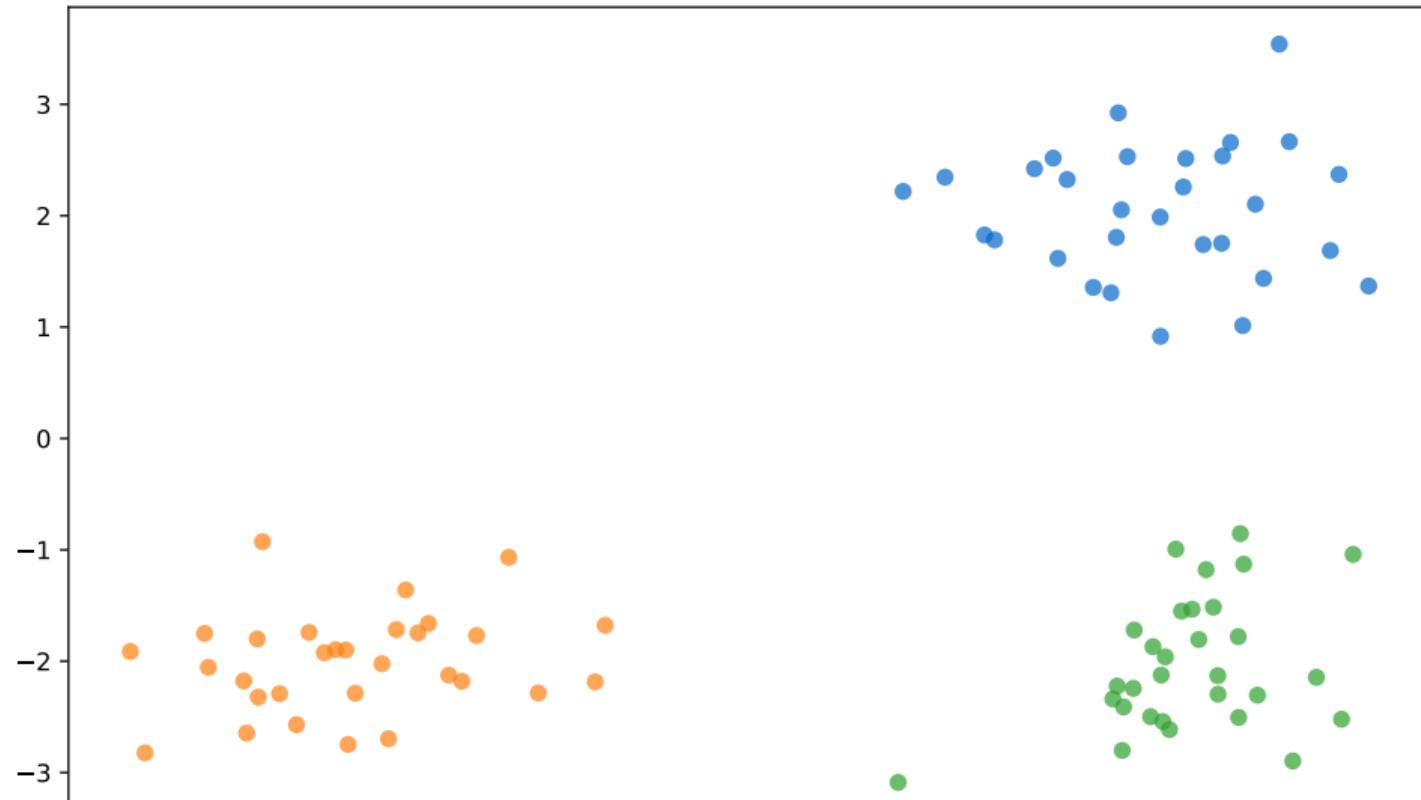


## Silhouette Score

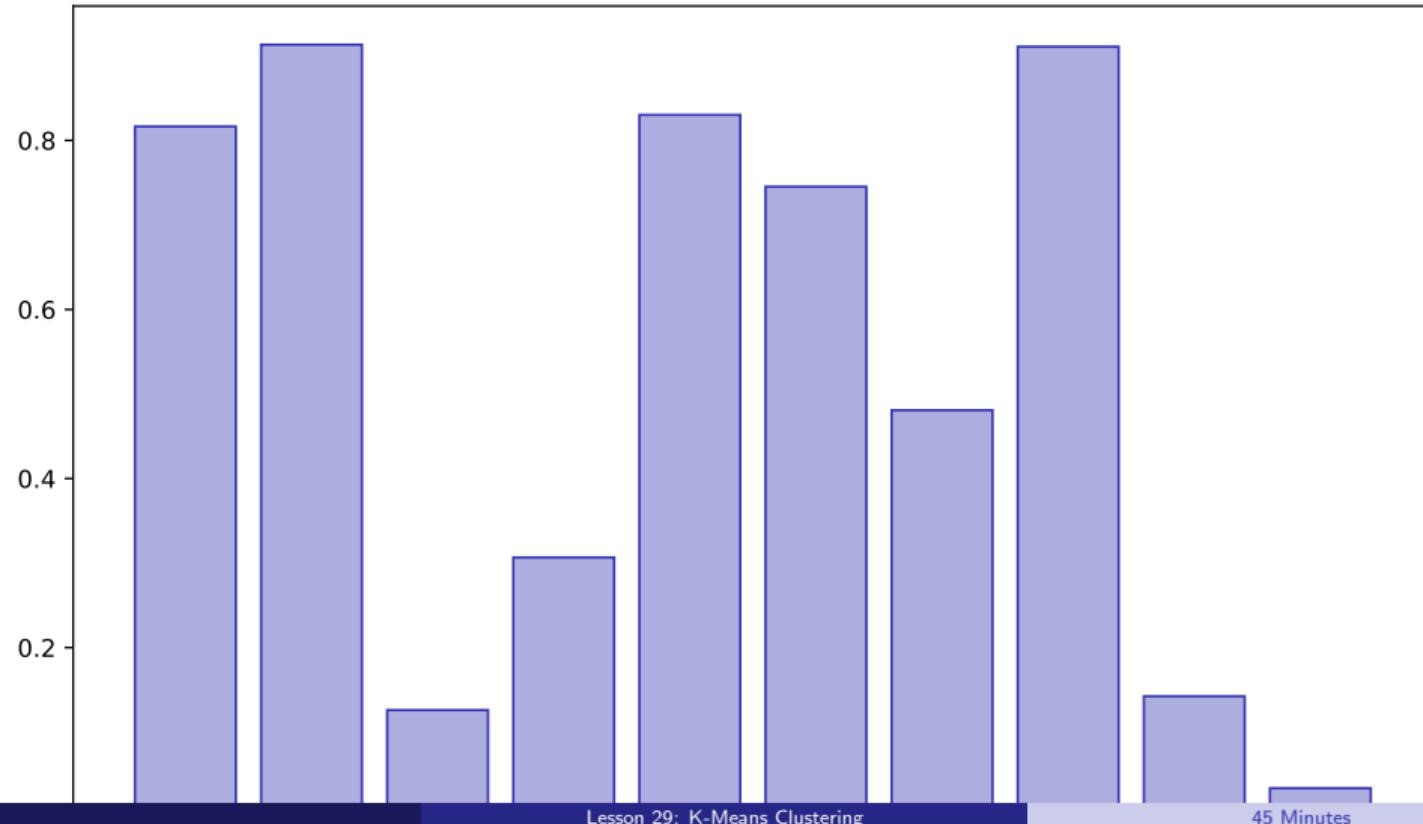
**Silhouette Score**



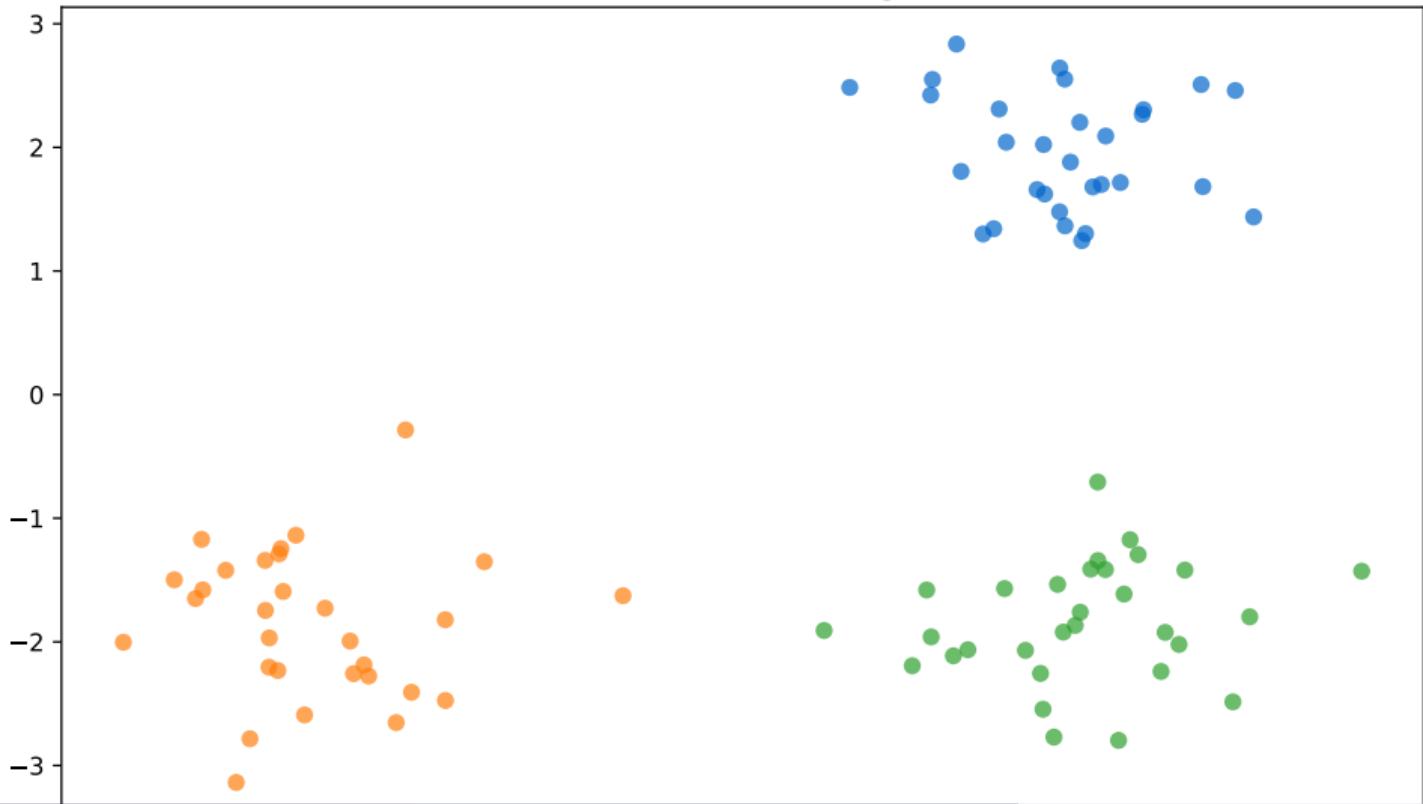
## Cluster Visualization



### Centroid Interpretation



## Asset Clustering



# Lesson Summary

## Key Takeaways:

- Apply K-Means algorithm
- Choose optimal K (elbow method)
- Interpret cluster centers
- Segment financial assets

Apply these skills in your final project