Global Malnutrition Trends (1983-2019)

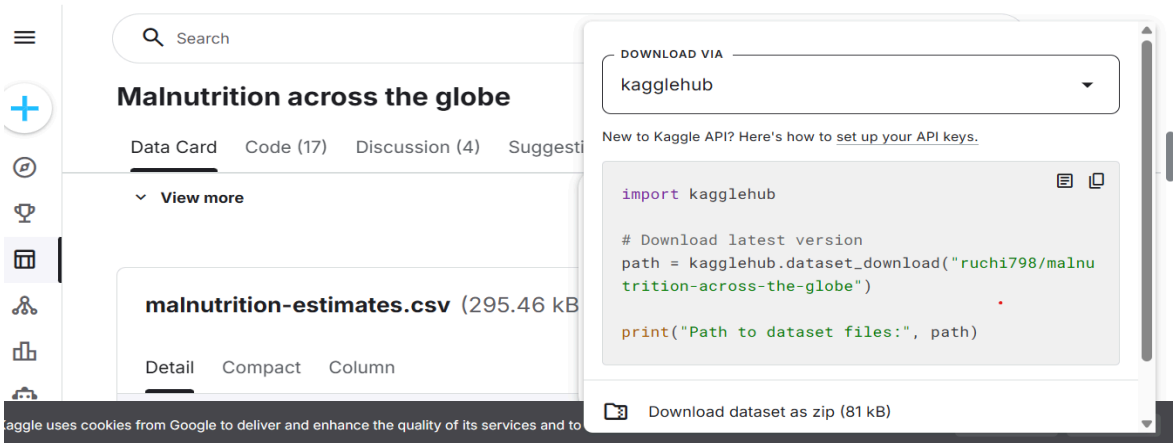
MILESTONE-1

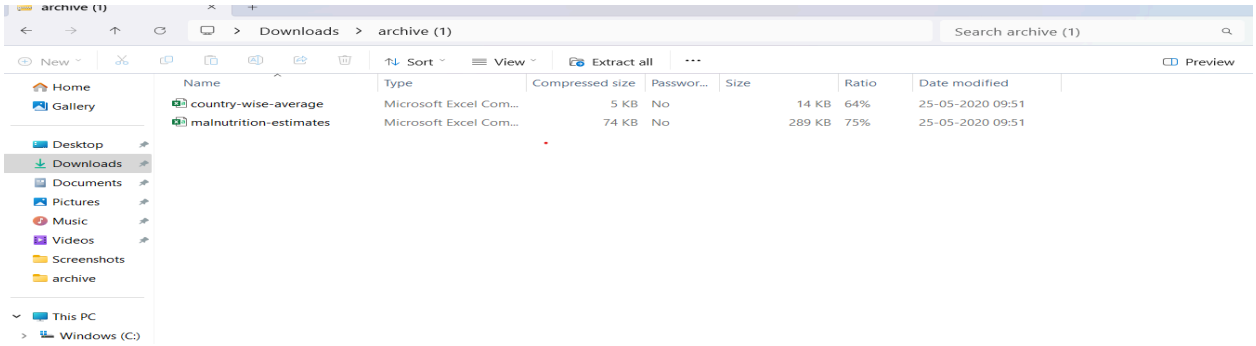
DATA COLLECTION AND EXTRACTION FROM DATA BASE:

STEPS INCLUDE:

The dataset for **Global Malnutrition Trend Analysis (1983–2019)** was downloaded from the Kaggle website.

1. Logged into Kaggle and searched for relevant malnutrition datasets.
2. Selected a dataset containing country-wise malnutrition indicators from 1983 to 2019.
3. Downloaded the dataset in CSV format and saved it in the project folder.
4. Verified the dataset columns and previewed the data.
5. Took screenshots of the dataset page and download process and inserted them into the Google document as evidence.





