

	Recall	Precision	Accuracy
Logistic Regression	91.11%	91.16%	91.11%
CART	93.33%	94.44%	93.33%
K-Means	75.56 %	75.93 %	75.56 %
Hierarchical - Single	100%	100%	100%
Hierarchical - Average	99.33%	99.34%	99.33%
Hierarchical - Complete	89.33%	91.91%	89.33%

Logistic Regression and CART exhibit similar performance in recall, precision, and accuracy, with CART showing slightly better results.

K-Means Clustering demonstrates the poorest performance among the listed methods, with lower recall, precision, and accuracy.

Hierarchical Clustering, particularly with single linkage, generates the best performance.

We performed test-train split on Logistic Regression, K-Means, and CART models, but not on Hierarchical Clustering. This could explain why Hierarchical Clustering shows the highest performance. Test-train split is not applicable in Hierarchical Clustering because it is an unsupervised learning method, meaning it doesn't rely on labeled data for training and therefore doesn't require a separate test set for evaluation.

Which model to choose?

- For unsupervised learning, or we only want to classify the existing data, Hierarchical Clustering appears promising due to its great performance.
- For interpretability or data prediction in the future, CART may be a suitable choice.