Customer Satisfaction Prediction

Problem Statement

One of the Major Telecommunications Companies in North America needed help to improve the customer experience and understand why customers were unhappy with the Company. Customers interact with Telcos to understand the products and plans, buy new services, use them, and pay bills.

The cause of unhappiness could be anything from service issues to billing issues or even communication issues from Customer service agents. The organization tried to collect customer feedback based on these transactions but only around 10% of customers provided feedback.

Approach

GeakMinds analyzed the transactions included data about Quotes, Orders, Service Issues, Billing Issues, inquiries about plans, etc. The outcome of these transactions would primarily decide customer satisfaction. The sample

feedback from customers when correlated against the corresponding transaction details shows what parameters drive customer satisfaction.

Example: A delay in Order delivery is likely to make the customer unhappy, likewise a repeated network issue is also expected to make the customer unhappy.

Quick resolution of an incident is expected to make customers happy.
Based on these learnings, five machine learning models were trained with the transaction parameters as features and actual sample customer feedback as labels.

This model was then used to predict customer satisfaction in all the transactions where the customer did not provide feedback. This approach helped the organization understand customer satisfaction after each transaction.

To process millions of transaction data and make predictions daily, we leveraged Microsoft Azure and Databricks to train and deploy the machine learning models.
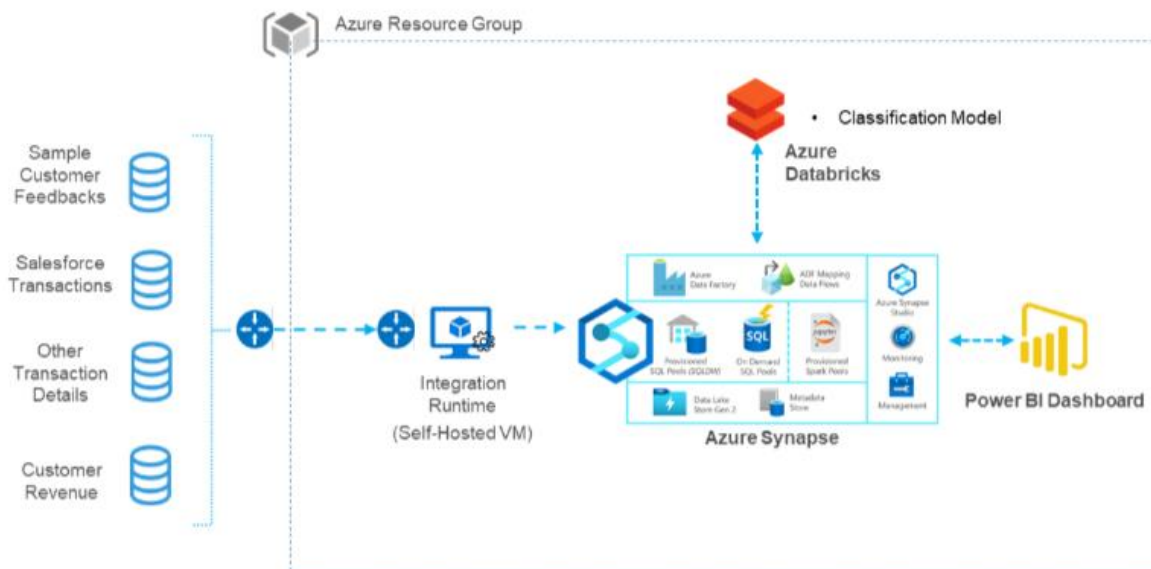
The data was ingested into Azure using Synapse pipelines. The output from Databricks was saved back in the Azure Synapse Data Warehouse. A Power BI Dashboard was built for Customer Success agents to analyze and take action.

Benefits

With Millions of transactions and hundreds of thousands of customers interacting across departments in an organization a unified satisfaction score for a customer with the capability to identify the issues in each department helps improve customer satisfaction, and revenues and reduce churn.