

StorePulse

Demand Forecasting Automation Platform using NB-INGARCH Models

MTech Technical Presentation - Complete System Architecture

Academic Contributions

1. Model Innovation

First production implementation of NB-INGARCH for retail demand forecasting with full uncertainty quantification

2. Feature Engineering

Novel 21-feature set combining temporal, autoregressive, and volatility indicators optimized for count data

3. Quality Gates

Automated validation framework ensuring models beat baselines before deployment

4. Desktop Deployment

Zero-cloud architecture using Tauri for local-first predictive analytics

Project Status: Production-ready system with verified ML pipeline, comprehensive testing, and full documentation. All code is open-source and metrics are reproducible.

StorePulse - Demand Forecasting Automation Platform

MTech Project | NB-INGARCH Implementation | Verified Metrics

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