The paper examines the efficacy of neural networks application for inflation forecasting. In a simulated out-of-model forecasting investigation using recent Nigeria inflation rate data obtained from the appropriate authorities, the neural networks did better than univariate autoregressive models on normal rate for short periods of quarter one and quarter two; quarter one and quarter three; and quarter one and quarter four. A clear-cut condition of the model of neural network and specialized evaluation trial from the neural networks literature exemplify the important roles in the achievement of the feed-forward neural network model.