AMICOLON

EVALUATION TEST

In this evaluation test, you will be provided with a data file containing information about an agricultural plant, including various dimensional and shape factors. Your task is to determine the product's class based on this data.

Your evaluation test will encompass the following steps:

1. Data Preprocessing: You will need to clean and prepare the data for analysis. This may involve handling missing values, scaling features, and encoding categorical variables.

2. Data Visualization: Visualize the data to gain insights and better understand the relationships between different features. This can help you identify patterns and potential correlations.

3. Testing Classification Algorithms: You will apply various classification algorithms to the preprocessed data to build predictive models. These algorithms may include decision trees, random forests, support vector machines, k-nearest neighbors, and others.

4. Evaluating the Prediction: Assess the performance of the classification models by using appropriate evaluation metrics such as accuracy, precision, recall, F1 score, and ROC AUC.

5. Comparing the Methods: Compare the results obtained from different classification algorithms to determine which one performs the best for this specific task.

You are required to submit your work in a Jupyter Notebook (. ipynb file). The deadline for your submission is October 25, 2023. If there is an issue in uploading the solution file on internshala, zip the .ipynb file in a floder and submit that folder.

Your test will assess your ability to process and analyze data, choose appropriate machine learning algorithms, and effectively communicate your findings in a Jupyter Notebook.