Main Dashboard:

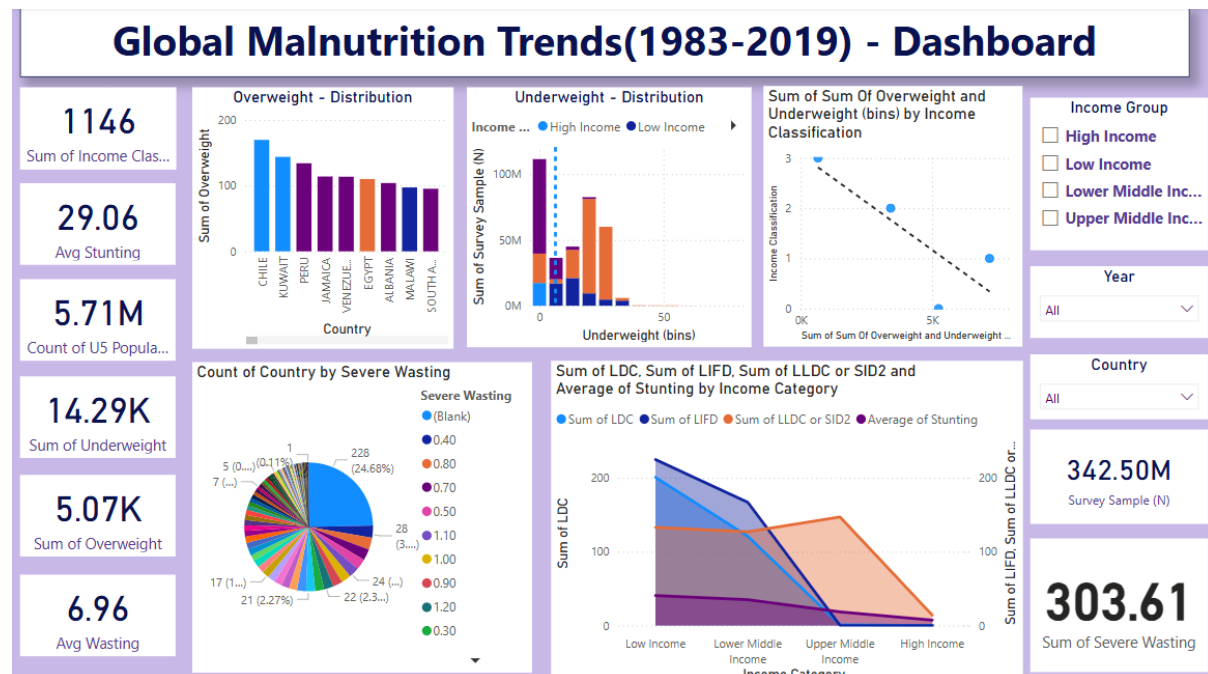# Global Malnutrition Trends(1983-2019) - Dashboard

Code:

```python
import pandas as pd

import matplotlib.pyplot as plt

import seaborn as sns

import numpy as np


# Sample dummy dataset structure (replace this with your Kaggle dataset)
data = {
    'Country': ['CHILE', 'KUWAIT', 'PERU', 'JAMAICA', 'VENEZUELA', 'EGYPT', 'ALBANIA', 'MALAWI', 'SOUTH AFRICA'],

    'Overweight': [180, 150, 140, 120, 110, 105, 100, 95, 90],

    'Underweight': [5, 10, 15, 8, 6, 11, 12, 14, 9],

    'Income Group': ['High Income', 'High Income', 'Upper Middle Income', 'Upper Middle Income', 'Upper Middle Income',

            'Lower Middle Income', 'Lower Middle Income', 'Low Income', 'Upper Middle Income'],
```

```python
    'Survey Sample': [50e6, 40e6, 35e6, 25e6, 22e6, 60e6, 30e6, 20e6, 45e6],

    'Stunting': [25, 18, 28, 32, 26, 35, 30, 40, 33],

    'Severe Wasting': [0.4, 0.8, 0.6, 0.7, 0.5, 1.1, 0.9, 1.2, 0.3],

    'LDC': [0, 0, 0, 0, 0, 1, 1, 1, 0],

    'LIFD': [0, 0, 0, 0, 0, 1, 1, 1, 0],

    'LLDC or SID2': [0, 0, 0, 0, 0, 1, 1, 1, 0]

}

df = pd.DataFrame(data)


# Set up the figure

plt.figure(figsize=(16, 10))

plt.suptitle("Global Malnutrition Trends (1983–2019) - Dashboard", fontsize=20, weight='bold',
y=0.98)


# KPI Panel (simulated with text)

plt.subplot2grid((4, 4), (0, 0), rowspan=4)

plt.axis('off')

kpi_text = (

    "1146\nSum of Income Class\n\n"

    "29.06\nAvg Stunting\n\n"

    "5.71M\nU5 Population\n\n"

    "14.29K\nUnderweight\n\n"

    "5.07K\nOverweight\n\n"

    "6.96\nAvg Wasting\n\n"

    "342.50M\nSurvey Sample\n\n"

    "303.61\nSevere Wasting"

)

plt.text(0, 1, kpi_text, va='top', fontsize=12, fontweight='bold', color='navy')


# Chart 1 - Overweight Distribution
```

```python
plt.subplot2grid((4, 4), (0, 1))

sns.barplot(x='Country', y='Overweight', data=df, palette='cool')

