Miscellaneous Information:

* Instead of calculating intrinsic and extrinsic measures individually for each combination of hyperparameters, we have calculated the average of all measures for each combination.
* For large datasets, some algorithms were getting stuck and hence required a lot of processing time. Therefore, datasets with suitable number of rows and columns are used in the analysis.
* The number of clusters for Agglomerative Clustering is obtained by observing the respective dendrogram and finding the largest horizontal distance between the lines.
* It is also observed that in almost all datasets, Bayesian GMM and Gaussian Mixture Model gave almost equal metric scores which means that both models are performing similarly in terms of their ability to accurately predict or classify data. This may indicate that either model could be a suitable choice for the particular task at hand.

References:

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4. sklearn Documentation