Autonomous Demand Forecasting at 30-Minute, Store-Level Grain

One of the largest quick-service restaurant players · every operational store · dine-in, takeaway, aggregator and own-app delivery

THE AGENTIC LOOP — WHAT THE SYSTEM DOES ON ITS OWN

1 Ingest

Marketing, promotion, sales-sales-force and transaction transaction data by store and and item.

2 Enrich

Weather, traffic, search trends, events and demographics added automatically.

3 Forecast

Demand predicted per store, store, per item, per channel, channel, per 30-minute slot. slot.

4 Alert

Deviations from forecast surfaced to operations while while the shift is still running. running.

5 Act

Forecasts feed marketing investment, delivery fleet and and inventory decisions.

THE MANDATE

Predict demand accurately enough to manage marketing investment, delivery fleet and inventory at store and market level, in 30-minute intervals rather than daily totals.

AI AND AGENTIC AI APPLIED

MODELS Gradient-boosted and time-series ensembles forecasting per store, item, store, item, channel and 30-minute slot, using weather, traffic, search, event and event and demographic features.

AGENTS Thousands of live forecasts re-run and self-correct continuously, raising deviation alerts to store operations mid-shift. No analyst-run process reaches this grain.

OUTCOME – PRECISION PLANNING WITH AGENTIC AUTOMATION

~93%

sales forecast accuracy at 30-minute grain

30 min

forecast interval, per operational store

Store + item

level granularity across four sales channels

15+

external signals included beyond marketing data