

TRACING THE GROWTH OF THE GLOBAL COMMUNITY: A POPULATION FORECASTING ANALYSIS ON MATHEMATICS.

Overview:

Global population growth is determined by the number of births and deaths .There is a big differences in population between different world regions and countries .While in some region the world population is likely to grow and in some other region the population will decline . This project is based on to forecast the population in different countries or cities or areas

Purpose :

Population forecasting is very important to know the growth rate and to estimate the future population of particular area . Studying population growth also helps scientists understand what causes changes in population sizes and growth rates . There are several mathematical methods that can be used to determine the population for a design period .

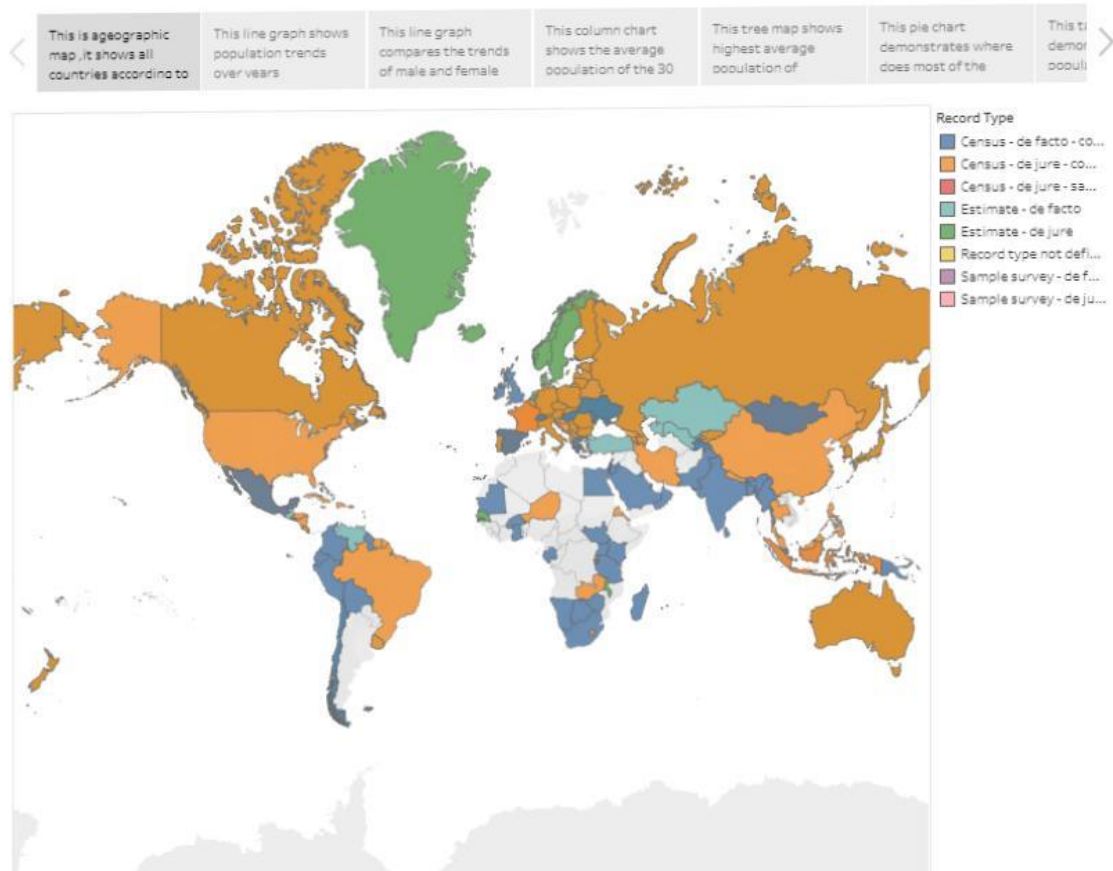
- 1.Estimate the basic need for human, such as demand for food, water, power, transportations.
2. Plan constructions such as housing, highways etc.
3. Estimate the labor forces in various places.
4. Estimate the potential consumptions in various regions.
5. Benefit sociological research, such as providing data about sex ratio or age ratio.

Problem definition and design thinking:

Empathy map:

