**Report on Population Country 2020**

**Overview of the Dataset**:

The provided dataset presents a comprehensive collection of population statistics for various countries and dependencies as of the year 2020.

1. Country (or dependency): The Name of each country or dependent territory for which the population data is provided.
2. Population (2020): The estimated total population of each country or dependency in the year 2020.
3. Yearly Change: The percentage growth rate of the population between the current year (2020) and the previous year. It shows whether the population is increasing or decreasing and the rate of change.
4. Net Change: The absolute numeric change in the population between the current year (2020) and the previous year. It helps understand the magnitude of population growth or decline.
5. Density (P/Km²): The population density for each country or dependency. It measures the number of individuals per square kilometer of land area, giving an indication of how densely or sparsely populated an area is.
6. Land Area (Km²): The total land area of each country or dependency in square kilometers. This information is vital for calculating population density and understanding spatial distribution.
7. Migrants (net): The net migration rate for each country or dependency. It represents the difference between the number of immigrants entering the country and the number of emigrants leaving the country.
8. Fert. Rate: The fertility rate of each country or dependency. It represents the average number of children a woman is expected to have during her reproductive years.
9. Med. Age: The median age of the population in each country or dependency. It represents the age at which half of the population is younger and half is older, providing an insight into the overall age structure of the population.
10. Urban Pop (%): The percentage of the total population living in urban areas for each country or dependency. It provides insights into the level of urbanization and urban migration trends.
11. World Share: The percentage of the global population represented by each country or dependency. It indicates the relative significance of each region in the context of the entire world population.

**Overview of MongoDB Atlas Charts:**

MongoDB Atlas Charts is a powerful data visualization tool provided by MongoDB Atlas, the fully managed global cloud database service from MongoDB. It allows users to create interactive, real-time charts and graphs directly from the data stored in their MongoDB databases. MongoDB Atlas Charts is designed to help users gain valuable insights from their data and present it in a visually engaging and easy-to-understand manner.

**Key Features:**

**Integration with MongoDB Atlas:** MongoDB Atlas Charts seamlessly integrates with MongoDB Atlas, making it easy for users to visualize data without the need for complex data extraction or transformation processes**.**

**Real-Time Data:** Charts created using MongoDB Atlas Charts are updated in real-time as the underlying data changes, ensuring that users always have access to the latest insights and analysis.

**Interactive Visualization:** Users can interact with the charts to explore different aspects of the data, such as zooming in on specific time ranges, filtering data points, and hovering over data elements to view detailed information.

**Chart Types:** MongoDB Atlas Charts supports a wide range of chart types, including bar charts, line charts, scatter plots, pie charts, heatmaps, and more. Users can choose the most suitable chart type to represent their data effectively.

**Customization Options:** Users have the flexibility to customize the appearance of the charts, including colors, labels, axes, and titles, to create visually appealing and informative visualizations.

**Sharing and Embedding:** Charts can be easily shared with others through unique URLs or embedded in web applications, presentations, or reports, allowing for easy collaboration and communication of insights.

**Security:** MongoDB Atlas Charts inherits the robust security features of MongoDB Atlas, ensuring that data remains protected and accessible only to authorized users.

**Use Cases:**

**Business Intelligence:** MongoDB Atlas Charts enables businesses to analyze and present key performance indicators, sales data, customer trends, and other metrics to support data-driven decision-making.

**Data Exploration:** Analysts and researchers can use MongoDB Atlas Charts to explore and discover patterns, trends, and correlations within their datasets.

**Real-Time Monitoring:** MongoDB Atlas Charts can be utilized to create real-time monitoring dashboards that provide live insights into system performance, user activity, and other operational metrics.

**Performance Tracking:** Teams can track the performance of applications and services by visualizing data related to response times, error rates, and user interactions.

**IoT Data Visualization:** MongoDB Atlas Charts can be used to visualize data from Internet of Things (IoT) devices, enabling organizations to monitor and analyze sensor data in real-time.

MongoDB Atlas Charts is a valuable tool for data visualization and analysis, especially for organizations leveraging MongoDB Atlas as their cloud database solution. With its intuitive interface, real-time capabilities, and wide array of customization options, MongoDB Atlas Charts empowers users to gain valuable insights from their data and communicate findings effectively to support better decision-making and business outcomes.

**Summary**

1. **Top 10 Countries – Density (KM2)**

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**Observation:**

Monaco was the country with the highest population density in the year 2020, with a population density of 27,337 people per square kilometer. Macao, officially known as the Macao Special Administrative Region (SAR) of China, ranked second in terms of population density in 2020. It had a population density of 21,645 people per square kilometer.

1. **Average Fertility Rate – Top 15 Countries**

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Description automatically generated

**Observation**

Niger had the highest fertility rate in the year 2020, with a fertility rate of 7.0. A fertility rate of 7.0 implies that, on average, women in Niger were expected to have seven children during their reproductive years.

Somalia ranked second in terms of fertility rate in 2020, with a fertility rate of 6.1. Similar to Niger, Somalia's high fertility rate indicates that women, on average, were expected to have approximately six children during their reproductive years.

1. **Average Age Group – Top 10 Countries**

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Description automatically generated

**Observation:**

Japan had the highest median age in the year 2020, with a median age of 48 years. A median age of 48 means that half of the population in Japan was older than 48 years, while the other half was younger. Japan is known for its aging population, which poses unique challenges for healthcare, pension systems, and the labor market.

Italy and Martinique were tied for the second-highest median age in 2020, with both countries having a median age of 47 years.

Portugal, Greece, and Germany shared the third position with a median age of 46 years. Like the other countries with high median ages, these nations also faced similar demographic challenges associated with an aging population. Hong Kong ranked fifth with a median age of 45 years. With an aging population, and so on.

1. **Top 10 Countries by Land Area**

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**Observation:**

Russia is the country with the largest land area in the world, covering approximately 16,376,870 square kilometers. It is known for its vast and diverse landscape, spanning across two continents, Europe and Asia. China ranks second in terms of land area, with a total area of approximately 9,388,211 square kilometers. As the world's most populous country, China's large land area accommodates a diverse range of landscapes, climates, and cultures.

5. **Population Vs Fertility Rate**

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A graph with green squares

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A graph with colored lines

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**Observation:**

China has the highest population in the world, with approximately 1440, 297,825 people. It is the most populous country on the planet and plays a vital role in global demographics, economic activities, and international relations. India ranks second in terms of population, with a population of approximately 1382,345,085 people. It is the world's second-most populous country and has a rapidly growing population, making it a significant force in the world's socio-economic landscape.

Niger has the highest fertility rate in the world, with a rate of 7.0. Somalia ranks second in terms of fertility rate, with a rate of 6.1.

**Insights**

The total population of all countries combined in the year 2020 was approximately 7,888,384,627. This figure represents the global human population count for that specific year.

The total population living in urban areas worldwide in 2020 was approximately 55.96%. This represents the number of people residing in cities and urbanized regions across the globe.

China was the most populous country in the year 2020. With its enormous population, The Holy See (Vatican City) was the least populous country in 2020. As one of the world's smallest independent states, it has a very small population compared to other countries.

Monaco was the most densely populated country in the year 2020. Despite its small land area, Monaco had a relatively high population density, indicating a significant concentration of people in a limited space.

The global population increased by approximately 346088 from the previous year. This shows a positive growth rate in the world's population between the years 2019 and 2020.

The average number of net migrants for all countries in 2020 was 6.3. This value indicates the average difference between the number of immigrants and emigrants for each country in the dataset.

These insights offer a broad overview of the global population and its characteristics for the year 2020.