**ABSTRACT**

Title: AI Based Model for Predicting Prices of Agri-Horticultural Commodities

SHARANYA T 727622BAD007

SANTHOSH S 727622BAD075

AASHIF SHADIN K N 727622BAD099

Variations in agricultural commodity prices pose major challenges for farmers, traders, and policymakers, impacting economic stability and food security. Traditional models for price prediction often lack the accuracy and flexibility required for effective decision-making. This study introduces a data-driven framework that leverages advanced machine learning techniques to enhance the reliability of agricultural price forecasts. The framework integrates multiple data sources, including real-time market trends, historical price patterns, weather conditions, supply-demand fluctuations, and government policies. Models such as ARIMA, SARIMA are applied to identify complex patterns in price movements This approach not only improves forecast accuracy but also supports better decision-making in buffer stock management, procurement strategies, and policy interventions, contributing to a more stable agricultural ecosystem.

**Keywords:** Agricultural price prediction, Machine learning, ARIMA, SARIMA, Time Series Forecasting, Market analysis, Economic forecasting, Decision support.