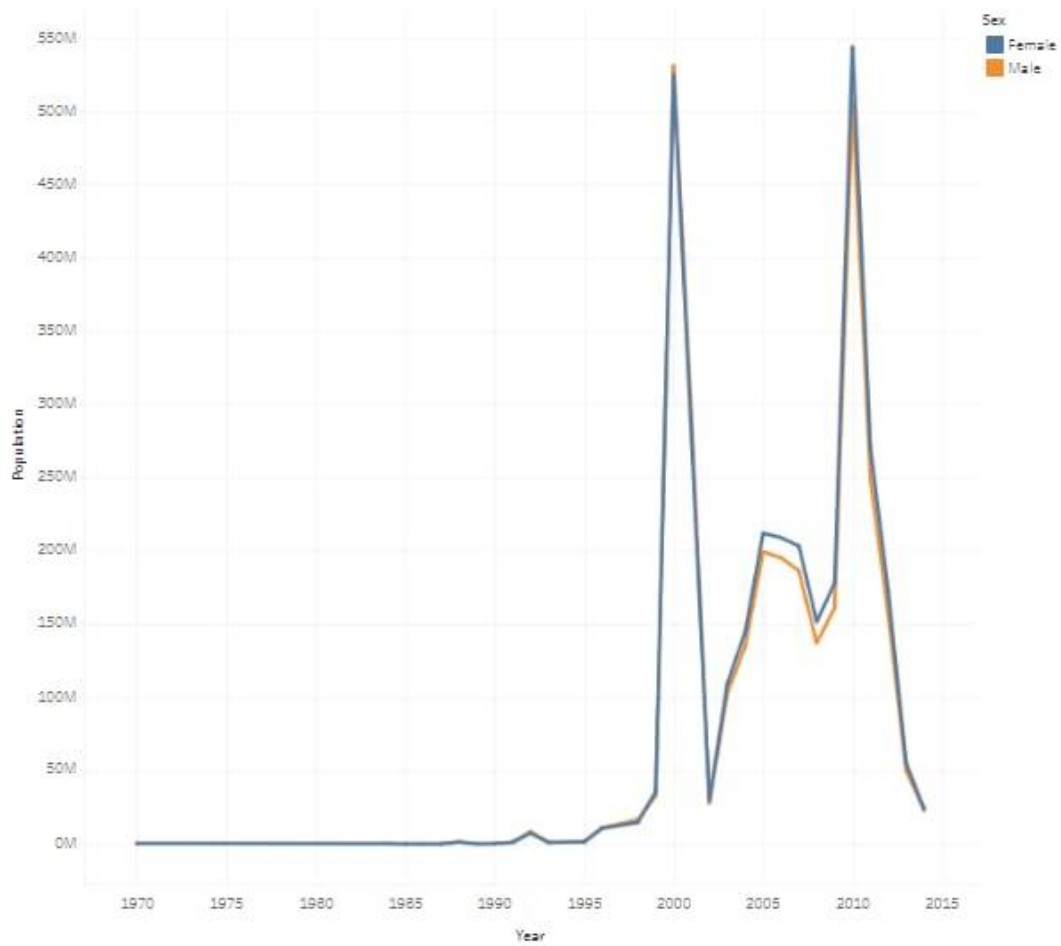
An empathy map is a collaborative tool teams can use to gain a deeper insight into their customers. Much like a user persona, an empathy map can represent a group of users, such as a customer segment. The empathy map was originally created by Dave Gray and has gained much popularity within the agile community.

