

Has the COVID-19
pandemic
significantly
impacted the
housing market in
Canada?



Research focus...

Has the COVID-19 pandemic significantly impacted the housing market in Canada? Which Provinces in Canada have been affected the most?

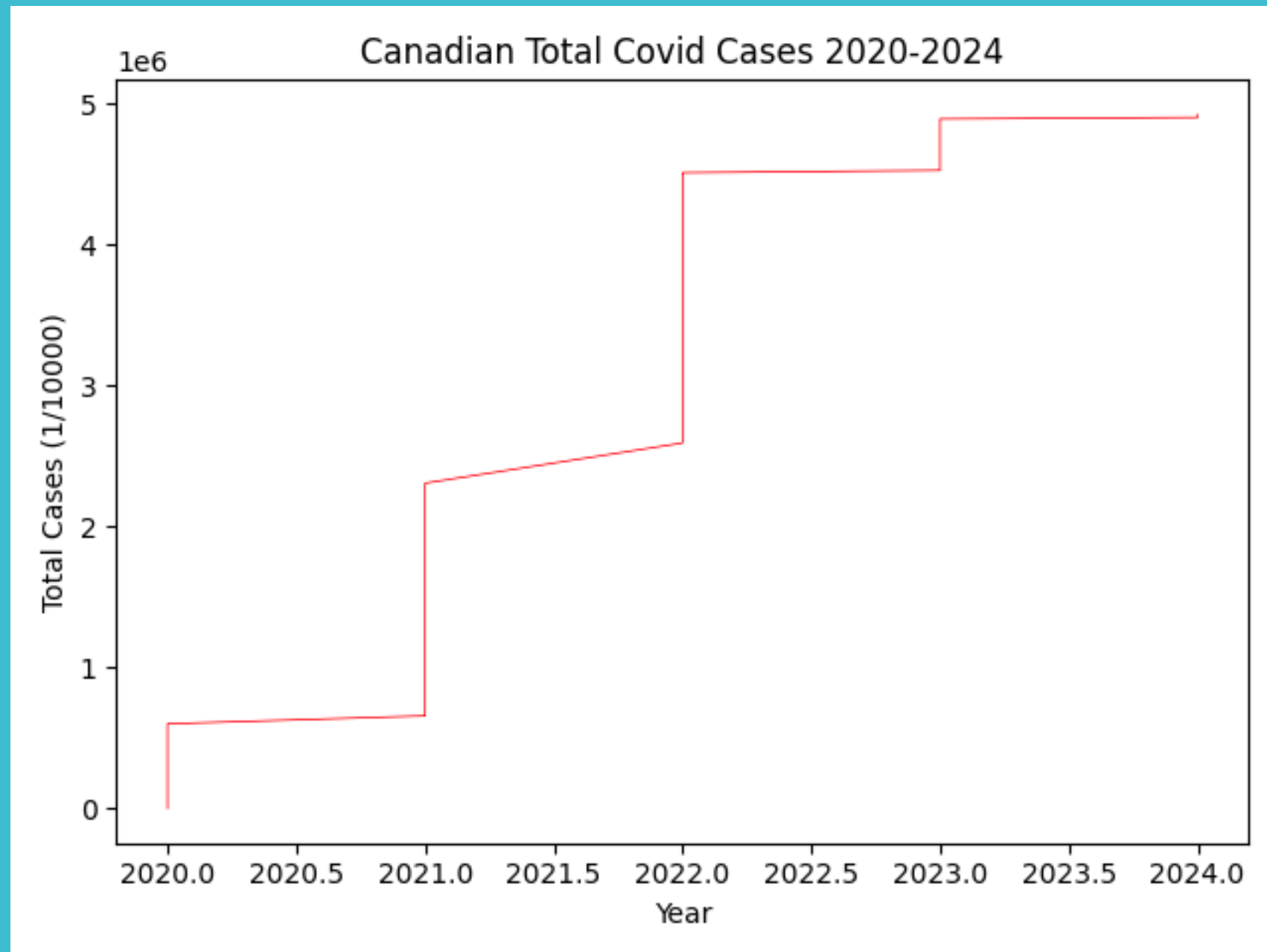


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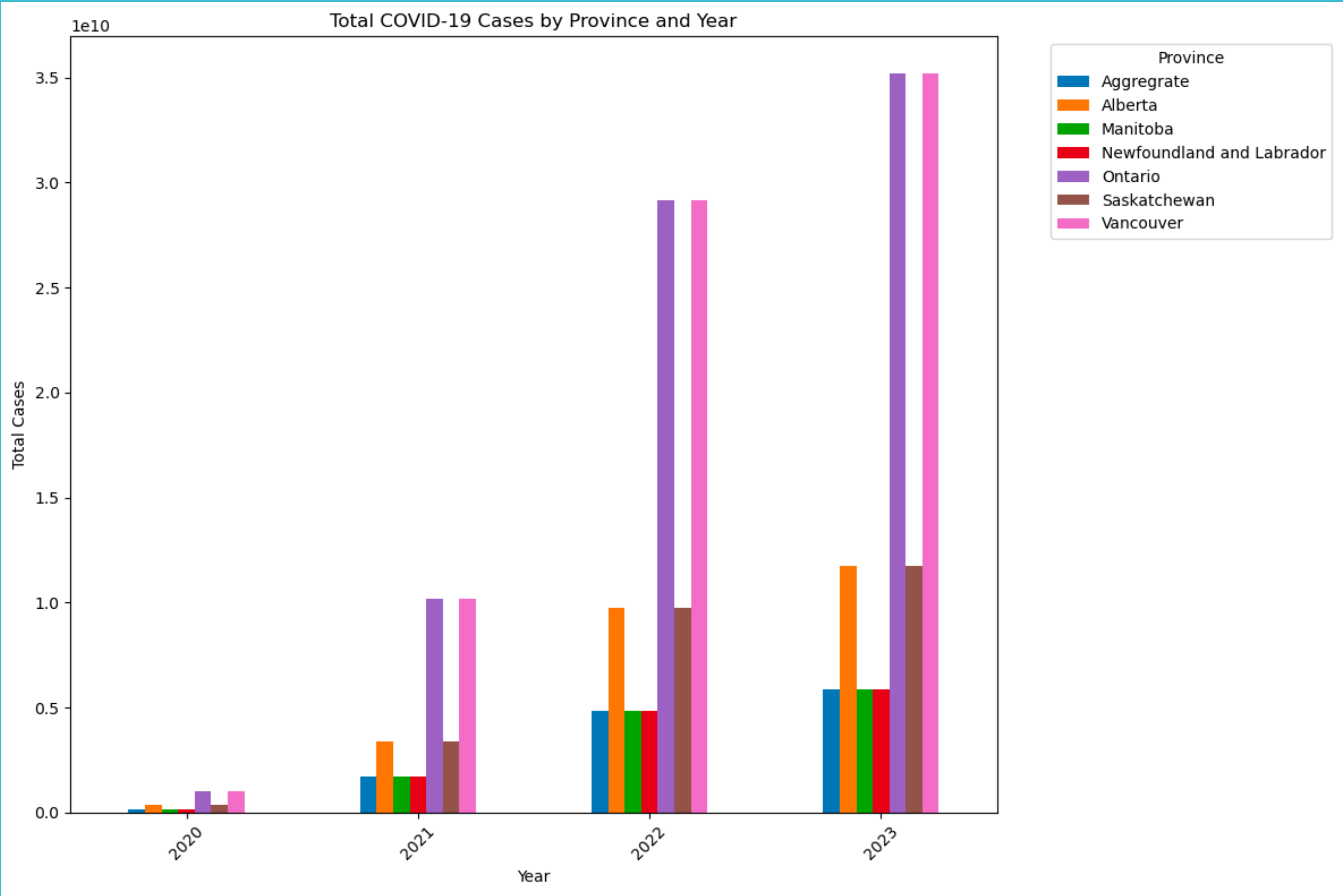
- Data Cleaning and formatting
- Analysis
