

(This email is addressed to John, whom I am consider as my (imaginary) Product/ Business leader in this case.)

Subject: Data Quality and Optimization Insights

Hi John,

I hope this email finds you in good health. I wanted to give you some key insights into our data as well as the measures we're taking to assure data quality and optimize our data assets for improved decision-making.

1. Overview of Data Quality:

To begin, it is critical that we have a clear grasp of our data:

- The source of the data and the methods used to obtain it: This will assist us in determining its dependability and usefulness to our operations.
- The major goal of collecting this data and using it to assist our business choices is: Understanding this will help us improve our data quality efforts and make better decisions.
- The current data volume and its rate of growth: This knowledge will assist us in making future plans and ensuring that our data architecture remains scalable.
- Controls on data ownership and access: It is critical to establish who is responsible for the data and to implement appropriate security and compliance measures.

2. Findings on Data Quality:

We noticed the following issues that require improvement through a thorough data analysis:

- There are missing values in the Users table, and certain date and ID fields have inappropriate formatting.
- Brands table: As with the Users table, we discovered missing values and formatting issues in the ID column. Furthermore, the 'cpg' column is made up of nested dictionaries, which must be handled.
- Receipts table: Once again, there are missing numbers, anomalies in date format, and issues with ID formatting.

3. Resolving Data Quality:

We will take the following efforts to maintain high data quality:

- Creating data standards and business rules that will govern data cleansing and validation.
- Seeking insights from subject matter experts to efficiently handle any data anomalies.
- To ensure correct data interpretation, create a comprehensive data dictionary.
- Understanding the data collection process allows you to detect potential problems and make improvements.
- Putting in place data entry and validation procedures to ensure data integrity.

4. Data Asset Optimization:

We will focus on the following areas to optimize our data assets:

- Understanding data use cases is essential for prioritizing data processing and storage efficiency.
- To plan for the future, establish performance criteria and growth estimates.
- Assuring compatibility with our current technology stack, which includes databases and data processing tools.
- Meeting security and regulatory standards for effectively handling sensitive data.

5. Efficacy and Scalability Concerns:

We expect and will address problems such as:

- Efficiently handling a big data volume in our efforts to maintain a high-performing and scalable data infrastructure.
- Concurrent users and any bottlenecks must be managed.
- Investigating methods for real-time processing of continuous data streams.
- Optimizing data storage to properly manage costs.
- Putting in place reliable data backup and recovery procedures.
- Proactively monitoring and addressing performance bottlenecks.
- For future scalability, cloud-based methods are being considered.

If you have any queries or need additional information, please do not hesitate to reach out.

Thank you,
Best Regards,
Mike Akshay Dominique.