**Report of the steps performed and the results obtained**

**Experiment #1:**

The objective of this experiment was to detect GAN generated images using a two-class support vector machine (SVM) and report the accuracy, F1-score, and recall of the classifier. The following steps were performed:

1. Load the live and fake images and resize them to 64x64 pixels.
2. Convert the images into 1-D vectors.
3. Concatenate the live and fake data and shuffle it.
4. Split the data into training and testing sets with a 1:1 ratio.
5. Train a SVM model with a linear kernel using the training data.
6. Evaluate the SVM model on the test set.
7. Calculate the accuracy, F1-score, and recall of the classifier.

**The results obtained from this experiment were:**

Accuracy: 0.6039

F1-score: 0.6611

Recall: 0.7881

**Experiment #2:**

The objective of this experiment was to develop a bagged version of SVM for the problem in Experiment #1 and compare the accuracy, F1-score, and recall of the classifier with those obtained in Experiment #1. The following steps were performed:

1. Load the live and fake images and resize them to 64x64 pixels.
2. Convert the images into 1-D vectors.
3. Concatenate the live and fake data and shuffle it.
4. Split the data into training and testing sets with a 1:1 ratio.
5. Define a base estimator with a linear kernel SVM.
6. Define a bagging classifier with 10 estimators and a random state of 42.
7. Train the bagging classifier using the training data.
8. Evaluate the bagging classifier on the test set.
9. Calculate the accuracy, F1-score, and recall of the classifier.

**The results obtained from this experiment were:**

Accuracy: 0.6396

F1-score: 0.6726

Recall: 0.7550

Overall, the bagged version of SVM improved the accuracy, F1-score, and recall of the classifier compared to the non-bagged SVM.