plt.title('Overweight - Distribution')

plt.xticks(rotation=45)


# Chart 2 - Underweight Distribution by Survey Sample

plt.subplot2grid((4, 4), (0, 2))

bins = pd.cut(df['Underweight'], bins=[0,10,20,30,40,50])

df['Underweight Bin'] = bins

uw_grouped = df.groupby(['Underweight Bin', 'Income Group'])['Survey
Sample'].sum().unstack().fillna(0)

uw_grouped.plot(kind='bar', stacked=True, ax=plt.gca())

plt.title('Underweight - Distribution')

plt.ylabel('Survey Sample (N)')

plt.xlabel('Underweight Bins')


# Chart 3 - Overweight + Underweight vs Income Group

plt.subplot2grid((4, 4), (0, 3))

df['TotalWeightIssues'] = df['Overweight'] + df['Underweight']

agg_trend = df.groupby('Income Group')['TotalWeightIssues'].sum().sort_values()

sns.regplot(x=agg_trend.values, y=np.arange(len(agg_trend)), scatter=True,
line_kws={'linestyle':'--'}, color='blue')

plt.yticks(np.arange(len(agg_trend)), agg_trend.index)

plt.title('Total Malnutrition vs Income')


# Chart 4 - Severe Wasting Pie

plt.subplot2grid((4, 4), (1, 1))

wasting_counts = df['Severe Wasting'].round(1).value_counts()

wasting_counts.plot.pie(autopct='%1.1f%%', ax=plt.gca(), textprops={'fontsize': 8})

plt.ylabel('')
```

```python
plt.title('Count of Countries by Severe Wasting')


# Chart 5 - Stunting, LDCs, LIFD, LLDC or SID2 by Income

plt.subplot2grid((4, 4), (1, 2), colspan=2, rowspan=2)

agg = df.groupby('Income Group').agg({

    'LDC': 'sum',

    'LIFD': 'sum',

    'LLDC or SID2': 'sum',

    'Stunting': 'mean'

}).reset_index()


# Area Plot

plt.stackplot(agg['Income Group'],

        agg['LDC'], agg['LIFD'], agg['LLDC or SID2'], agg['Stunting'],

        labels=['LDC', 'LIFD', 'LLDC/SID2', 'Stunting'], alpha=0.6)

plt.legend(loc='upper right')

plt.title('LDC, LIFD, LLDC vs Stunting by Income')


plt.tight_layout(rect=[0.01, 0.01, 1, 0.95])

plt.show()
```