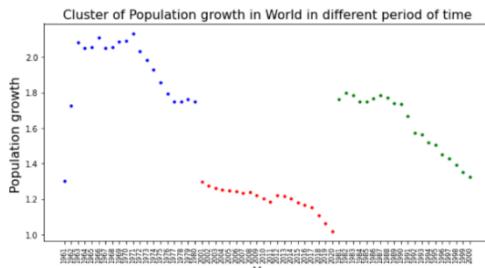


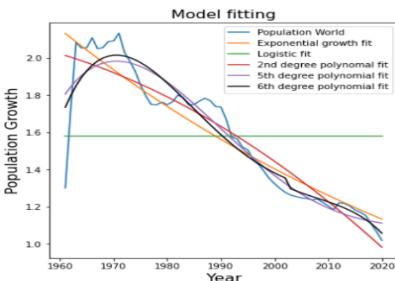
## Population Growth Rate Analysis & Prediction

The annual growth rate of the population is tremendously decreasing every year. There was a time annual growth rate reached its peak in the late 1960s. However, the world population has been continuously growing with decreasing annual growth rate. This document analyses the population growth rate in the different periods and predicts the future population growth for a few countries and the world altogether.



50 years ago, the population growth rate showed a higher rate for a few decades in the period of 1961 to 1980, however, in recent decades from 2001 to 2020 growth rate shows a lower rate. Also, an average growth rate showcases in the period of 1981 to 2000. This concludes a consistent decrease in the population growth rate every year.

Considering countries such as China, the United States of America, and the United Kingdom the population growth rate in the recent year showed a similar trend with a consistent decrease though China, the USA, and the UK depicted high rates from 1960 to 1980.



The major observation of this document is the population growth rate in the future. As the world population rate decreases consistently for the last few decades, this will continue for the coming years as predicted using the sixth-degree polynomial.

### Population Growth of World in Future:

Year:2030 Population growth is 0.67535308282237 (annual %).

Year:2040 Population growth is -0.8076042262837291 (annual %).

Year:2050 Population growth is -3.9170041028410196 (annual %).

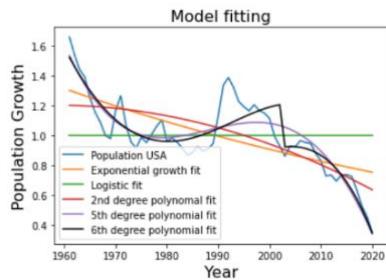
China contributes the majority of the population and a huge decline is observed in the annual population growth rate. This decline is expected to continue for the upcoming decades.

### Population Growth of China in Future:

Year:2030 Population growth is 0.4213535934686661 (annual %).

Year:2040 Population growth is -1.6151029616594315 (annual %).

Year:2050 Population growth is -6.528780061751604 (annual %).



Countries such as USA and UK also showed the same trend however UK's growth rate depicted a sudden rise and fall which might be the same in the future as well.

### Population growth of USA in future:

Year:2030 Population growth is 0.11847476952243596 (annual %).

Year:2040 Population growth is -2.55248765880242 (annual %)

Year:2050 Population growth is -7.0298005022341385 (annual %)

### Population Growth of UK in future:

Year:2030 Population growth is -0.9378262717509642 (annual %).

Year:2040 Population growth is -2.8622298350092024 (annual %).

Year:2050 Population growth is -6.319618524052203 (annual %).

As predicted, the rate of population growth might decline and reach a negative annual percentage within a few decades. The decrease in the population rate can affect the countries in terms of GDP and manpower. On the other hand, this trend might benefit the environment as there would be less footprint burden.

Github: [https://github.com/Krishnasasi21/ADS\\_Assignment3.git](https://github.com/Krishnasasi21/ADS_Assignment3.git)