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Data 400

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**Mini Project Idea 2**

This study aims to answer: "How does the return on investment compare for landlords

renting out properties versus selling them in the Bronx? Is it more financially viable to rent or

buy an apartment in the Bronx and what factors influence this decision? By analyzing historical

and current real estate trends, this study will assess whether landlords benefit more from

long-term rental income or immediate property sales. Additionally, it will explore affordability

for potential homeowners by comparing rental costs to mortgage payments.

To conduct this study, data will be obtained through web scraping Zillow listings for

properties in the Bronx that are either for sale or for rent. This dataset will include listing prices,

rental rates, and property characteristics such as the number of bedrooms/bathrooms and square

footage. The research will employ various analytical models to compare the financial returns of

renting versus selling. Return on investment calculations will be used to determine the

profitability of each option, factoring in property appreciation, rental income, property taxes, and

maintenance costs. Time series forecasting models will analyze historical price trends and predict

future housing market behavior. Multiple linear regression models will be applied to identify the

key factors affecting property values and rental income. Additionally, geospatial analysis using

clustering algorithms will identify the most profitable neighborhoods for landlords in the Bronx.

Beyond financial considerations, this study will provide insights into housing support

programs and mortgage accessibility. It will examine whether mortgage approval rates, interest

rates, and down payment requirements make homeownership a viable alternative to long-term renting in the Bronx. For many low- and middle-income residents, housing vouchers, first-time homebuyer assistance programs, and rent control policies play a crucial role in affordability. By analyzing mortgage lending disparities and rental cost burdens, this research could inform policymakers on ways to expand access to mortgage loans, improve rental protections, and enhance housing support programs to ensure greater financial stability for Bronx residents.