 - Canadian total COVID-19 cases per year and its affect on mortgage
 - Canadian total COVID-19 cases per year and its affect on House prices
 - Hypothesis and Findings of paired T-Test
 - Realestate prices from 2016 to 2023 and average
 - Overall Analysis
- Conclusion



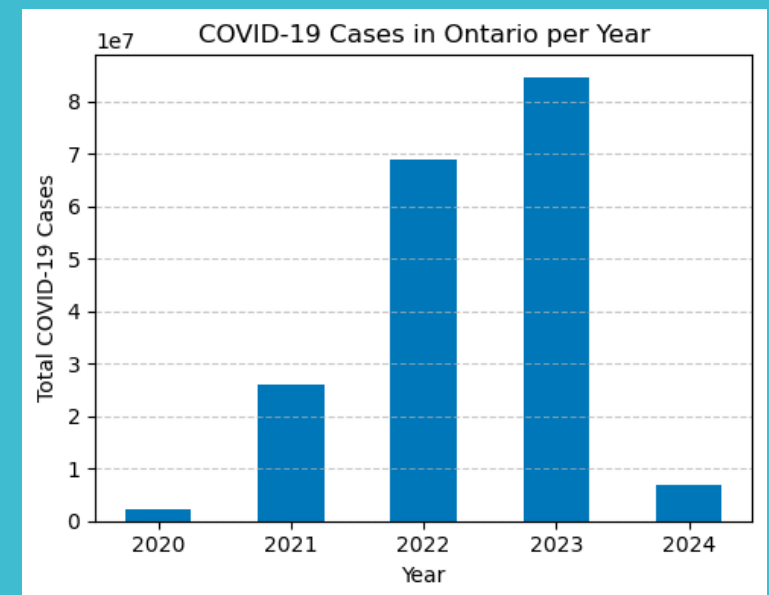
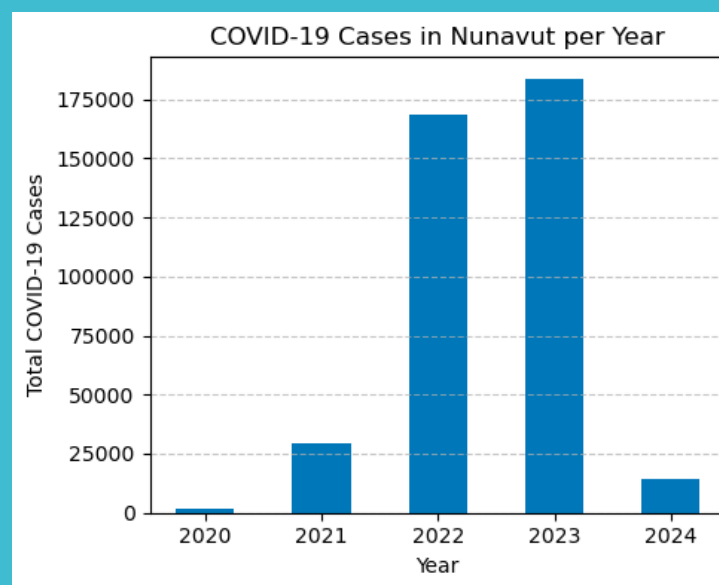
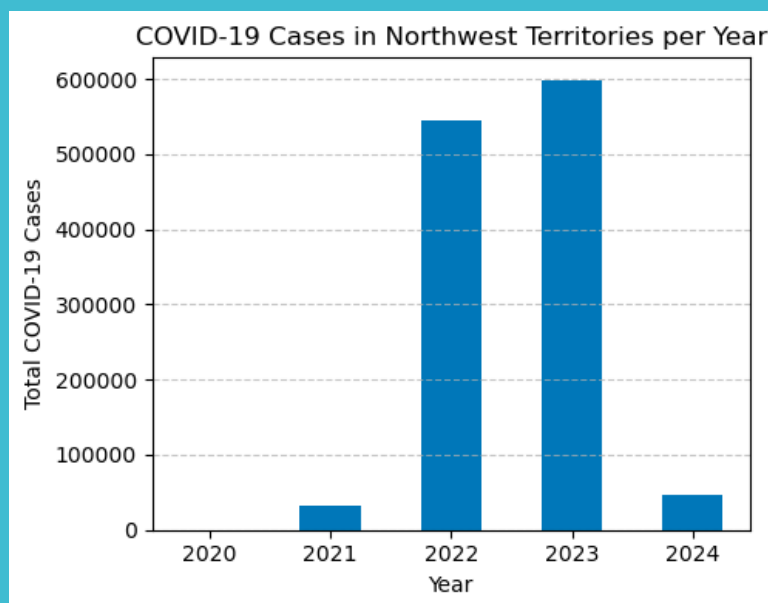
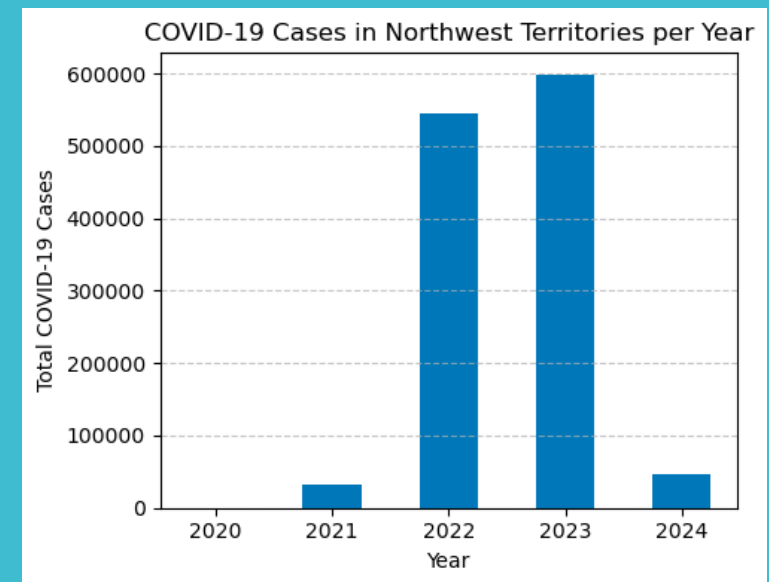