Story 1

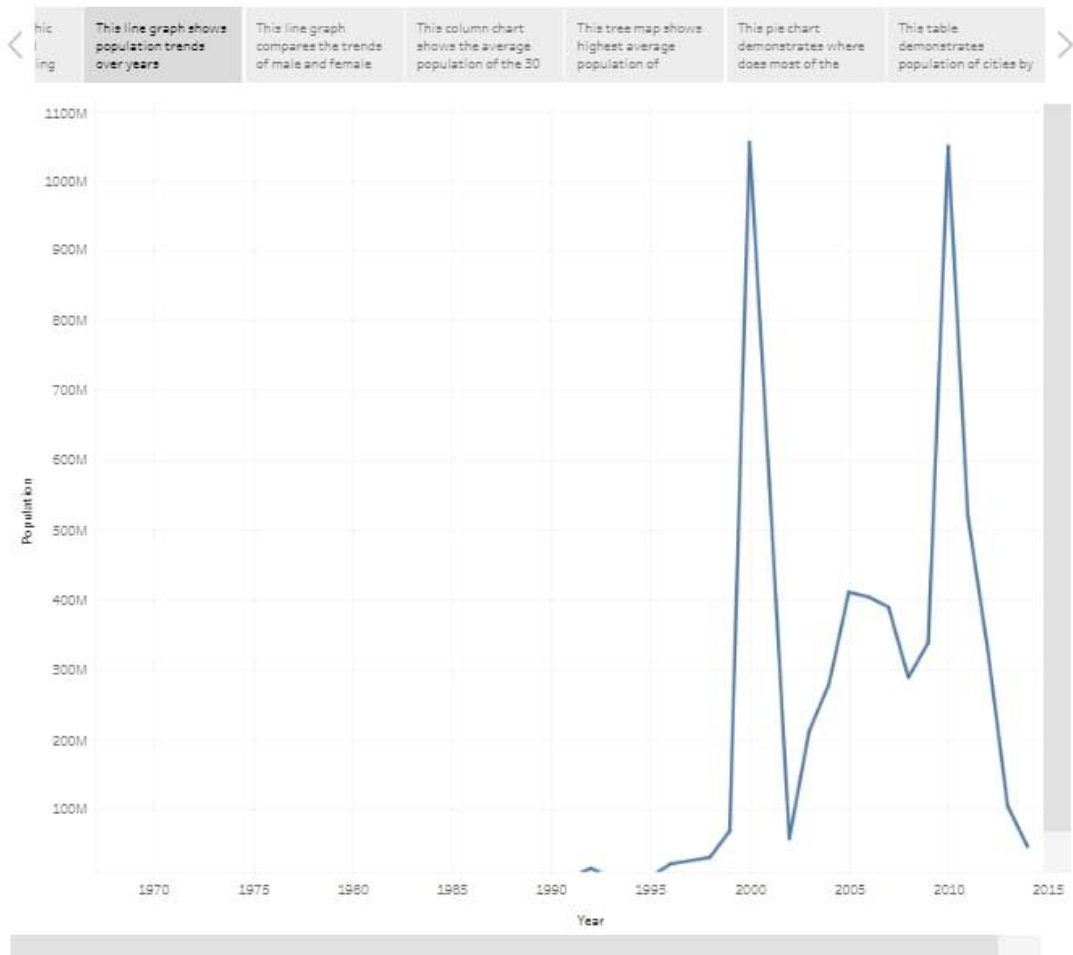


Story 1

< This is a geographic map, it shows all countries according to population size. This line graph shows population trends over years. **This line graph compares the trends of male and female** This column chart shows the average population of the 30 highest average population of This pie chart demonstrates where does most of the population live. This is a demographic map, it shows all countries according to population size. >

