**Team No :** 16

**Python Machine Learning Strategies for Predicting Bitcoin Price Fluctuations**

**Abstract:**

The predictive accuracy of Bitcoin price direction using machine learning methods, focusing on the unique challenges presented by its volatility and transient market status. While existing literature has extensively explored various machine learning techniques for time series prediction, research specifically targeting Bitcoin remains limited. Given Bitcoin's performance as a top-performing currency in recent years, this study aims to fill this gap and highlight the potential for profitable trading strategies. Additionally, the research examines the advantages of utilizing GPU-based machine learning algorithms over traditional CPU methods, demonstrating significant performance improvements. By analyzing key dependent variables and assessing their importance through various regression algorithms, this study seeks to contribute valuable insights to the field of cryptocurrency prediction and inform trading practices in this dynamic market.

**Key Words**: Bitcoin prediction , Time Complexity , cryptocurrency market , regression algorithms, database architecture , time series forecast

**Under the guidance of Team Members**

K.Navya Sree (21VD1A0528)

Mr.K.Srinivasa Rao N.Rupak (21VD1A0539)

Assistant Professor (c) Ch.Srihari (21VD1A0549)

& Dept. of CSE G.Surya (21VD1A0554)