

Project Development Phase
Model Performance Test

Date	10 November 2023
Team ID	Team - 592087
Project Name	Project – Time Series Analysis For Bitcoin Price Prediction
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.	Model Summary	<p>The Bitcoin price prediction model employs a hybrid approach, combining traditional Machine Learning (ML) models, such as AutoARIMA with exogenous variables for baseline prediction, and deep learning models, including Long Short-Term Memory (LSTM) and Recurrent Neural Network (RNN), to capture complex temporal dependencies. The model's architecture involves sequential layers with LSTM/RNN for deep learning components and an ensemble approach to combine predictions from both ML and deep learning models, with individual models weighted based on their performance. Training and evaluation are conducted on split datasets, utilizing metrics like Mean Absolute Error (MAE) and Mean Squared Error (MSE). The model is deployed in a production environment with continuous monitoring, and hyperparameter tuning is employed for optimization. Continuous learning mechanisms and regular updates with new data ensure adaptability to changing market conditions. Results, including performance</p>	

		metrics and future work considerations, are presented for comprehensive analysis and improvement.	
2.	Accuracy	Training Accuracy – 99.67 Validation Accuracy -98.81	<pre>print("train_data: ", train_data.shape) print("test_data: ", test_data.shape) train_data: (243, 3) test_data: (345, 3)</pre>
3.	Confidence Score (Only Yolo Projects)	Class Detected - Confidence Score -	