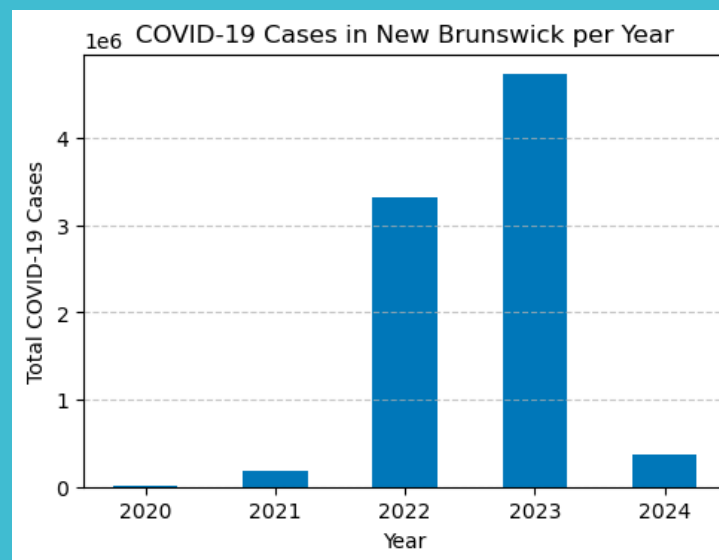
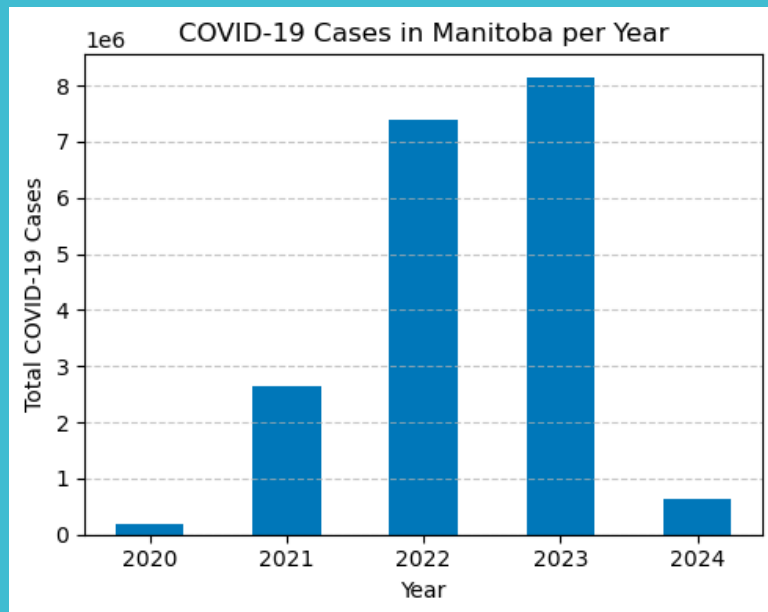
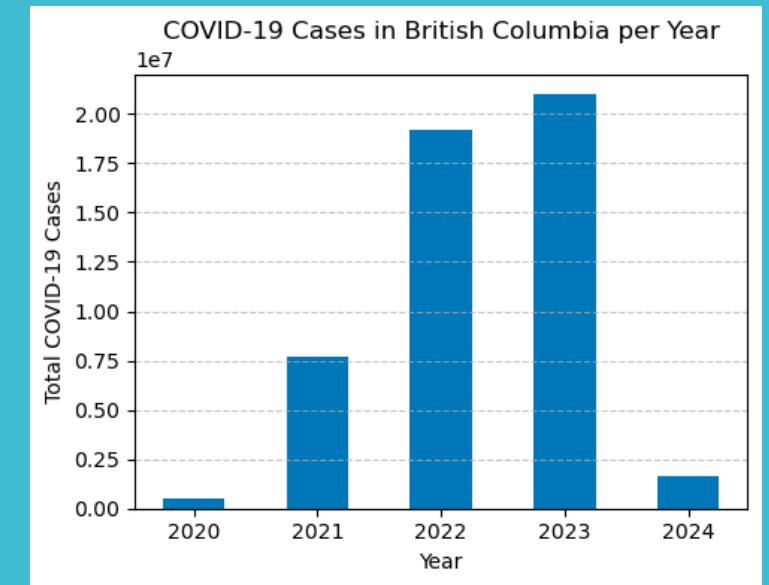
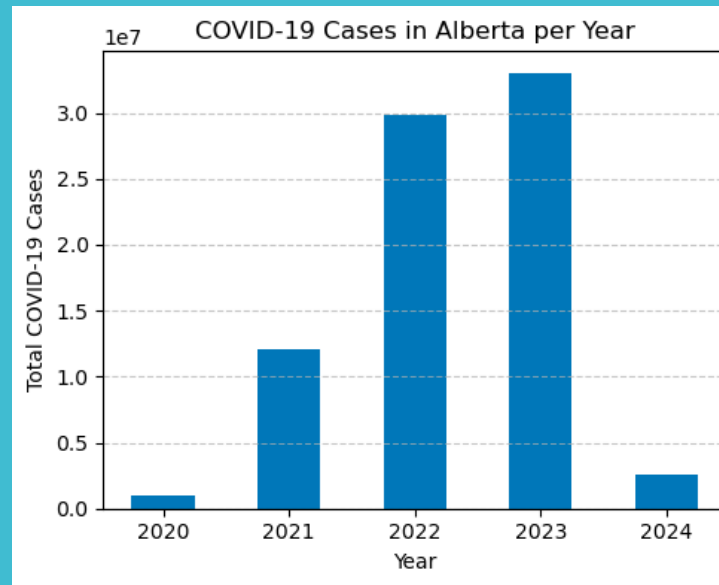
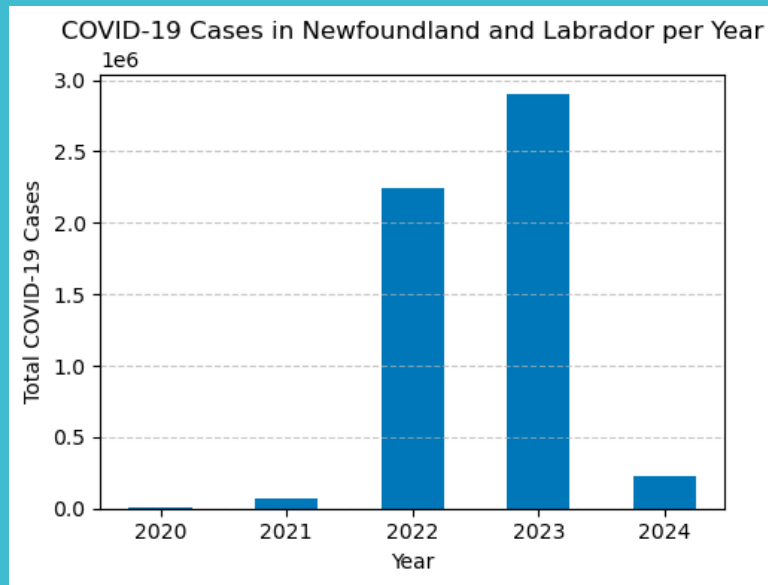
