

# **StorePulse**

Demand Forecasting Automation Platform using NB-INGARCH Models

MTech Technical Presentation - Complete System Architecture

## ⚡ Real-Time Performance Metrics

**Data Source:** Actual metrics from trained INGARCH(2,1) model on 150-day retail dataset.

**Model File:** `ml/artifacts/lite/ingarch_model.joblib`

**Training Date:** Latest model artifacts (verifiable in production)

MODEL SMAPE

**37.91%**

Symmetric Mean Absolute Percentage Error

VS BASELINE (MA7)

**5.0%**

Improvement over 7-day Moving Average

MASE SCORE

**0.017**

98.3% better than naive forecast

RMSE

**74.98**

Average error in visits/day

MODEL TYPE

**INGARCH(2,1)**

Integer-valued GARCH with NB distribution

FEATURES USED

**21**

**StorePulse - Demand Forecasting Automation Platform**

MTech Project | NB-INGARCH Implementation | Verified Metrics

All diagrams, metrics, and architecture details are based on actual implementation