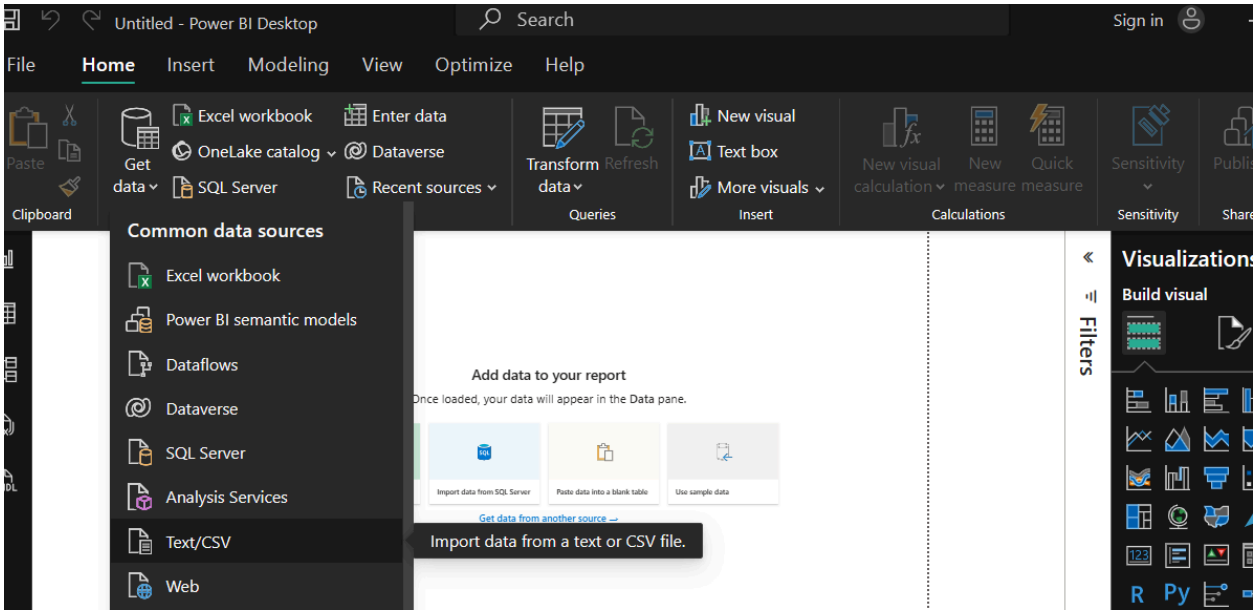
MILESTONE-2

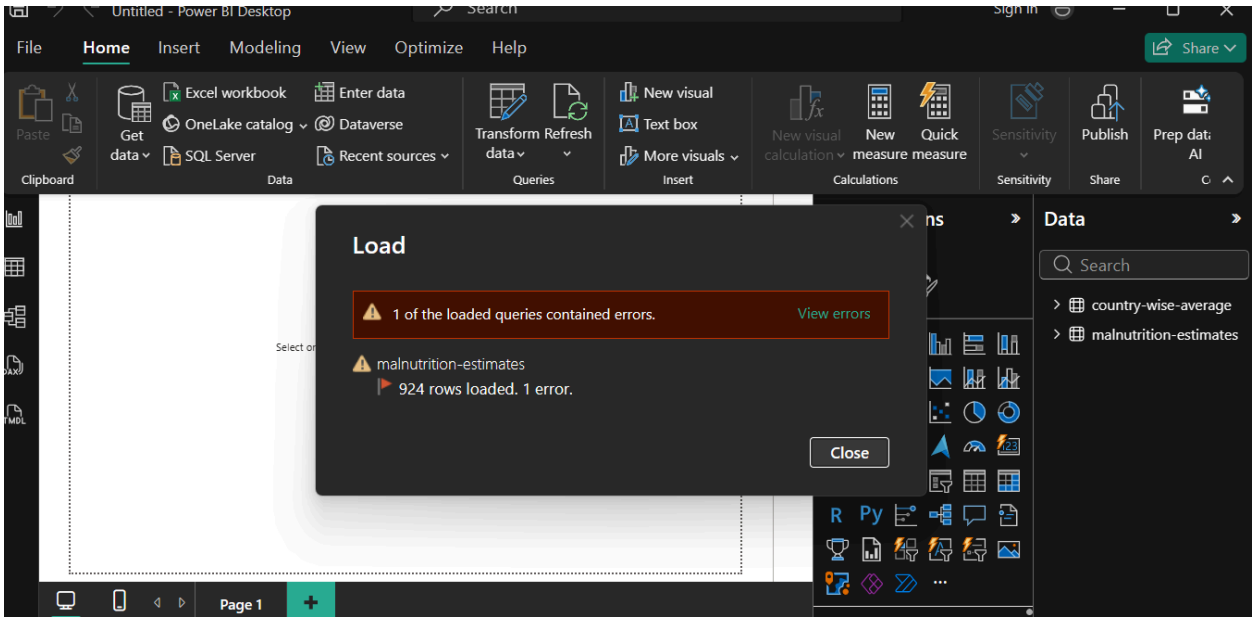
DATA PREPARATION

STEPS INCLUDE:

Data Loading

1. Opened **Power BI Desktop**.
2. Clicked on **Get Data** → **Text/CSV** option.
3. Selected the downloaded malnutrition dataset file from the project folder.
4. Loaded **two datasets**:
    - *Country-wise Estimates* dataset
    - *Malnutrition Estimates* dataset
5. Previewed both datasets in the Power BI data view and verified column names and formats.





