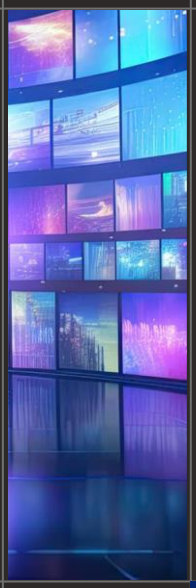
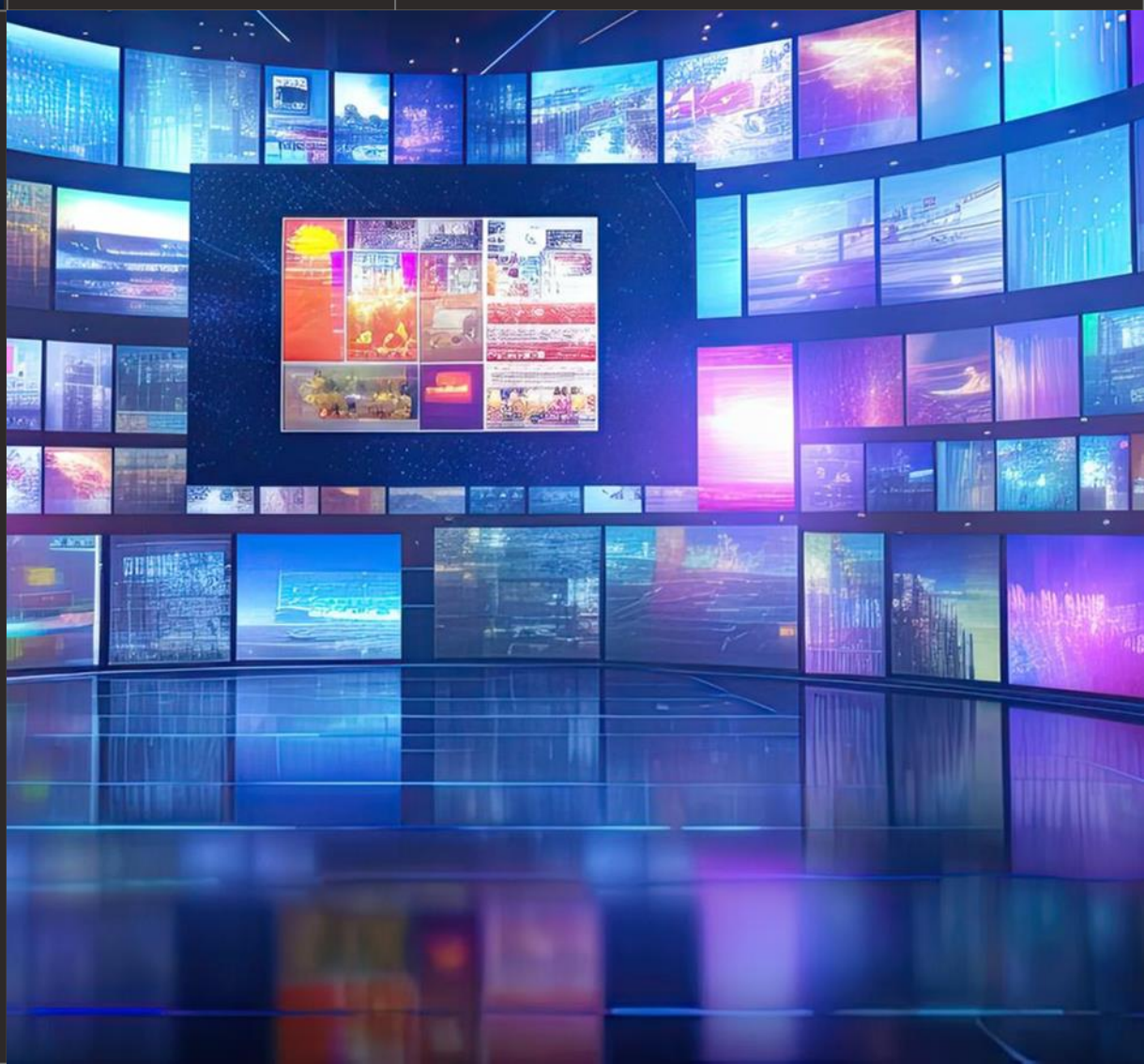
Tiger Analytics

A Leading Indian Media Conglomerate Harnesses GCP powered monetization Intelligence to Improve Programming and Ad Solutions



A leading Indian media conglomerate wanted to use user viewing behavior data to improve its programming and advertising solutions. They also wanted to optimize their TV ad plan and make better-informed ad quotation decisions.



The Background

Our client has been prominent in the Indian media industry for over three decades. They are also one of the nation's leading media conglomerates. Their objective was to leverage user viewing behavior for intelligent programming and advertising solutions to harness monetization intelligence. Sought a solution to optimize their TV Ad Plan using available data, allowing them to make informed decisions about ad quotations with greater intelligence.

