I am preparing a manuscript. I need results, ROC plots, Tables for accuracy ( including columns Accuracy, Sensitivity, Specificity, F-1 Score, MCC and AUC).

We need to evaluate importance of features for classification of skill level of surgeons. You can use recursive feature evaluation method. you can apply PCA or t-SNE to reduce dimensionality and improve decision boundary clarity

#### You can use a. Stacking

* Combine SVM with other models (e.g., Random Forest, XGBoost) to leverage their strengths.

**b. Bagging with SVM**

* Use BaggingClassifier with SVM to improve stability and accuracy.

Surgeon ID is column ID, Skill is the classification outcome, Test is the task performed by surgeons and muscle names and nonlinear variability measures are provided. Please classify skill level using all nonlinear features for different tasks and muscle types. Please note L\_ and R\_ represent left and right muscles. Please write python code to classify using SVM and SMOTE and provide all graphs and accuracy ies.

Can you tell me which muscle and which test (task) and which features are important in identifying skill levels of surgeons with high accuracy. Please add the code to include these plots. Please provide all figures and results for manuscript.