

## Population Growth in Jiangsu Province

Jiangsu Province, located in the eastern part of China, has experienced significant population growth over the past few decades. Suzhou, one of its major cities, is believed to have contributed significantly to this growth due to its rapid urbanization and economic development.



You are a demographer tasked with analyzing the population growth of Jiangsu Province over the past decade. The local government wants to understand the trend and predict the population for the upcoming years.

Population Data for Jiangsu Province (in millions):

Year	Population
1990	67.67
1995	70.66
2000	73.27
2005	75.88
2010	78.69
2015	83.15
2016	83.81
2017	84.24
2018	84.46
2019	84.69
2020	84.77
2021	85.05

**Tasks:**

1. Using your GDC, plot the data on a scatter plot with the year on the x-axis and the population on the y-axis.
2. Calculate the correlation coefficient to determine the strength and direction of the linear relationship between the year and the population.
3. Perform a linear regression analysis to find the equation of the line of best fit.
4. Based on your analysis, predict the population of Jiangsu Province for the next 5 years.
5. Comment on the implications of continued population growth in Jiangsu Province, especially in relation to urban centers like Suzhou.