DATA CLEANING

STEPS INCLUDE:

Opened **Transform Data** to enter **Power Query Editor**.

Removed all **errors** from the transformed data using the **Remove Errors** option.

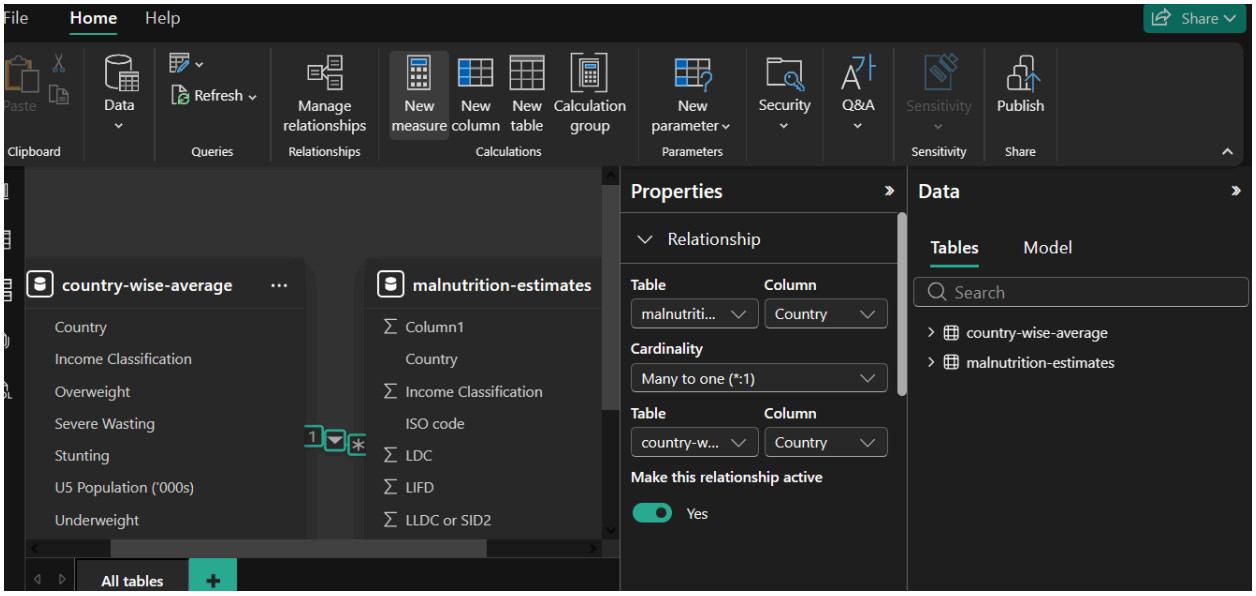
Identified columns with **null values** and deselected the null check box to exclude them.

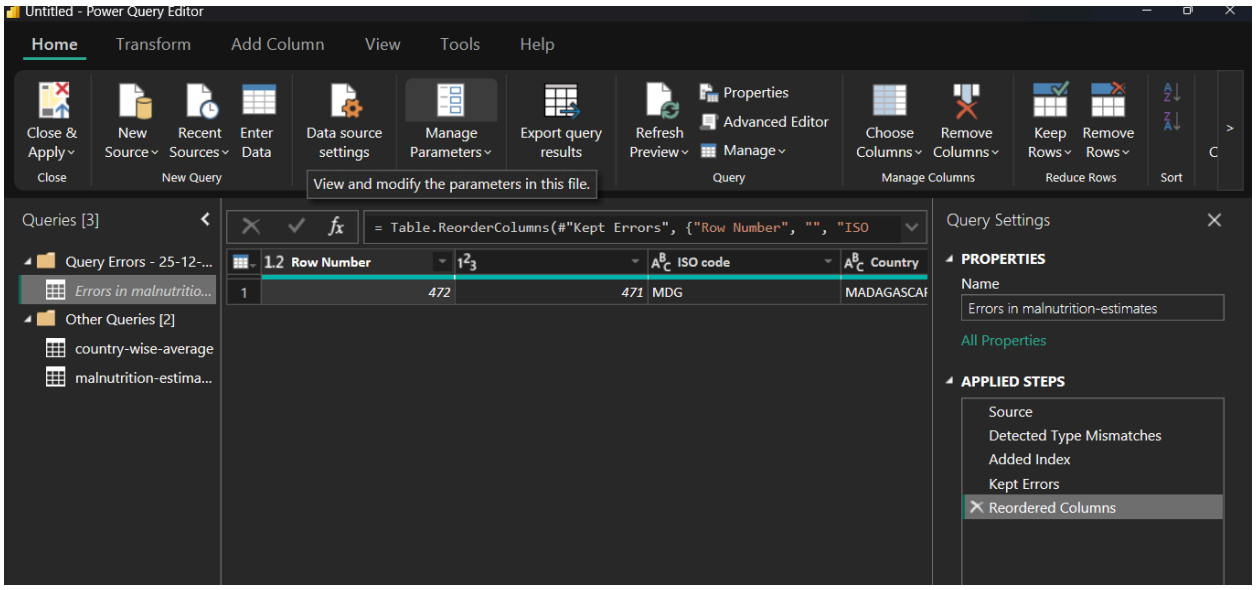
Changed the data type of **U5 Population** column to **Fixed Percentage**.

