Factors That Influence Home Prices in the US

Understanding the factors that impact the supply and demand of homes is crucial for analyzing housing market trends and predicting home prices. The following factors were chosen to build a data science model to study their effect on home prices:

1. Unemployment Rate
  - **Definition:** The percentage of the labor force that is jobless and actively seeking employment.
  - **Reason for Inclusion:** Higher unemployment rates reduce the purchasing power of potential home buyers, leading to decreased demand for homes and potentially lowering house prices.

2. Employment Rate
  - **Definition:** The percentage of the working-age population that is employed.
  - **Reason for Inclusion:** Higher employment rates generally increase the income levels and financial stability of households, boosting demand for homes and driving up prices.

3. Per Capita GDP
  - **Definition:** The average economic output per person, calculated as the total GDP divided by the population.
  - **Reason for Inclusion:** Higher per capita GDP indicates a stronger economy and higher average incomes, which can increase the demand for houses and push prices up.

4. Median Household Income

  - **Definition:** The middle value of household incomes when ordered from lowest to highest.

  - **Reason for Inclusion:** Higher median household income means more families can afford to buy homes, increasing demand and potentially driving up house prices.

5. Construction Prices

  - **Definition:** The costs associated with building new homes, including materials, labor, and other expenses.

  - **Reason for Inclusion:** Higher construction prices can lead to higher house prices.

6. Consumer Price Index (CPI)

  - **Definition:** A measure that examines the average change over time in the prices paid by consumers for goods and services.

  - **Reason for Inclusion:** Rising CPI indicates inflation, which can erode purchasing power and affect interest rates, subsequently influencing home prices.

7. Interest Rates

  - **Definition:** The cost of borrowing money, often expressed as an annual percentage of the loan amount.

  - **Reason for Inclusion:** Higher interest rates increase the cost of mortgages, reducing affordability and demand for homes, thereby potentially lowering home prices.

8. Number of New Houses Supplied

  - **Definition:** The number of newly constructed homes available for sale.

  - **Reason for Inclusion:** An increase in the supply of new homes can satisfy demand and stabilize or reduce home prices.

9. Working Population

- **Definition:** The segment of the population that is employed or actively seeking employment.
   - **Reason for Inclusion:** A larger working population can indicate a stronger labor market and economic stability, which can increase demand for housing.

10. Urban Population
   - **Definition:** The percentage of the population living in urban areas.
   - **Reason for Inclusion:** Urban areas often have higher demand for housing due to better job opportunities and amenities, influencing home prices.

11. Percentage of Population Above 65
   - **Definition:** The proportion of the population aged 65 and older.
   - **Reason for Inclusion:** An aging population may impact housing demand,
   - with potential increases in demand for smaller, more accessible homes.
   - Most people retire at this age and want to settle down and buy their own homes.

12. Housing Subsidies
   - **Definition:** Government financial assistance to help individuals or families afford housing.
   - **Reason for Inclusion:** Housing subsidies can increase the purchasing power of lower-income households, affecting overall demand and home prices.

13. Number of Households
   - **Definition:** The total number of households, including single-family homes and multi-family units.
   - **Reason for Inclusion:** An increase in the number of households generally indicates higher demand for housing, which can drive up home prices.

- I chose these factors because they collectively provide a comprehensive view of the economic, demographic, and market conditions that influence housing supply, demand, and home prices.
- By analyzing these variables, we can gain insights into the dynamics of the housing market and make informed predictions about future trends.