Final Project Dimensional Model

CIS 9440 - Data Warehousing for Analytics

Final Project Milestone 2

Group Number - 21

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Our KPI’s help us identify areas that have the potential for property value to grow and we can make investment decisions based on that data. For example, KPI’s like the property value, median and mean income level can be used to calculate other KPIs such as the average, difference, min/max of income and property values based on regions and zip codes. This will help us to identify which income levels can be associated with which areas. Furthermore, the change in property value KPI will allow us to track property value trends in different areas and when putting these numbers next to our income level KPI’s mapped over time, we will have a more comprehensive idea about the relationship between income level and property value. In addition, the ratio of median property value to median income can be used to analyze whether there is a correlation between income and property value. If there is a strong correlation we can expect the property value to increase, if we see a rise in income level in any New York city area.

Additional KPI’s like Average Asking Price and Average Sales Price over time will help us identify markets that are both increasing and decreasing in value by observing the change in the difference between average asking price and average sales price over time. As the difference in the two metrics grows and shrinks, we can identify areas in which it is a sellers market and areas where it is a buyers market. Both of which are significant indicators in regard to the direction in which property value is going to be moving. Lastly, to keep track of market conditions or identify properties that might be open to price negotiations, we can use Days on Market KPI. There is often more room for negotiation with a seller if the property has been on the market for a long time as they may become desperate. Additionally, days on the market may be able to offer insight to which areas are increasing in value as properties with less days on the market are often more sought after than similar properties in different areas with more days on the market. Year-over-Year (YoY) Variance of Average Sold Price is to assess the regional market condition. An increasing YoY rate indicates that the region is experiencing an increase in demand, while a decreasing YoY rate can signal a slump in demand.

**Key Performance Indicators (KPI’s):**

1. Property Value
2. Change in Property Value
3. Min property value
4. Max Property Value
5. Average List Price
6. Average Sales Price
7. Year-over-Year (YoY) Variance of Average Sold Price
8. Days on market
9. Change in Income
10. Min Income Level
11. Max Income Level
12. Median Income Level
13. Mean Income Level
14. Average Property value/ income
15. Change in income/change in property value
16. Median income/average days on market