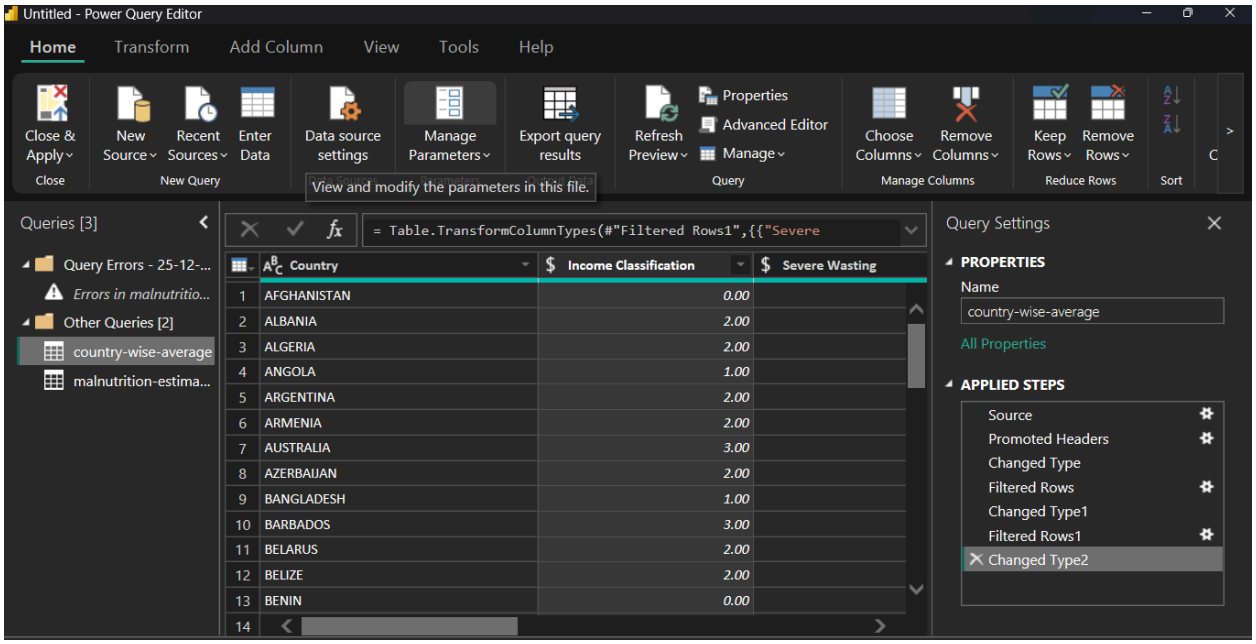
Changed the data type of **Underweight** and other malnutrition indicator columns to **Fixed Decimal Number**.

Removed blank and irrelevant rows.

Ensured consistency of country names across both datasets.







MILESTONE-3

DATA VISUALIZATION

STEPS INCLUDE:

Switched to the **Report View** in Power BI Desktop.

Selected the **Card Visual** from the Visualizations pane.

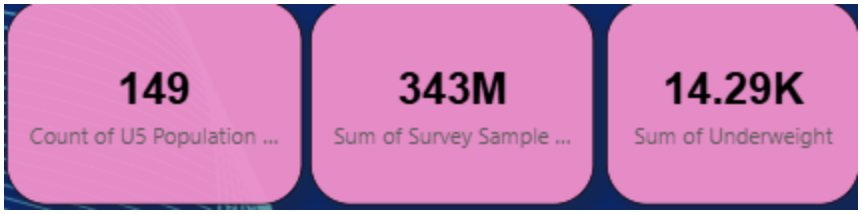
Dragged the **Underweight** field into the card to display the **count of underweight cases**.