Canadian total COVID-19 cases per year (1/10000 reported cases)



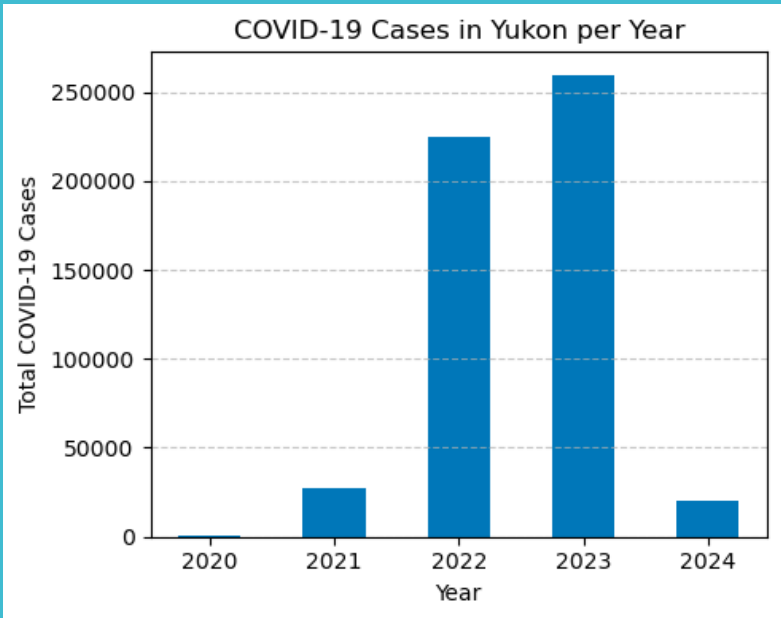
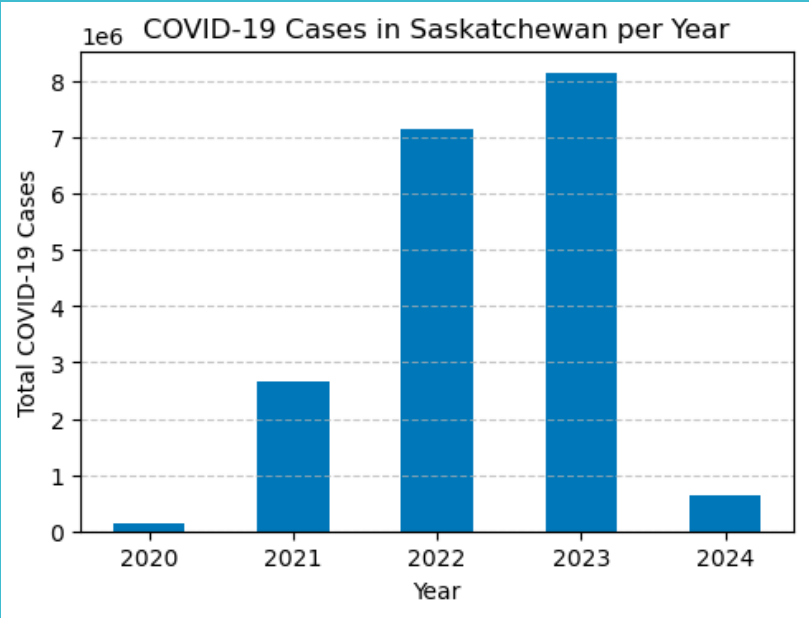
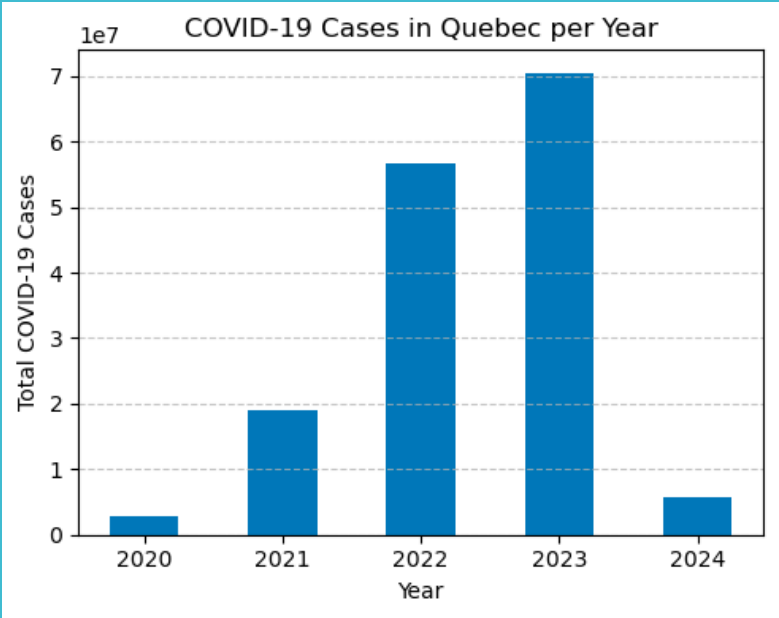
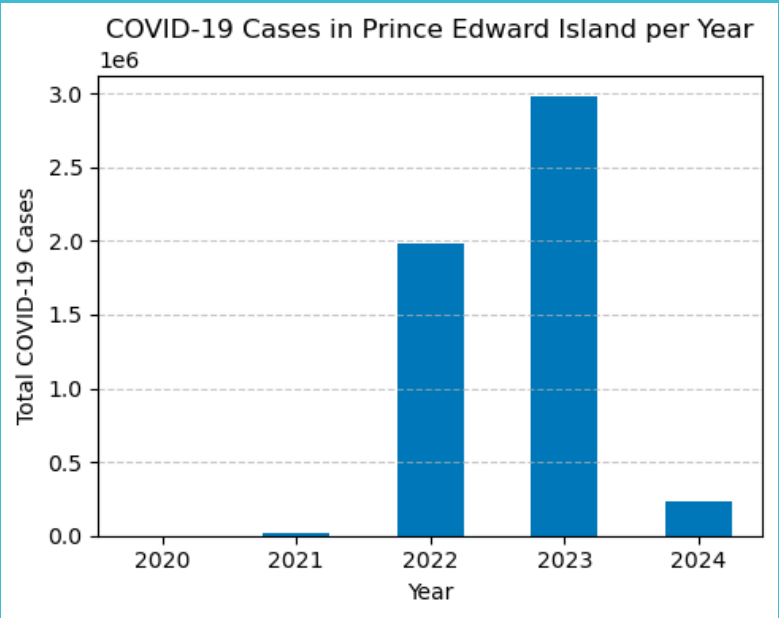
