

AI-Powered Demand Forecasting for Smarter Inventory Planning

HIGHLIGHTS



30% Fewer stockouts and excess inventory



10% Lower supply chain costs



Improved forecast accuracy



Data-driven decision-making

Client Overview

A leading global beverage company with a diverse portfolio of iconic brands. Headquartered in North America, the company operates across multiple continents and serves millions of consumers. It focuses on product quality, sustainable practices, and delivering a seamless customer experience.

Business Need

Lack of accurate hourly demand forecasting led to frequent stockouts and excess inventory. Sales and supply teams lacked real-time visibility into SKU-level performance across outlets, which in turn affected replenishment planning and marketing decisions. The client needed a solution to:

- Forecast hourly beverage sales across retail outlets for all SKUs and packaging types
- Predict monthly demand for CPG SKUs at select outlets
- Estimate the likelihood of specific outlets stocking SKUs

Solution

Innominds proposed an AI-based solution to help the client address challenges and support business needs.

The engagement team

- Developed AI/ML-based forecasting models using historical sales, inventory, and promotional data
- Applied advanced algorithms such as ARIMA and Prophet to predict hourly and monthly SKU-level demand
- Incorporated outlet attributes, product mix, and supply dynamics for higher accuracy
- Integrated supply metrics including fulfillment rates, order cycles, and lead times
- Automated workflows using Python and Azure Data Factory
- Delivered intuitive dashboards for proactive decision-making by inventory and marketing teams

Tools & Technologies Used

- **AI/ML-driven forecasting**
- **Algorithms: ARIMA, Prophet**
- **Reporting and Dashboards**
- **SAS 9.1, Python, Azure Data Factory**

Value Delivered

- 30% Improvement in sales retention through accurate forecasting
- 10% Reduction in production and logistics costs
- Real-time visibility into demand and inventory levels
- Improved alignment between production, supply chain, and retail demand



Transform Inventory Management with AI!
Forecast Smarter. Reduce Costs. Drive Efficiency.

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