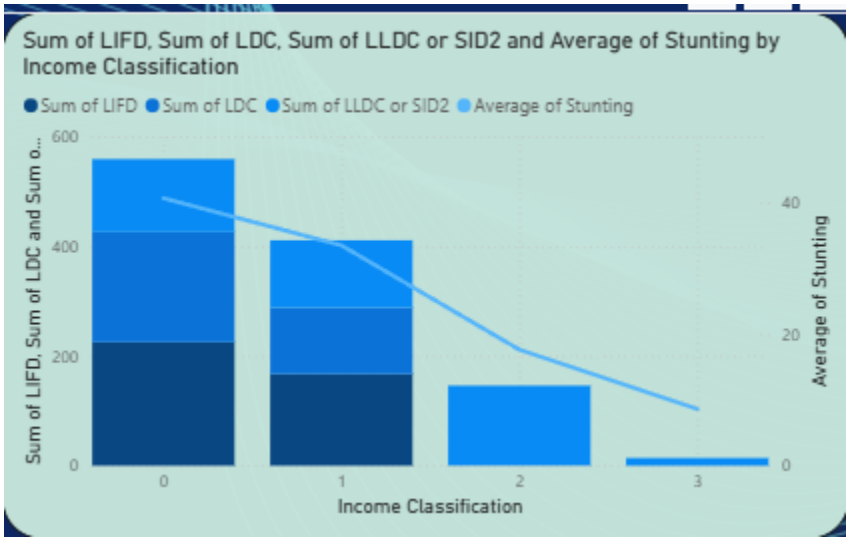
Added another **Card Visual** and dragged the **Country** field to show the **total number of countries** in the dataset.

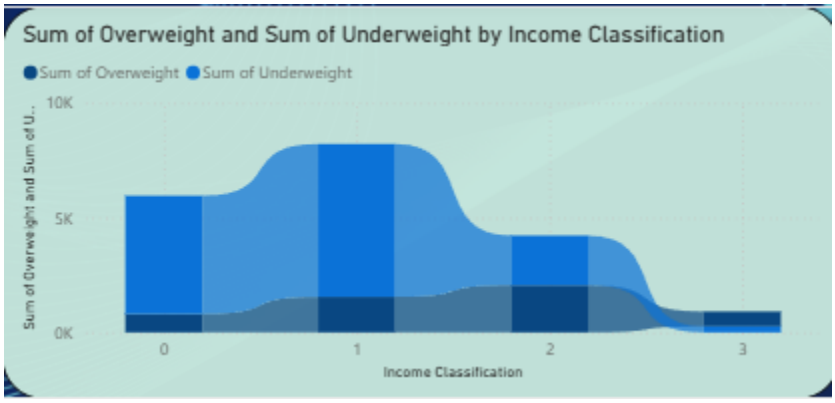
Formatted the cards by adding titles such as:

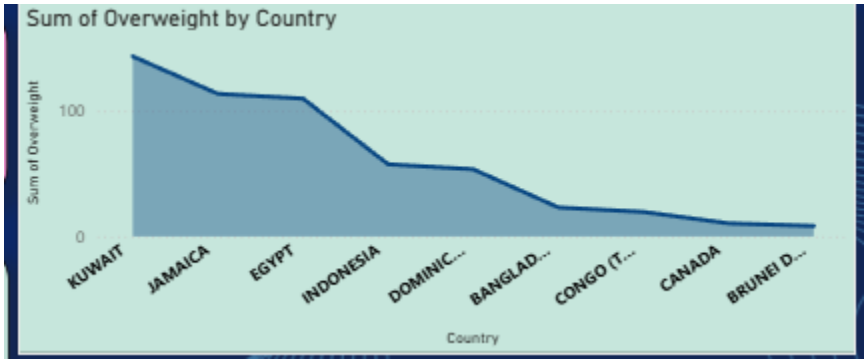
- *Total Underweight Count*
- *Total Countries Covered*

