

Hi Battulga,

I enjoyed reading your post! The animal example for hierarchical clustering was a great way to explain the concept, simple and visual. It reminded me of how researchers might group 50 animal species based on traits like diet, habitat, and size, eventually building a tree that shows their biological connections (Frontline Systems, Inc., 2025).

Your K-means example with students was also very relatable. Imagine having math and reading scores for 100 students. K-means could group them into clusters like high performers (scores 85+), average (60–84), and those needing extra support (below 60). It is quick and makes patterns clearer, but what do you think happens when just a few students score extremely low or high? Could that throw off the cluster centroids (Grasberger, 2024)?

Your DBSCAN example of restaurants was very well explained.. If we mapped 200 restaurants in a city, DBSCAN could find tight clusters in busy downtown areas but might treat a few stand-alone suburban places as outliers. Do you think this could limit how DBSCAN works in rural areas (Sharma, 2024)?

Great job making these concepts so easy to understand!

All The Best!

Avinash

References

Frontline Systems, Inc. (2025). *Hierarchical clustering example*. Solver. Retrieved April 18, 2025, from <https://www.solver.com/hierarchical-clustering-example>

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Sharma, A. (2024, November 24). *DBSCAN clustering in machine learning: How it works and how to implement it*. Analytics Vidhya. Retrieved April 18, 2025, from <https://www.analyticsvidhya.com/blog/2020/09/how-dbscan-clustering-works/>