

Case Study: Coffee on Wheels (Global Presence)

Business Overview

“Coffee on Wheels” is a mobile coffee service operating in a busy metropolitan area. They serve coffee, snacks, and other beverages at different locations throughout the city using food trucks. They want to optimize their operations, understand customer preferences, and increase sales through data-driven decisions.

Requirement / Challenges

Depends on social media, Internet to collect customer reviews and make use of this data in order to make

- Demand Prediction
- Customer Segmentation
- Popular product analysis
- Customer Preferences
- Marketing Campaigns
- Operational Efficiency notes
- Audio/Video Gen AI based output

Data Available

1. **Sales Data**
 - Transaction ID, Date, Time, Location, Product, Quantity, Price, Payment Method
2. **Customer Data**
 - Customer ID, Demographics (age, gender), Loyalty Points, Purchase History
3. **Location Data**
 - GPS coordinates, Foot traffic data, Nearby events
4. **External Data (Optional)**
 - Weather data (temperature, rain, humidity)
 - Local events calendar

Problem Statement

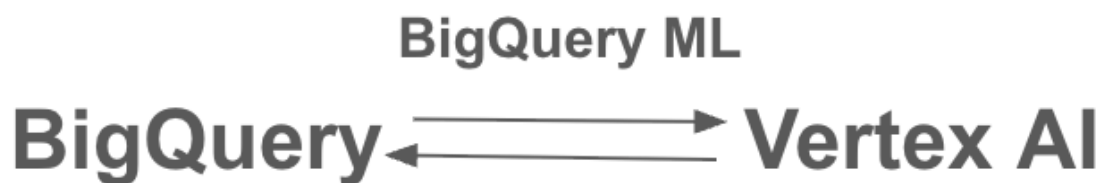
1. **Ingestion :-** Customer reviews across social media in multiple formats
2. **Create Models:-** Create suitable AI model
3. **Analyze data:-**
 - a. **Extract Keywords**
 - b. **Identify Sentiments**
 - c. **Analyze audio and video**
4. **Actions:-**
 - a. **Generate responses to reviews**
 - b. **Develop a marketing campaign**

Deciding the right tool:-



Google BigQuery

(Storage + Analytics + AIML (Create and use ai models access to gen ai on vertex AI))



Gen AI Utilization

- Gen AI generated statements
- Realtime +ve and -ve reviews
- Marketing Campaigns

Analytics

- Individual truck performance
- Individual product performance

Conclusion:-

By systematically analyzing and responding to customer reviews across multiple platforms, Coffee on Wheels not only deepens its understanding of customer preferences but also enhances service quality and customer loyalty—ultimately driving repeat business and stronger brand reputation.

- **Ingests real customer reviews** from multiple sources (Facebook, Twitter, Instagram, etc.)
- **Analyzes customer sentiment** and content
- **Generates marketing actions** (e.g., “offer a free drink”) using GenAI models
- **Stores it back in BigQuery** for real-time or scheduled campaign automation

“By leveraging Vertex AI’s generative capabilities within BigQuery, we transformed raw, unstructured customer feedback into intelligent, personalized marketing actions — enabling Coffee on Wheels to respond at scale, build stronger customer loyalty, and drive data-backed promotional strategies.”

With just a few lines of SQL, we orchestrated a fully serverless solution that:

- Scaled to handle multi-platform reviews
- Used GenAI to interpret customer intent and tone
- Produced actionable outputs (e.g., “offer a free drink”) ready for marketing teams
- All while staying within the Google Cloud ecosystem (BigQuery + Vertex AI)