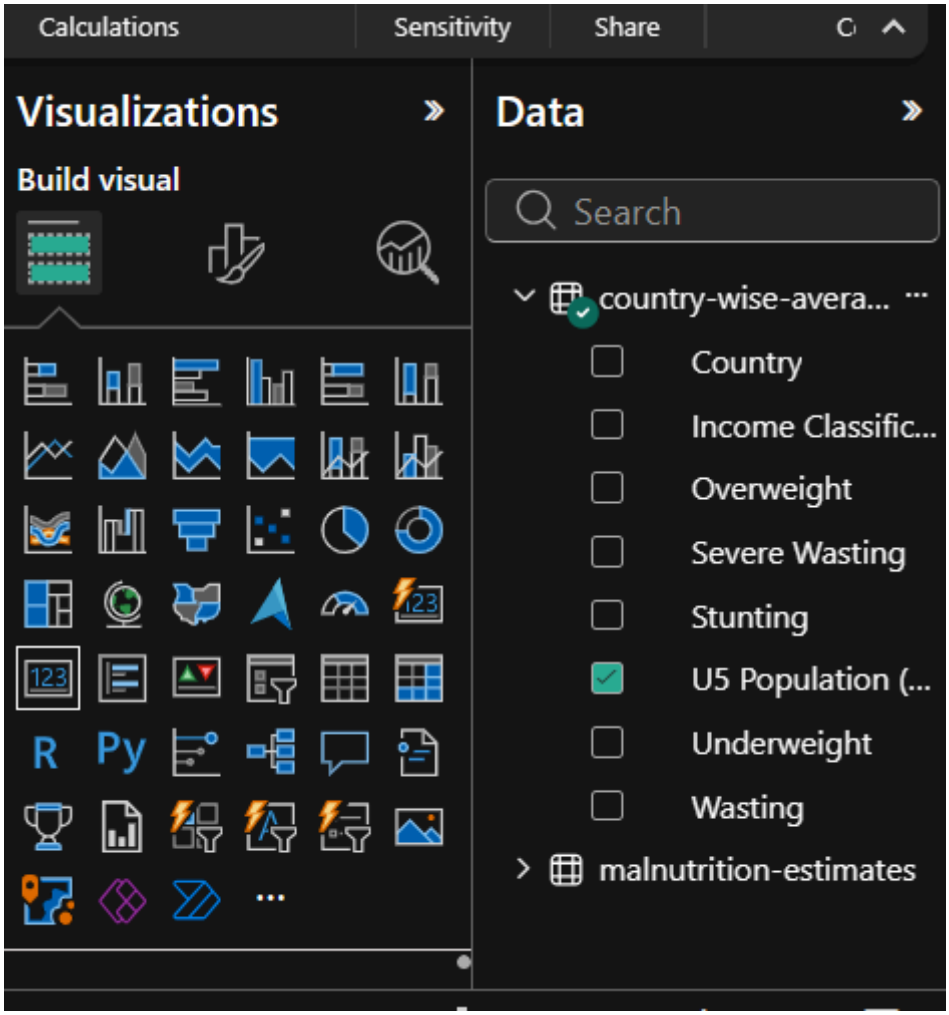
Adjusted font size, alignment, and layout for better readability.


149
Count of U5 Population ...
343M
Sum of Survey Sample ...
14.29K
Sum of Underweight


Sum of LIFD, Sum of LDC, Sum of LLDC or SID2 and Average of Stunting by Income Classification
Sum of LIFD
Sum of LDC
Sum of LLDC or SID2
Average of Stunting
Sum of LIFD, Sum of LDC and Sum o...
600
400
200
0
40
20
0
Average of Stunting
0
1
2
3
Income Classification


Sum of Overweight and Sum of Underweight by Income Classification
Sum of Overweight
Sum of Underweight
Sum of Overweight and Sum of U...
10K
5K
0K
0
1
2
3
Income Classification


Sum of Overweight by Country
Sum of Overweight
100
0
KUWAIT
JAMAICA
EGYPT
INDONESIA
DOMINIC...
BANGLAD...
CONGO (T...
CANADA
BRUNEI D...
Country


Calculations
Sensitivity
Share
Visualizations
Build visual
Data
Search
country-wise-avera...
Country
Income Classific...
Overweight
Severe Wasting
Stunting
U5 Population (...
Underweight
Wasting
malnutrition-estimates