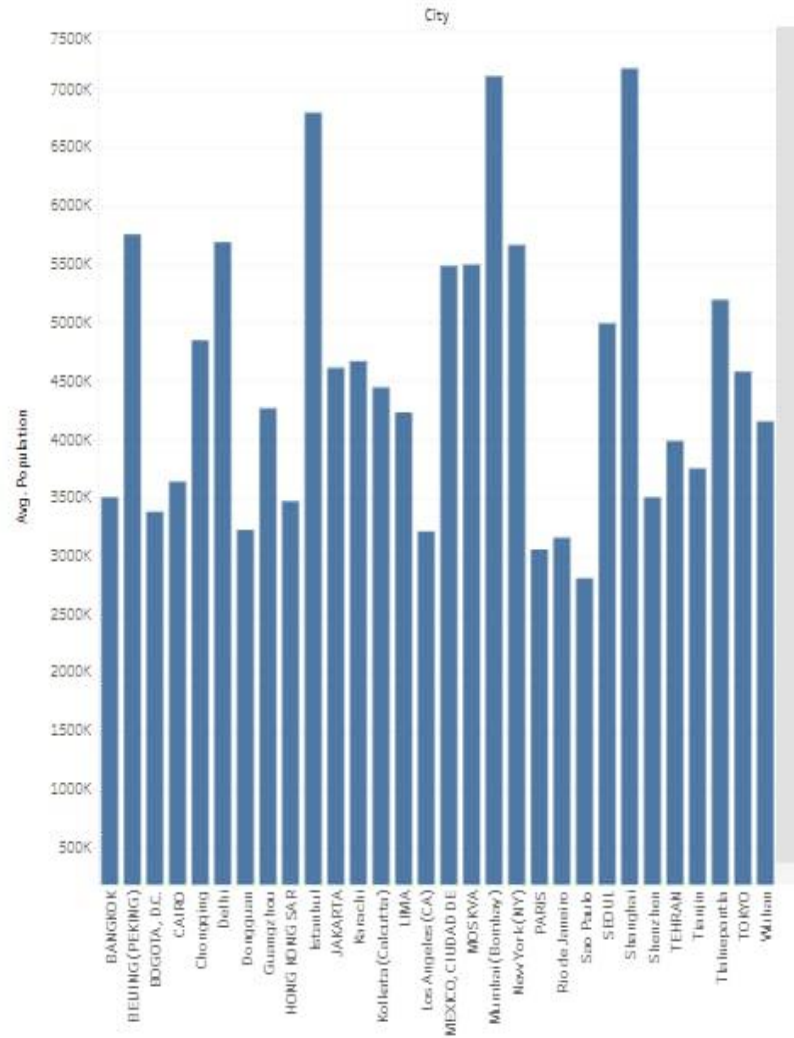


Story 1



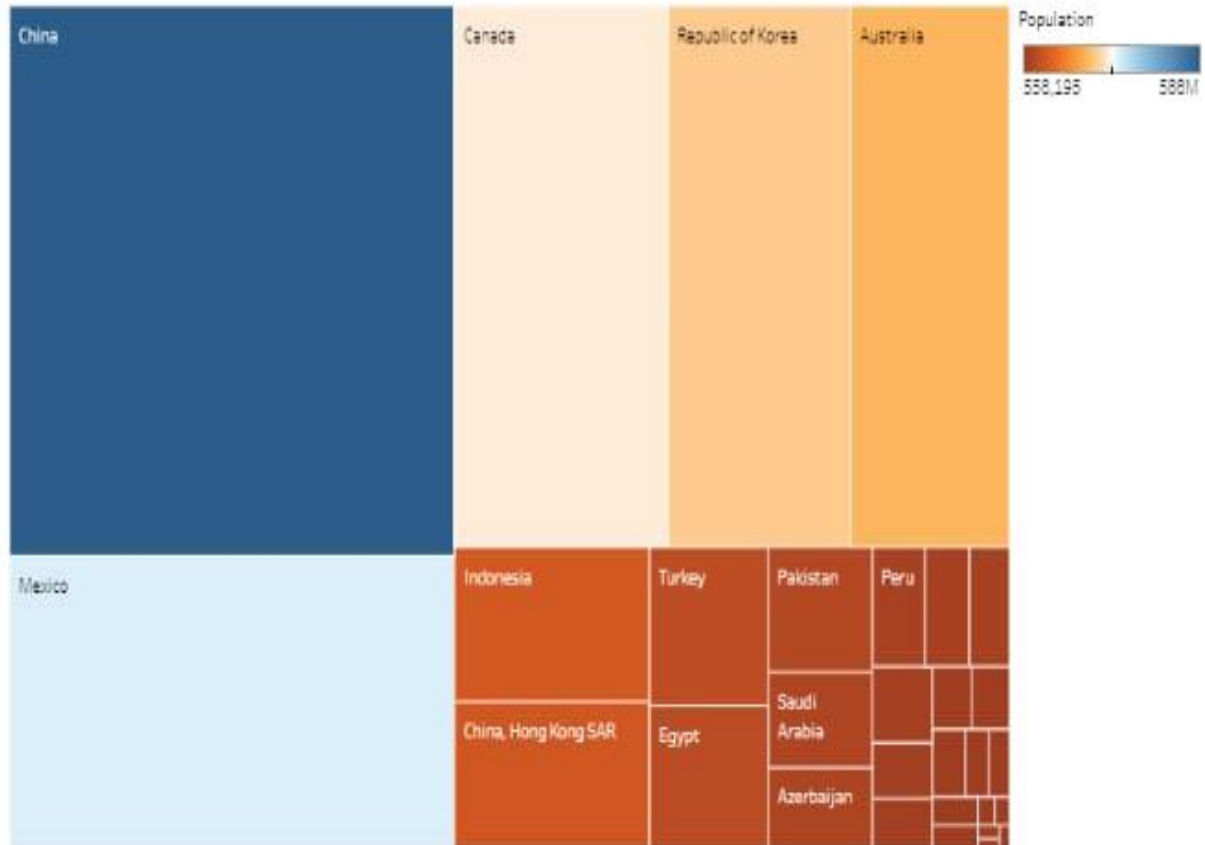
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 This pie chart demonstrates where does most of the
 This is a demo population >



