Project Development Phase
Model Performance Test

Date	16 November 2023
Team ID	Team-592664
Project Name	T20 Totalitarian-Mastering Score Predictions
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 -	The Regression metrics are: MSE: 42.58478785861209 MAE: 4.11531679731367 R-squared: 0.9594444804497875

2.	Tune the Model	Hyperparameter Tuning –
		• GRU layer=50 units
		• Activation function='relu'
		• Optimizer='adam'
		• Loss Function='MSE'
		• Epoch=50
		• Batch size=32
		Validation Method –
		• Early Stopping
		• Scaling of data using minmaxscaler
		• Reshaping of data
		• Data split into: Training=70%,Validation=20%,Testing=10%
			`# Use early stopping`
			`early_stopping = EarlyStopping(monitor='val_loss', patience=3, restore_best_weights=True)`
			
			`# Split the data into training, validation, and testing sets (70% training, 20% validation, 10% testing)`
			`X_train, X_temp, y_train, y_temp = train_test_split(features, target, test_size=0.3, random_state=42)`
			`X_val, X_test, y_val, y_test = train_test_split(X_temp, y_temp, test_size=1/3, random_state=42)`
			
			`# Standardize the features using Min-Max scaling`
			`scaler = MinMaxScaler()`
			`X_train_scaled = scaler.fit_transform(X_train)`
			`X_val_scaled = scaler.transform(X_val)`
			`X_test_scaled = scaler.transform(X_test)`