MILESTONE-4

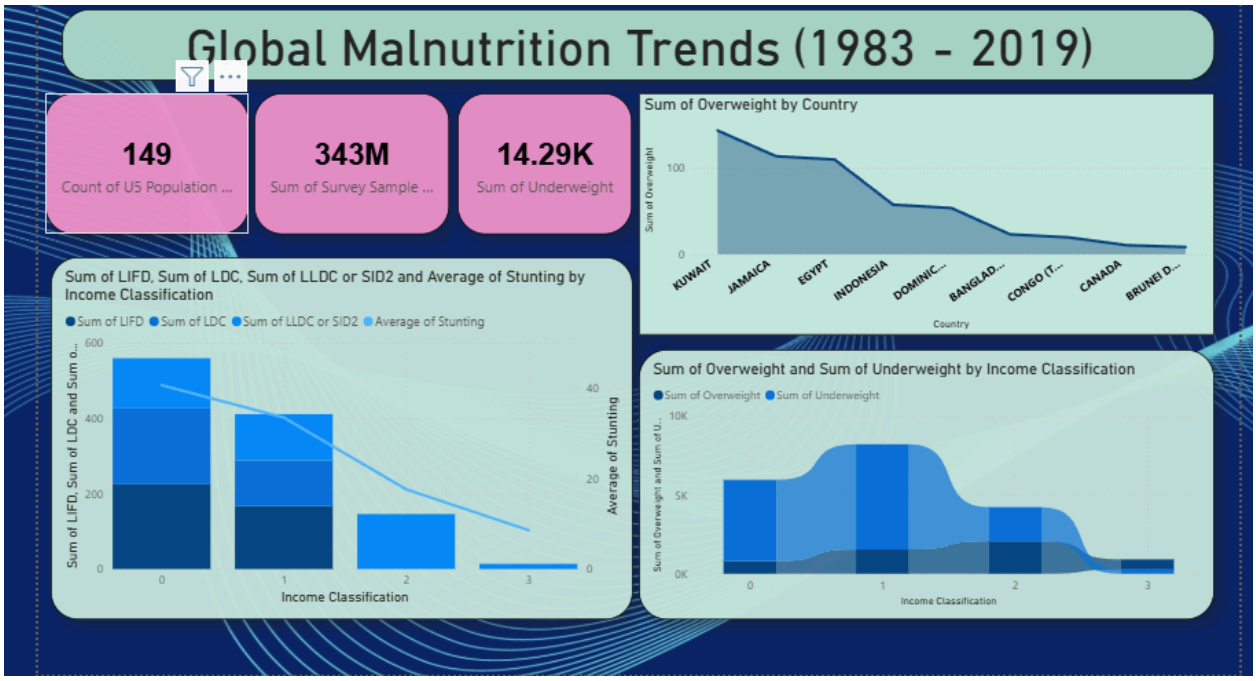
DASHBOARD

STEPS IN CREATING A DASHBOARD:

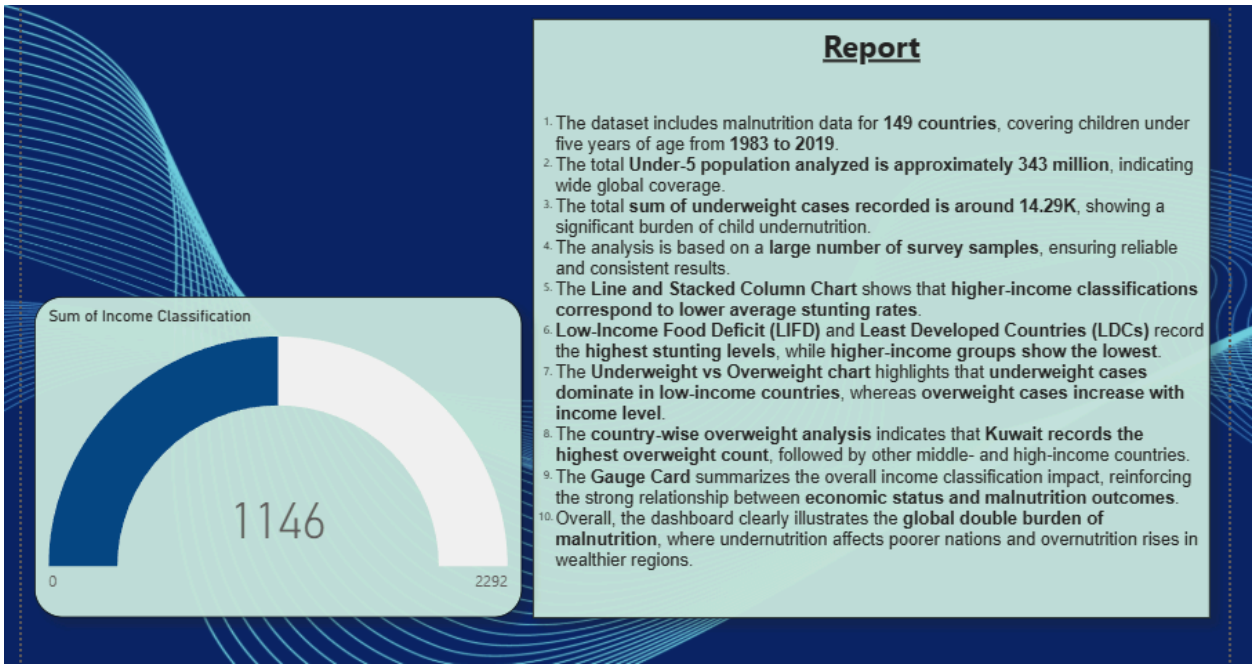
1. Opened the cleaned dataset in **Power BI Desktop**.
2. Switched to **Report View** from the left panel.
3. Applied a suitable **wallpaper/background** for the report.
4. Inserted **Card visuals** to display:
    - Total Underweight Count
    - Total Countries
5. Added the following charts:
    - **Line Chart** – Year on X-axis and malnutrition values on Y-axis.
    - **Ribbon Chart** – Country-wise comparison of malnutrition indicators.
    - **Stacked Area Chart** – Overall trend of malnutrition across years.
6. Arranged the required fields into:
    - **X-axis:** Year
    - **Y-axis:** Underweight, Stunting, Wasting values
    - **Legend / Values:** Country
7. Added **Slicers** for Country and Year for interactive filtering.
8. Formatted all visuals with proper titles, font sizes, and alignment.
9. Reviewed interactions to ensure correct data filtering.