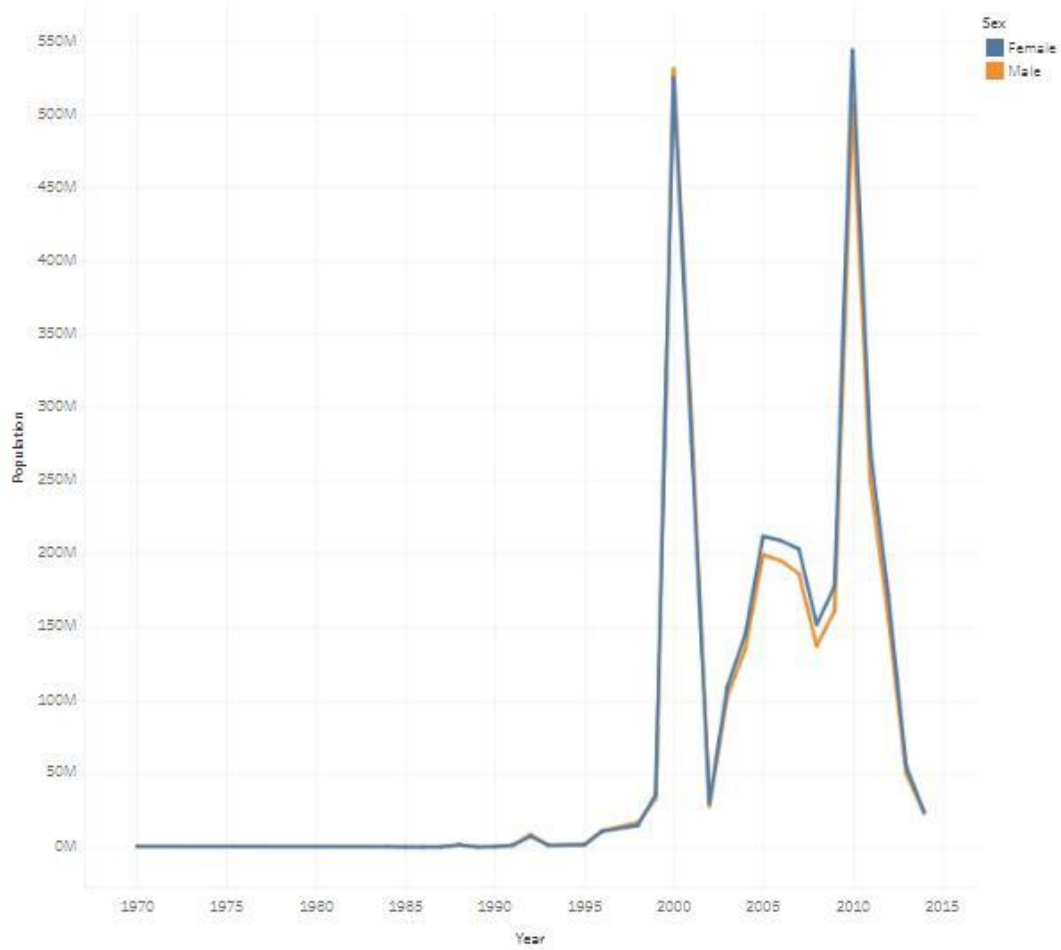
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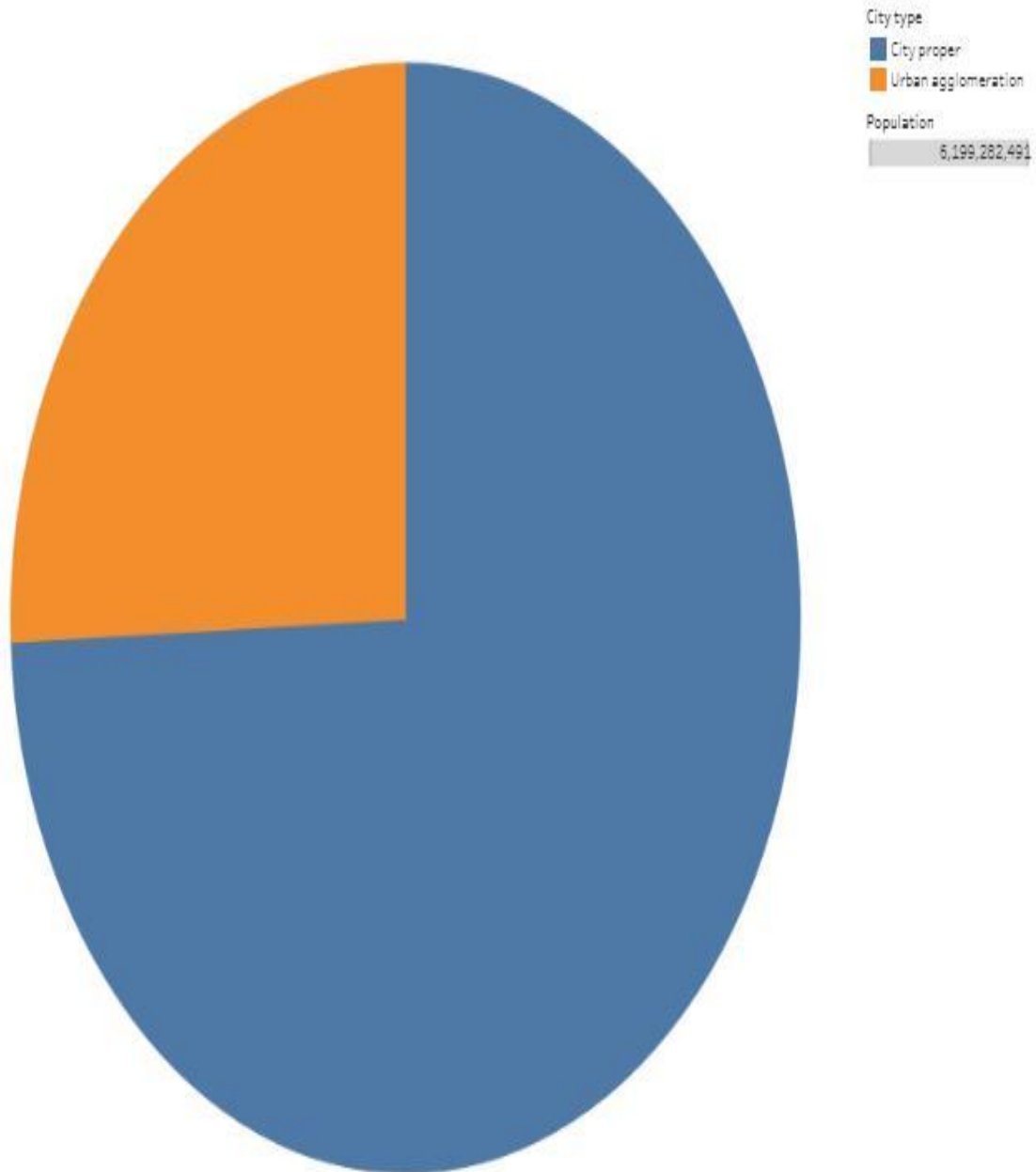


