



CASE STUDY

Project Lighthouse

Client is India's leading FMCG conglomerate

Client cognized the need for a Data & Analytics strategy and a platform to coalesce the data elements from the divisions into one platform and perform advanced analytics to yield insights. A leading consulting firm was onboarded to define the strategy and roadmap for Data & Analytics, Data Science & AI driven solution on Azure cloud environment. The data platform built is expected to be the default data store for data across environment and enable usage of advanced analytics and other data related initiatives in the Organization.



Business Challenge

To design an enterprise Unified Data and Insights platform with adequate modeling tools & capabilities with easy-to-use visualization methods to support business decision-making with respect to Trade Promotions and Marketing Mix.

To build the capability to Predict and Optimize ROI on marketing spends and improve the effectiveness of promotions across channels by leveraging DS & AI. This initiative covers all major FMCG categories like Biscuits, Snacks, Noodles, and Personal care products.

Technologies

Microsoft Azure: Azure Data Factory (ADF), Azure Data Lake Storage (ADLS) and Azure Data Bricks (ADB), Azure ML, MLOps , Azure DevOps

Our Solution

The ITC Infotech team was involved as a Professional Services Group to work in parallel with the COE SI integrator and DS consulting teams and review the entire ongoing development.

In collaboration with other vendors for Data Engineering and Data Science solutions, the ITC Infotech team was involved in Data Extraction, cleaning, business validation, and transformation using Azure Data Factory and Data Bricks and Data Science modeling, Retraining, and Scoring on Azure ML and automated using ML Ops.





AI Approach used



The ingestion of data from various source systems into different layers of Azure involved masking of PII as well as sensitive data. The remaining data is ingested and passed through multiple layers of cleaning, value encoding, & business validation checks and populated into the processed (Silver) layer.

From this layer, we perform business transformations and populate the final curated layer of data, which is also called the Gold Layer.

From the curated layer, earlier historical data and incremental data for the latest available month are taken. Modeling techniques like Random Forest are applied to predict Sales for various categories and estimate Baseline Sales. Hyper-parameters are optimized using different Grid Search techniques, and cross-validation is used to improve the accuracy of the output.

A business logic-based approach is used to modify existing schemes and generate new pristine schemes to be tested in the market. Optimization techniques are used to choose the best schemes with respect to forecasting higher Sales and reducing the Spends.



Business Benefits

Business Target achieved in the first two months of roll out

- The Trade Promotion solution is currently under the Stabilization phase and fine-tuned for performance. In the first two months, the optimization of Trade Promotion % over the baseline was seen to be in the range of 5-8%
- Ability to predict individual promotion effectiveness by markets, categories, and brands
- Optimized the overall ROI, both short-term and long term driven by DS & AI models

About ITC Infotech

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