MILESTONE-5

DASHBOARD VIEW :



REPORT VIEW



STEPS INCLUDED IN REPORT VIEW:

1. Added a **Gauge Chart** to evaluate overall performance of malnutrition reduction against a target value.

2. Arranged fields properly into:

    a. **X-Axis:** Year

    b. **Y-Axis:** Underweight, Stunting, Wasting values

    c. **Legend / Values:** Country

3. Added **Slicers** for Country and Year for interactive analysis.

4. Reviewed the dashboard to support **decision-making** by identifying high-risk countries and major trend changes between **1983–2019**.

5. Performed a complete review of the report to ensure insights are clearly visible and accurate.

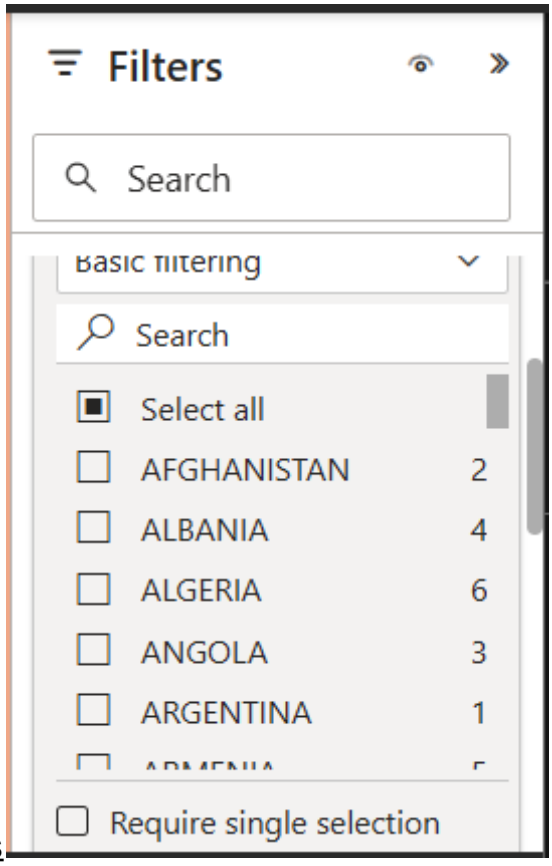
MILESTONE-6

PERFORMANCE TESTING

STEPS INCLUDED IN PERFORMANCE TESTING:

1. Verified that all visuals load correctly without errors.
2. Tested the response time of the dashboard while applying **Country** and **Year slicers**.
3. Checked the performance of charts such as **Line Chart, Ribbon Chart, Stacked Area Chart, and Gauge Chart** for smooth interaction.
4. Ensured that data refresh works properly after reloading the dataset.
5. Validated that calculated fields and card values update correctly based on filters.
6. Tested dashboard navigation and confirmed there is no delay or crash during interactions.
7. Reviewed overall dashboard performance and ensured it supports quick and accurate decision-making

AMOUNT OF DATA LOADED

UTILISATION OF FILTERS 

NUMBER OF VISUALIZATION GRAPHS:

1. Count of U5 Population
2. Sum of Survey Sample(N)
3. Sum of Underweight
4. Sum of Overweight by Country
5. Total Income Classification
6. Sum of Overweight and Underweight by Income Classification
7. Sum of LDC, LIFD, LLDC or SID2 and Average of Stunting by Income Analysis

MILESTONE-7

PROJECT DEMONSTRATION AND DOCUMENTATION:

Presented the complete **Power BI dashboard** showing global malnutrition trends from **1983 to 2019**.

Demonstrated the use of **slicers** to filter data by Country and Year.

Explained the functionality of key visuals including:

- Card visuals for summary statistics
- Line chart for year-wise trends
- Ribbon chart for country-wise comparison
- Stacked area chart for overall pattern analysis
- Gauge chart for performance evaluation

Highlighted major insights and trends identified through the dashboard.

Showed how the dashboard supports **decision-making** by identifying high-risk countries and improvement areas.

Submitted proper documentation covering data extraction, preparation, visualization, performance testing, and final dashboard review.