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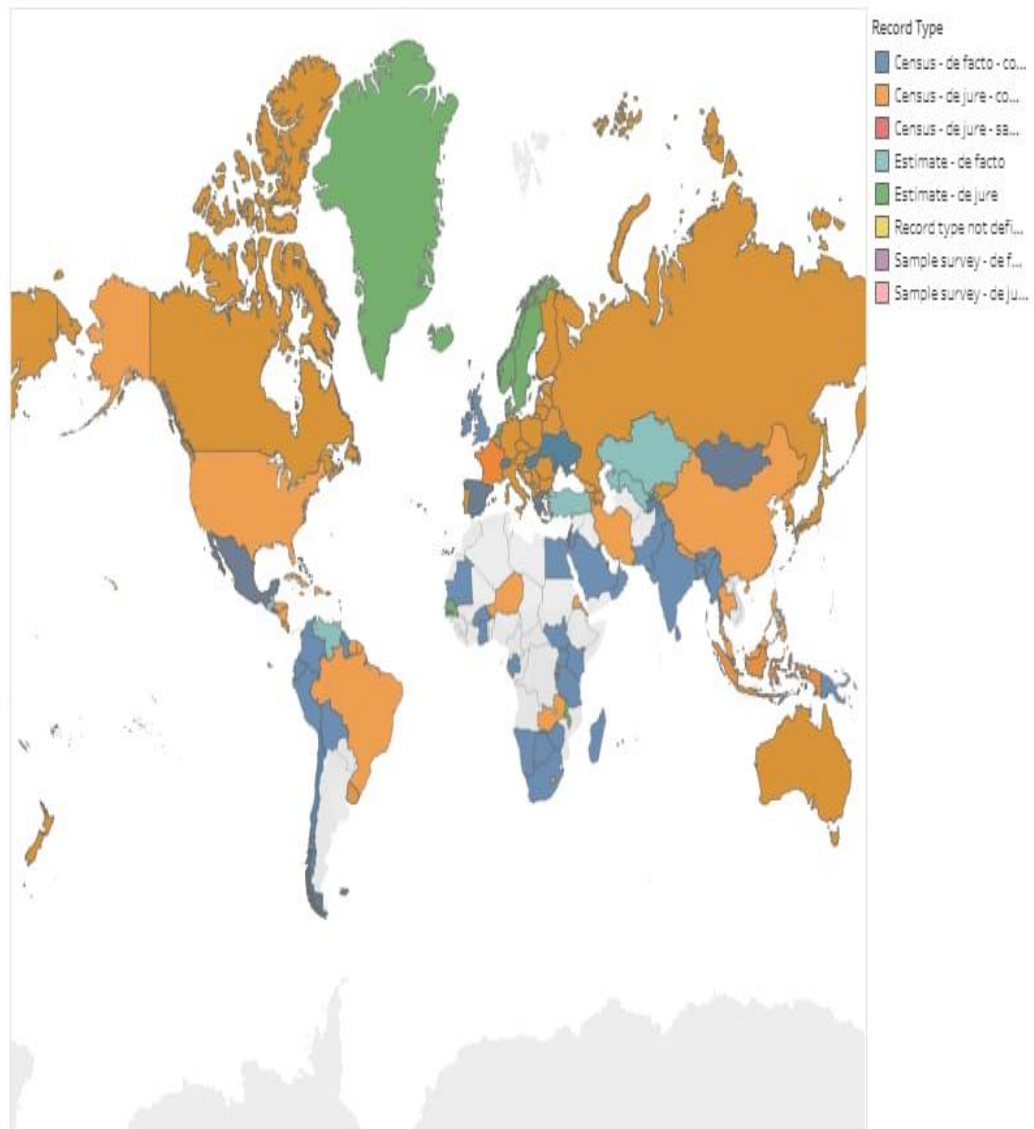