Key Challenges

- Inconsistencies in data, combined with diverse data sources, formats, and structures..
- Issues with downtime during data migration.
- Scalability issues arising from the extensive user database and volume, affecting concurrency performance
- Challenges concerning resource allocation, increased response time, poor synchronization, and load imbalances

Client Problem 1:

a. Data Integrity: During the migration process, ensuring the integrity of the data becomes critical. Any inconsistencies, errors, or data loss during transfer can severely affect the accuracy and reliability of the insights derived from the data. The challenge is meticulously planning and executing the migration process to maintain data integrity.

b. Data Compatibility: Media conglomerates often have diverse data sources, formats, and structures, making data compatibility a significant hurdle. Integrating data from various systems and making it coherent for analysis requires careful data mapping and transformation. This process can be time-consuming and resource-intensive.

c. **Downtime and Disruptions:** Data migration and re-ingestion can lead to temporary downtime, affecting regular operations. Minimizing disruption during the transition becomes crucial to avoid negative impacts on the business and user experience.

d. **Data Validation and Quality:** Verifying the accuracy and quality of migrated data is essential for making informed decisions. However, ensuring the completeness and correctness of the transferred data can be challenging, necessitating comprehensive data validation procedures.

Client Problem 2:

Concurrency Performance Issues Post Data Load:

a. Scalability Concerns: As the media conglomerate's user base and data volume grow, concurrency performance becomes a pressing issue. The system must handle multiple users and data requests simultaneously without experiencing performance degradation or bottlenecks.

b. Resource Allocation: High concurrency can strain system resources, including processing power, memory, and storage. Managing resource allocation efficiently becomes critical to maintaining optimal performance under heavy loads.

c. Response Time and Latency: Concurrency can increase response time and latency, affecting the user experience and real-time decision-making capabilities. Reducing response time while maintaining data accuracy becomes a balancing act for the media conglomerate.

d. Locking and Synchronization: In concurrent data processing, multiple users or processes may try to access and modify the same data simultaneously, leading to potential conflicts and data inconsistencies. Implementing robust locking and synchronization mechanisms becomes crucial to prevent data corruption.

e. Load Balancing: Load imbalances can occur when different system parts receive varying traffic levels. Proper load-balancing strategies must be implemented to distribute the workload evenly across resources, ensuring efficient utilization and performance.

Our Solution

Constructed the core data pipelines using Spark, Hive, and HBase components on the Dataproc service.

In-house supported Scala application, hosted as a containerized service on GKE, orchestrated the entire workflow.

It furthermore developed a reporting framework that seamlessly integrates with BigQuery, enabling rapid and low-latency delivery of reports to end-business consumers.

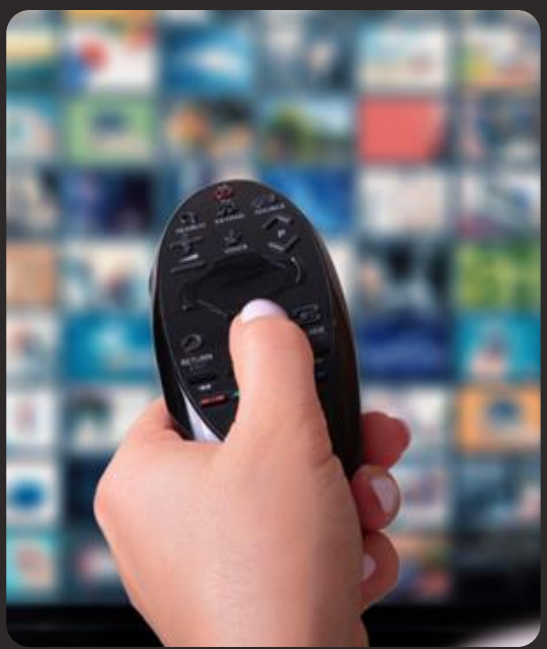
Tech Stack

/ GCP

/ Data Migration

Value Delivered

Enhancing customer call center operations by leveraging AI-driven text and voice analytics



The solution was highly scalable with high accuracy, enabling the customer to optimize their TV ad plan

The solution also helped the business provide the required data and intelligently decide on the ad's quotation

It also significantly increased the ability of the customer to generate better revenue by delivering ads at the appropriate time

About Us

Tiger Analytics is a global leader in AI and analytics, helping Fortune 500 companies solve their toughest challenges. With over 4000 data technologists and consultants spread across offices in the US, Canada, UK, India, Singapore and Australia; we help our customers accelerate their AI and analytics journey in sectors like CPG, Retail, Insurance, BFS, Manufacturing, Life Sciences, and Healthcare. Tiger Analytics is a Great Place to Work-Certified and a 'Leader' in the Forrester Wave: Customer Analytics Services Report 2023.

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