Yum! Brands partners with Tiger Analytics for Demand Forecasting

Yum! Brands is a global Fortune 500 global quick restaurant chain company operating multiple brands in 130+ countries and is one of the largest food restaurant companies with 43,000+ stores

The client depended on a simple forecasting process using recent historical data and a thumb rule-based adjustment. The forecast engine was a black box and hence did not provide much visibility into demand drivers. Tiger Analytics helped in developing forecasting models at menu item/sales/transactions x Store x Day level factoring in potential other drivers of demand like Macro Economic data, Weather, Seasonality, Pricing, Promotions, etc.

The forecast was holistic in nature to build out inventory plans and for the purposes of labor planning.

At-a-glance:

Country: 135 nations

Industry: Quick Service Restaurant

Products and Services: Azure Cloud, Databricks, Azure ML Studio, PowerBI

Stores: 43,000+

Website: https://www.yum.com/

Demand Forecasting Solution on Azure Cloud Platform for a Quick Service Restaurant Chain

Customer challenges

- Understanding the client's existing black box model

- Errors in the back-end migration resulted in an inconsistent inventory data for one full year

- Revolving menu with limited period offers which kept changing all the time

- Arriving at a forecasting granularity of 15-minute interval for labor planning use case

Tiger Solution

Developed a robust forecasting model leveraging Advanced Analytics for all sales, transactions, and menu items at Store x Day level for the next 4-week period on Azure Platform leveraging Databricks, Azure ML Studio, and PowerBI to enable scale across 11,000+ stores

The item level demand forecasts were then used for inventory order forecasting and labor optimization

Customer Benefits

Developed a robust forecasting model with a 3 to 5% increase in accuracy over existing models. Average inventory holding cost across the test stores dropped by ~50% for daily counted items and by ~8% for Weekly counted items

Efficiency: ~90% lower instances of transfers across stores due to better inventory planning eliminating the need of manual adjustments

Scalability: The model deployment on Azure helped scale the solution across 4000+ stores and markets in less than 9 months time

ROI: USD 9.4Mn Savings in total cost due to reduction in inventory holding costs

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