Story 1



Story 1

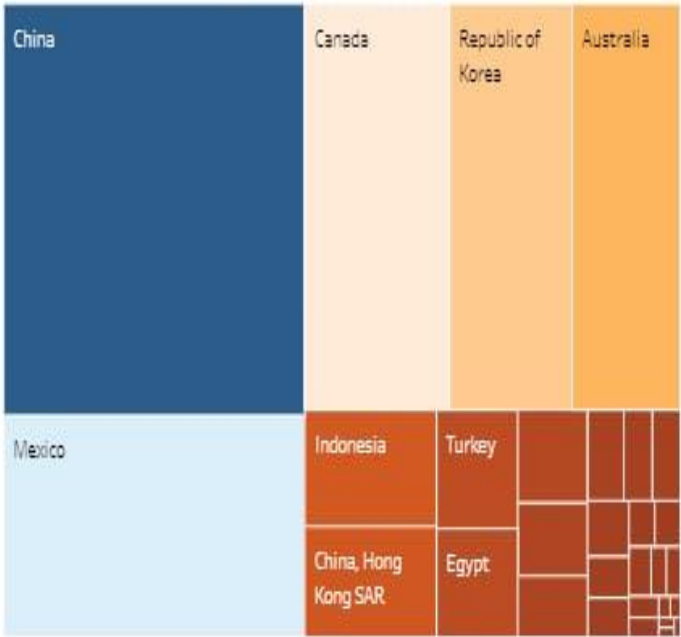
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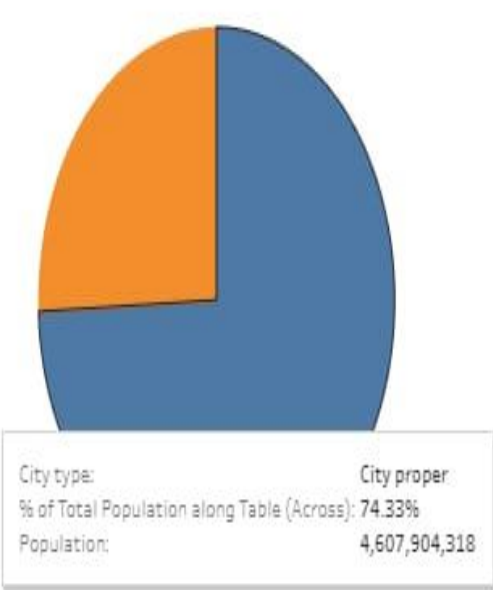
DASHBOARD:

A dashboard is a way of displaying various types of visual data in one place. Usually, a dashboard is intended to convey different, but related information in an easy-to-digest form.

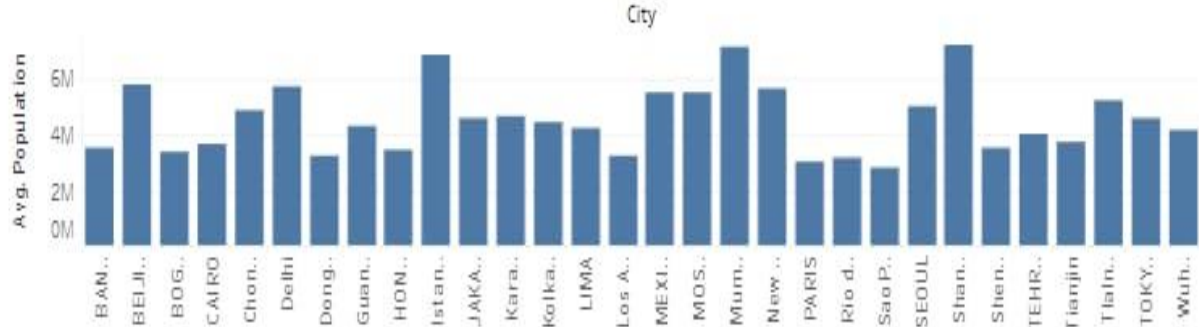
Countries with highest avg population from 2000-2014



Population by city type

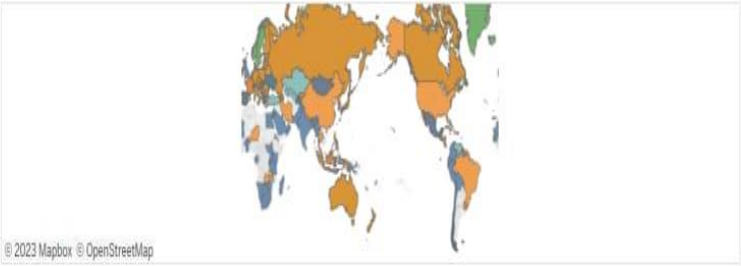


Cities with highest average population

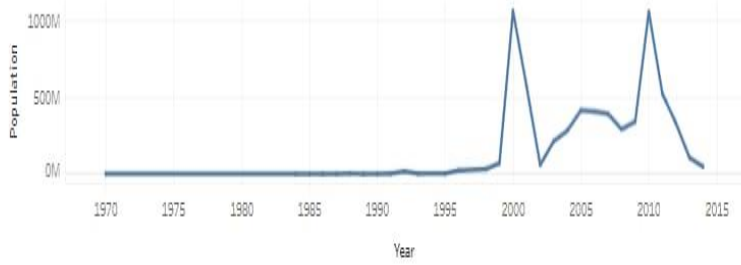


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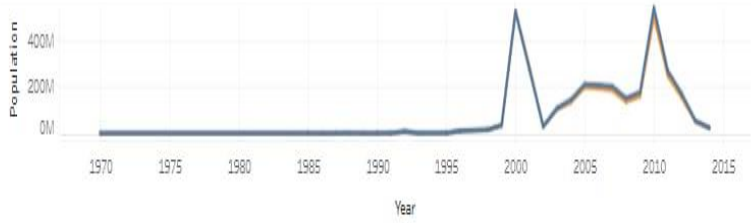
Population records by types of countries









