

**Subject: Identified Data Quality Concerns: Receipts, Users, and Brands Data**

**Hello Todd,**

I hope this email finds you well. Following a comprehensive exploratory analysis of our Receipts, Users, and Brands data, I've unearthed several significant data quality concerns that warrant our attention. I believe addressing these issues is crucial for maintaining the integrity and accuracy of our database.

**1. Missing Data:**

a. `finishedDate`: Approximately 49% of receipts lack information on their completion date, which impacts our understanding of their validity status.

b. `pointsEarned`: Concerning 45% of receipts have missing values for points earned, potentially affecting our ability to accurately track rewards.

c. `purchasedItemCount`: The absence of data in this field complicates our ability to assess eligibility for promotional offers or bonus points tied to purchase quantities.

d. `totalSpent`, `rewardsReceiptItemList`: The absence of transaction amounts and item details hinders our analysis of points earned for these transactions.

e. `topBrand`: Boolean indicators for featuring top brands are absent.

f. `categoryCode`: Missing category codes impair our ability to categorize brands effectively.

**2. Outliers**

The presence of unusually large values in '`pointsEarned`,' '`purchasedItemCount`,' and '`totalSpent`' suggests potential anomalies. Investigating the processes generating these values is advisable to ensure data accuracy.

**3. Duplicate Records:**

More than half of the Users data contains duplicate entries, highlighting a need for database cleanup to eliminate redundancy and prevent future occurrences.

**4. Inconsistent Date Formats:**

I observed inconsistencies in date formats across the database. Aligning our date capture and storage procedures with standard formats like MM/DD/YYYY will enhance data consistency.

I have devised a plan to address these issues comprehensively and would appreciate the opportunity to discuss it with you in detail. Please let me know a convenient time for you, and I will gladly arrange a meeting. Thank you for your attention to these matters. I look forward to our discussion.

**Best regards,**

**Janki**