Hi there,

Thank you for giving us the opportunity to analyses and identify the data quality issues and strategies to mitigate these issues. Below is a list of the Data Quality issues which we discovered from datasets.

**Data Quality Framework Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Datasets** | **Accuracy** | **Completeness** | **Consistency** | **Currency** | **Relevancy** | **Validity** |
| **Customer**  **Demographic** | Inaccurate D.O.B  Age  Missing | Job title: blanks | Gender: inconsistency | Filter out deceased  customers | Delete: default  column |  |
| **Customer**  **Address** |  |  | States: inconsistency |  |  |  |
| **Transactions** | Profit: missing | Online order: blanks  Brand: blanks |  |  | Cancelled order status:  filter out | List price: format  Product first sold date: format |

Detail description of data quality issues and there are some recommendations to mitigate data quality issues.

**Accuracy Issues**

* DOB was inaccurate for the “Customer Demographic” dataset.
* Profit column and age column are missing in the “Transactions” dataset.
* **Mitigate:** Filter out DOB.
* **Recommendations:** Add age column in the dataset. Add profit or profit margin column in the “Transactions” dataset for better insight of sales data.

**Completeness**

* Blanks in job title for the “Customer Demographic” dataset.
* Blanks in online order and brand column in the “Transactions” dataset.
* **Mitigate:** Filter out job title; brand; and online order columns.
* **Recommendations:**  Blank values in columns affect data analysis in a negative way, so avoid null values.

**Consistency**

* Inconsistency in gender column for “Customer Demographic” dataset.
* Inconsistency in states column for “Customer Address” dataset
* **Mitigate:** Filter out ‘M’ as ‘Male’ and ‘F’ as ‘Female’ in gender column. Filter out ‘New South Wales’ as ‘NSW’ and ‘Victoria’ as ‘VIC’ in the states column.

**Currency**

* Deceased indicator column having value ‘Y’ in “Customer Demographic” dataset is not a current customer..
* **Mitigate:** Filter out deceased indicator column having value ‘Y’ in dataset.
* **Recommendations:** Up to date data of deceased customer will increase efficiency of data.

**Relevancy**

* Lack of relevance in default column for “Customer Demographic” dataset and order status column in “Transactions” dataset.
* **Mitigate:** Delete meta-data in default column in “Customer Demographic”. Remove the cancelled value from order status column in “Transactions”.

**Validity**

* Format of list price; and product first sold date column in “Transactions” dataset.
* **Mitigate:** Change format of list price column to currency and product first sold date to short date.
* **Recommendations:** Assign suitable format for any column to make data more readable and understandable.

The recommendations and mitigation strategies are effective and easy to implement. The recommendations will improve data quality and make it more effective or efficient. Also these suggestions will improve data analysis output.