Real Estate Marketing Analytics

**Background / Motivation:**

The real estate market is one of the most significant sectors of the economy in Canada. According to a report given by PwC, Canada is expected to experience strong economic growth in the coming years, and the real estate industry will play most important role in driving this growth.

As more people move to urban areas, there is a growing demand for affordable housing, especially in Toronto, Vancouver, and Montreal. Apart from that, the advancement in technology and changes in consumer behaviour have greater need for real estate marketing analytics to understand consumer behaviour, preferences and buying patterns.

Therefore, analyzing real estate data can help businesses make meaningful decisions about property investments, pricing, and marketing strategies. By understanding market trends, businesses can identify areas of opportunity and make strategic investments to capitalize on them.

**Problem Statement:**

The main aim of this project is to conduct a detailed analysis of the Canadian housing market by examining key trends and factors that have impacted house prices across various regions. By analyzing historical data, the project aims to provide valuable insights into the current state of the housing market and assist potential buyers, sellers, and real estate professionals in making informative decisions. Ultimately, the project seeks to provide a deeper understanding of the Canadian real estate market and its prospects.

***This project aims to answer the following questions regarding the Canadian housing market:***

1. What is the overall trend in housing prices across Canada, and how does it vary by City and Province?
2. What are the key factors that have influenced housing prices in different regions, such as economic growth, population growth, interest rates, and housing supply?
3. What are most popular types of house being bought and sold in different regions, and how do their prices compare?
4. Are there any regions in Canada where housing prices are significantly higher or lower than the national average, and what factors contribute to these differences?
5. How have housing prices have been changed over time, what are the short and long term forecasts for the Canadian housing market?

**Proposal:**

* **Objective:**

The objective of this project is to analyze Canadian housing market trends and identify factors influencing prices in different regions. It aims to provide insights to help buyers, sellers , and real estate professionals make informed decisions.

* **Project Scope:**

The scope of this project is to analyze the Canadian housing market trends from the year 2005 (January) to 2023 (February) using the CREA (Canadian Real Estate Association). The analysis will cover major cities and provinces, and including factors such as housing prices, population growth, and economic indicators.

* **Project Methodology:**

The project aims to use Python and data analysis tools such as Pandas, NumPy, Matplotlib and Seaborn to conduct exploratory data analysis, data cleaning, data transformation, and statistical modeling techniques on the housing market data.

* **Project deliverables:**

The goal of this project to provide detailed analysis report and interactive data visualizations of the Canadian housing market trends.

* **Target Audience:**

The target audience in this project would be potential homebuyers and sellers, real estate professionals, investors, and policymakers who are interested in gaining insights into the Canadian housing market trends and making informed decisions based on the analysis.

* **Conclusion:**

In Conclusion, this project aims to provide a comprehensive analysis of the Canadian housing market trends and offer key insights to assist potential homebuyers and sellers, real estate professionals, investors, and policymakers in making informed decisions.

**About the Dataset:**

The dataset used in this project is sourced from the Canadian Real Estate Association (CREA) which includes information on housing prices and related variables in various regions across Canada.

The dataset includes various columns:

|  |  |
| --- | --- |
| **Column Name** | **Description** |
| Date | Date of observation |
| Composite\_HPI\_SA | Composite House Price Index |
| Single\_Family\_Benchmark\_SA | Benchmark Price for Single Family Houses |
| One\_Storey\_Benchmark\_SA | Benchmark Price for One – Storey Houses |
| Two\_Storey\_Benchmark\_SA | Benchmark Price for Two – Storey Houses |
| Townhouse\_Benchmark\_SA | Benchmark Price for Townhouse |
| Apartment\_Benchmark\_SA | Benchmark Price for Apartment |

There are various excel files in this dataset across every region in Canada starting from the year 2005 (January) to 2023 (February), the project plans to merge multiple excel sheets into one single file for further analysis that can be used to gain insights into the Canadian housing market and understand the trends that have influenced the market over the past few years.

**SWOT Analysis:**

* **Strengths:**

The potential benefits from a rich and diverse dataset, powerful data analysis tools, and has the potential to provide valuable insights into the Canadian housing market trends.

* **Weakness:**

Limitations include limited scope of analysis, reliance on data accuracy, and technical expertise for data analysis.

* **Opportunities:**

Opportunities include potential for expansion, discovering new insights, and creating value for stakeholders.

* **Threats:**

Potential threats to the project include unforeseen market events, data availability limitations, and competition from similar market analysis.

**Dataset Link:**

[**https://creastats.crea.ca/en-CA/**](https://creastats.crea.ca/en-CA/)

Recommended by - **Professor John Ulkaovich**.

**References:**

* [**Canadian real estate markets to watch| PwC Canada**](https://www.pwc.com/ca/en/industries/real-estate/emerging-trends-in-real-estate-2021/markets-to-watch.html)
* [**https://www.moneysense.ca/spend/real-estate/whats-affecting-canadas-real-estate-and-housing-market/**](https://www.moneysense.ca/spend/real-estate/whats-affecting-canadas-real-estate-and-housing-market/)
* [**https://www.nesto.ca/real-estate/canadian-housing-market-outlook/?g\_acctid=725-158-0052&g\_adgroupid=&g\_adid=&g\_adtype=none&g\_campaign=Performance+Max\_ON\_EN\_3331-IN-0007&g\_campaignid=14403087096&g\_keyword=&g\_keywordid=&g\_network=x&gclid=Cj0KCQjw2v-gBhC1ARIsAOQdKY2vRO1veWfIkM7KfRLQCjy070YlLmeHslTaH7KTFcAgXjy4srtBg9AaAkMREALw\_wcB**](https://www.nesto.ca/real-estate/canadian-housing-market-outlook/?g_acctid=725-158-0052&g_adgroupid=&g_adid=&g_adtype=none&g_campaign=Performance+Max_ON_EN_3331-IN-0007&g_campaignid=14403087096&g_keyword=&g_keywordid=&g_network=x&gclid=Cj0KCQjw2v-gBhC1ARIsAOQdKY2vRO1veWfIkM7KfRLQCjy070YlLmeHslTaH7KTFcAgXjy4srtBg9AaAkMREALw_wcB)