Population trends over years



Poulation trends over the years by sex





Connections Add

UN population data
Microsoft Excel

Sheets p

Sheet1

New Union

New Table Extension

Sheet1 (UN population data)

Connection
☒ Live ☐ Extract

Filters
0 | [Add](#)

UN population data



Need more data?

Drag tables here to relate them. [Learn more](#)

UN population data

11 fields 28364 rows












100 rows 

Table Details	 Sheet1	 Sheet1	 Sheet1	 Sheet1	 Sheet1	 Sheet1	 Sheet1	 Sheet1	 Sheet1	 Sheet1
	Country or Area	Year	Area	Sex	City	City type	Record Type	Reliability	Source Year	Population
	land Islands	2013	Total	Male	MARIEHAMN	City proper	Estimate - de jure	Final figure, complete	2014	5,445
	land Islands	2013	Total	Female	MARIEHAMN	City proper	Estimate - de jure	Final figure, complete	2014	5,925
	land Islands	2012	Total	Male	MARIEHAMN	City proper	Estimate - de jure	Final figure, complete	2013	5,408
	land Islands	2012	Total	Female	MARIEHAMN	City proper	Estimate - de jure	Final figure, complete	2013	5,896
	land Islands	2011	Total	Male	MARIEHAMN	City proper	Estimate - de jure	Final figure, complete	2012	5,363

Data Source

Cities with highest average popu...

Countries with highest avg popu...

Population by city type


Population of cities by year


Dashboard 1


Dashboard 2


Dashboard 3

Story 1









Advantages and disadvantages:

1. Advantages:

1. Estimate the basic need for human, such as demand for food, water, power, transportations.
2. Plan constructions such as housing, highways etc.
3. Estimate the labor forces in various places.
4. Estimate the potential consumptions in various regions.
5. Population analysis is needed to identify problems and community needs, establish goals and objectives, assess alternative courses of action, allocate resources for plan implementation, and evaluate the ability of the plan to achieve goals and objectives.

Benefit sociological research, such as providing data about sex ratio or age

2. Disadvantages:

1. Population growth is difficult to predict because unforeseen events can alter birth rates, death rates, migration, or the resource limits on population growth.

2. Forecasts are never 100% and it is almost impossible to predict the future with certainty.

3. Forecasting also has some limitations due to incorrect information from employees and customers and relying on past numbers which can be inaccurate if market conditions change unexpectedly.

4. Does not respond to the fluctuation that take place for a reason, for example cycles and seasonal impacts.

5. Defining the problem carefully requires an understanding of the way the forecasts will be used, who requires the forecasts, and how the forecasting function fits within the organization requiring the forecasts

APPLICATIONS:

1. The mathematical methods, used in the early attempts to project population, involve the charting of past and present population data, the determination of "trends" and the projection of these present population trends into the future. There are two types of mathematical projection: arithmetic and geometric.

2. The population forecasting methods require the values of present and past population records to undergo the calculation. The local census records of a particular area provide the value of present and past populations.

3. The arithmetical Increase Method is mainly adopted for old and developed towns, where the rate of population growth is nearly constant. Therefore, it is assumed that the rate of growth of

the population is constant. It is similar to simple interest calculations. The population predicted by this method is the lowest of all.

4. The main purpose of producing population projections is to provide an estimate of the future population as a common framework for use in planning, policy formation and decision making in a number of different fields.

CONCLUSION:

The Earth's current population is almost 7.6 billion people, and it is expanding. It is expected to surpass 8 billion people by 2025, 9 billion by 2040, and 11 billion by 2100. The population is quickly increasing, far surpassing our planet's ability to maintain it, given existing habits.

The current population of India is around 140 crores. According to certain reports, in the next few years, there will be a solid growth of population in India, and globally too. The population is the total number of human beings living in a city or the country.

Conclusion. The most important solutions to overpopulation are education and public awareness. Overpopulation will become less likely as society becomes more aware and aware. Despite significant government efforts to control the population, much more needs to be done.

FUTURE SCOPE:

Population studies involve learning about population growth and the measures taken to control it. This includes understanding factors such as fertility, mortality, and migration, as well as the measures implemented to manage population growth. The ultimate goal is to improve the quality of life for individuals.

The study of the ways in which spatial variations in the distribution, composition, migration, and growth of populations are related to the nature of place.

Documentation by

H. SARANYA

J. ASHMI

F.FLENCY JENIFER

J.ASHMI