Performance & Final Submission Phase
Model Performance Test

Date	15 November 2023
Team ID	Team-592065
Project Name	Vitamin Detection using Deep Learning
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot

1.	Metrics	**Regression Model:**
		MAE - , MSE - , RMSE - , R2 score -
		
		Classification Model:
		Confusion Matrix - , Accuray Score- & Classification Report -
			`# Confusion Matrix`
			`cm = confusion_matrix(y_true_labels, y_pred_labels)`
			`print("Confusion Matrix:\n", cm)`
			
			Confusion Matrix:
			[[4 11 22 4 11]
			[11 7 12 4 8]
			[11 15 16 8 12]
			[3 5 7 7 6]
			[4 12 8 6 10]]
			
			`# Accuracy Score`
			`accuracy = accuracy_score(y_true_labels, y_pred_labels)`
			`print("Accuracy Score:", accuracy)`
			
			Accuracy Score: 0.19642857142857142
			
			`# Classification Report`
			`report = classification_report(y_true_labels, y_pred_labels)`
			`print("Classification Report:\n", report)`
			
			Classification Report:
			precision recall f1-score support
			
			0 0.12 0.08 0.09 52
			1 0.14 0.17 0.15 42
			2 0.25 0.26 0.25 62
			3 0.24 0.25 0.25 28
			4 0.21 0.25 0.23 40
			
			accuracy 0.20 224
			macro avg 0.19 0.20 0.19 224
			weighted avg 0.19 0.20 0.19 224

2.	Tune the Model	Hyperparameter Tuning - Validation Method - CNN	`model=Sequential()`
			`model.add(Convolution2D(32,(3,3),input_shape=(64,64,3),activation="relu"))`
			`model.add(MaxPooling2D(pool_size=(2,2)))`
			`model.add(Flatten())`
			`model.add(Dense(units=128,activation="relu"))`
			`model.add(Dense(units=5,activation="softmax"))`