**Data Analysis Report: MoMA Dataset**

**1. Introduction**

The analysis explores a Museum of Modern Art (MoMA) dataset containing information about artists and their artworks. The goal is to uncover insights related to demographics, diversity, historical trends, and artwork characteristics.

**2. Dataset Overview**

• **Total Records**: 157598 rows and 30 columns.

• **Key Columns**:

• Artist: Name of the artist.

• Gender: Artist’s gender ( Male, Female, Unknown).

• Nationality: Artist’s nationality.

• Birth and Death: Years of birth and death.

• Painting Date: Year the artwork was created.

• Height and Width: Dimensions of the artwork (converted to meters for analysis).

**3. Data Cleaning**

• **Null and Empty Values**:

• Removed or filled all rows with null or empty fields to ensure data quality.

• **Unit Conversion**:

• Converted height and width from centimeters to meters for better standardization.

• **Derived Columns**:

• Calculated Area (m²) using Height and Width.

• Computed Lifespan as Death - Birth for artists.

**4. Key Insights**

1. **Demographics**:

• **Gender Distribution**:

• Male artists dominate the collection, comprising 80,89% of the dataset.

• Female artists represent 17,70%, with 1,42% labeled as unknown.

• **Top Nationalities**:

• The most represented nationalities are American, French, and German.

• Diversity beyond European and American artists is limited.

• **Lifespan**:

• The average lifespan of artists is approximately 78 years, with variations across nationalities.

2. **Historical Trends**:

• Representation of female artists increased gradually in the 20th century.

• A notable decline in artwork acquisitions occurred post-2000, likely due to changes in MoMA’s strategies and finances.

3. **Artwork Characteristics**:

• Average artwork size is approximately **0.39 m²**, with the smallest at **0 m²**  and the largest at **600 m²**.

• Larger artworks tend to be from female artists, but no clear trend links size to year or nationality.

4. **Diversity and Representation**:

• MoMA’s collection reflects significant biases toward European and American artists, with limited representation from Africa, Asia, and Latin America.

**5. Recommendations**

1. **Improved Diversity**:

• Expand acquisitions to include more artists from underrepresented regions and genders.

2. **Focus on Trends**:

• Analyze modern acquisitions to understand shifts toward digital or contemporary art.

3. **Data Enhancement**:

• Enrich datasets with additional fields like medium, acquisition source, and exhibition details.

**6. Conclusion**

This analysis highlights MoMA’s historical biases and trends in artwork acquisition. By leveraging these insights, future efforts can aim for a more inclusive and diverse representation of global art.