AN ANALYSIS OF HOUSING PRICE & REAL ESTATE IN 2023

Goal:

The goal of the project is to study the Canadian housing market in 2023 to offer information. on potential. investment opportunities in different regions and types of properties. Using data analysis methods and visual representations, the project aims to grasp trends in housing. prices, the impact of demographics.

Datasets Used & Licensing References:

1. Housing Price & Real Estate - 2023:
   - Data Source: Kaggle
   - Licensing: Public Domain
   - URL: https://www.kaggle.com/datasets/reenapinto/housing-price-and-real-estate-2023
   - Description: This dataset provides information about housing prices and real estate trends in Canada for the year 2023. It includes data such as property prices, descriptions, locations, and other relevant attributes.
   - Kaggle Housing Price & Real Estate - 2023: Reena (Owner), Kaggle
2. Community Points: Using this second data set due to lack of geographic data in the first.
   - Data Source: Calgary Open Data
   - Licensing: Open Government License - City of Calgary
   - URL: https://data.calgary.ca/Base-Maps/Community-Points/j9ps-fyst/data
   - Description: This dataset contains community points in Calgary, where each point identifies the centroid of a specific community. It includes geographic coordinates and other community-related attributes.
   - Calgary Open Data - Community Points: The City of Calgary, Calgary Open Data

   By utilizing these datasets and adhering to the respective licensing terms, the project aims to provide comprehensive insights into the Canadian housing market in 2023, facilitating informed decision-making for investors.

Introduction:

- In this study, we analyze the Canadian housing market in 2023 using data from reputable sources like Kaggle and Calgary Open Data.
- Our objective is to provide actionable insights for stakeholders.
- We will follow the CRISP-DM methodology, beginning with a thorough understanding of the business context and data.
- We will formulate relevant business questions and create visualizations to address them effectively.
- Our findings will be presented through a Power BI report, offering a comprehensive view of housing trends and investment opportunities.

1. **Business Understanding**

   - The objective is to analyze trends in the housing market, particularly focusing on information on potential investment opportunities in different regions and types of properties.

2. **Data Understanding**

   - We will Analyze the data using Data Analysis tools that is Python and Power Bi

3 & 4. Data Preparation: Cleaning and Modeling:

1. For the Housing Price & Real Estate dataset:
   - Check for blank rows and handle them appropriately.
   - Clean and preprocess the data to handle missing values, outliers, and inconsistencies.
   - Create a new column for price per square foot.
   - Ensure appropriate data types and column names.
2. For the Community Points dataset:
   - Check for blank rows and retain them if necessary.
   - Ensure appropriate data types and column names.
   - Establish relationships between datasets using common columns.

Dax Measure:
- Average of Price per Square Foot

5. Evaluation:

- We will review the entire process. With all the necessary data in hand, we will formulate business questions. Subsequently, we'll develop visualizations to address these questions and deploy them in Power BI. Finally, we'll present our analysis through a PowerPoint presentation

6. Business Questions

1. What is the average price per square foot for homes in different communities, and how does it vary across sectors? And how does the community type (Industrial and Residential) influence the price of homes for sale?

2. In pursuit of investment opportunities, what type of property would be optimal in terms of maximizing the number of bedrooms? Additionally, in which community is such a property typically located, and what is the associated selling price?

3. For a single individual with the financial means to purchase a property featuring one bedroom and one bathroom, what would be the anticipated cost of such a unit?