

1. Load the dataset seeds.csv.
2. Extract the grain variety and the feature data, and transform the feature data into a numpy array.
3. Run the non-negative matrix decomposition on the data multiple times (rank=3, repeat_times=20).
4. Calculate the Silhouette coefficients for each clustering result, and plot a line graph, labeling the best scores.
5. Transform the clustering results corresponding to the best score into a Dataframe, and make a crosstab of the varieties and the best clustering results `pd.crosstab(df1, df2)`