Hello Nancy,

Thank you for sharing your insights on the use of cluster analysis in streaming services and classification in predicting loan defaulters. Your examples are well-chosen and relevant to how these methods are applied in real world scenarios.

Alternative Approach: Using Classification in Streaming Services

You discussed how streaming platforms like Netflix and YouTube use cluster analysis to group viewers based on similar viewing behaviors, which helps in personalizing content and optimizing advertising strategies. To complement your example with an alternative approach, here is a potential research question that applies **classification**:

Research Question:

"What factors are most predictive of a user transitioning from a free to a paid subscription, and can we classify users based on their conversion likelihood?"

Hypothetical Example: Consider a streaming service offering a 30 day free trial to new users. The platform collects data such as the number of shows watched during the trial, interaction frequency (e.g., likes, ratings), and engagement with premium only features (e.g., exclusive content previews). Using a logistic regression model, the service could classify users into high, medium, or low likelihood of converting to a paid subscription. For instance, users who frequently engage with premium features and consistently watch content during the trial period are classified as having a high likelihood of conversion. This classification enables the platform to tailor follow up marketing efforts, such as personalized emails or special offers, to encourage subscription upgrades.

This classification approach provides actionable insights by identifying key factors that drive conversions, allowing streaming services to optimize the company's marketing strategies and improve conversion rates (Le, 2023; Rajasekaran, 2018).

All The Best!

Avinash

References

Le, J. (2023, December 31). *Clustering and Classification in Ecommerce*. Lucidworks. https://lucidworks.com/post/clustering-classification-supervised-unsupervised-learning-ecommerce/

Rajasekaran, C. (2018, April 12). *Clustering Algorithm*. Medium. https://medium.com/@chitrark/clustering-algorithm-89f79c456336