Canadian total COVID-19 cases by Province and year



COVID-19 cases in Canadian provinces from 2020 -2024



COVID-19 cases in Canadian provinces from 2020 -2024



List of top 5 and bottom 5 provinces based on the number of COVID-19 cases from 2020-2024

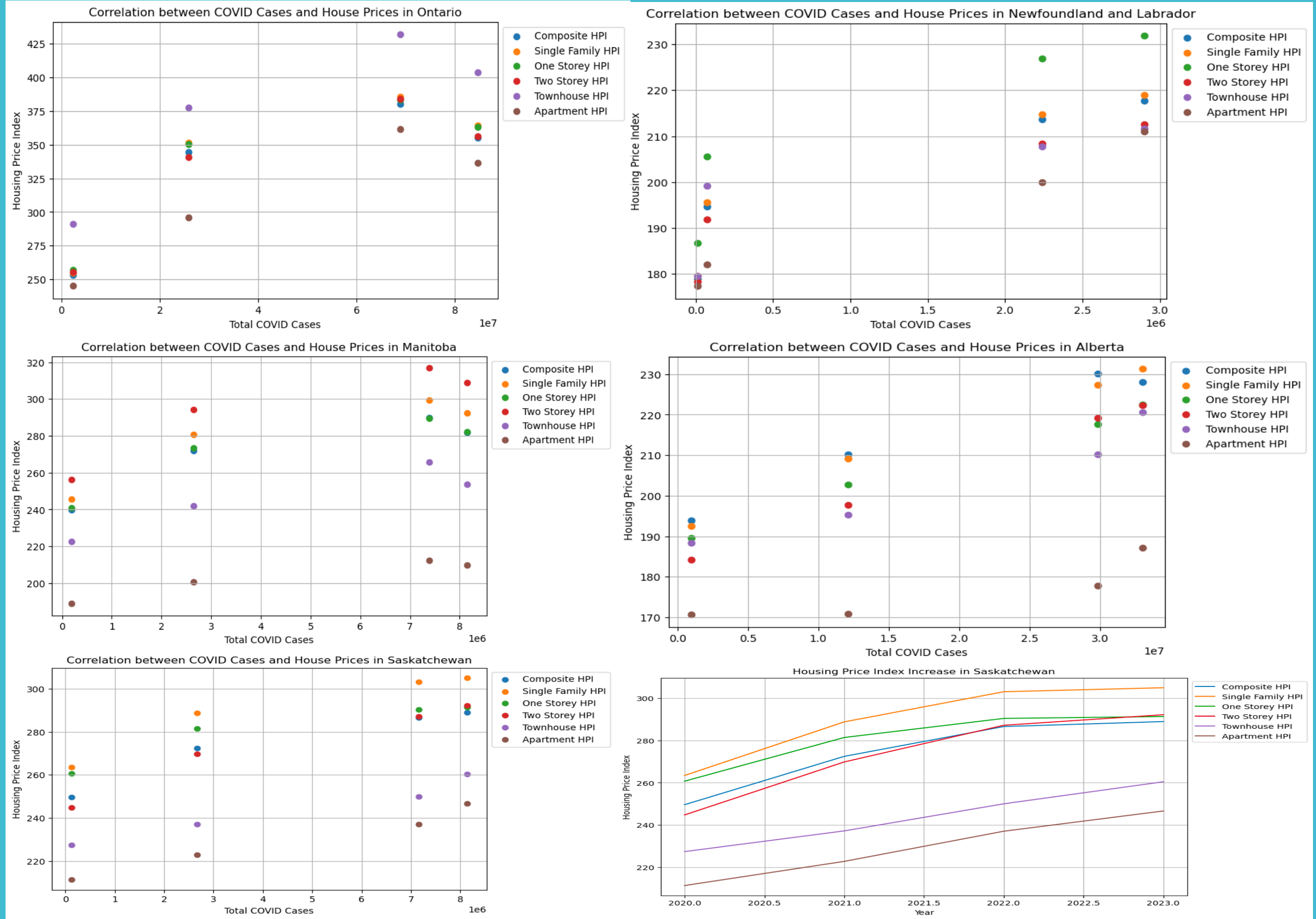
Province	Total Cases
Ontario	188493950
Quebec	154999135
Alberta	78551765
British Columbia	50000442
Manitoba	50000442

Top 5 Provinces affected by COVID-19

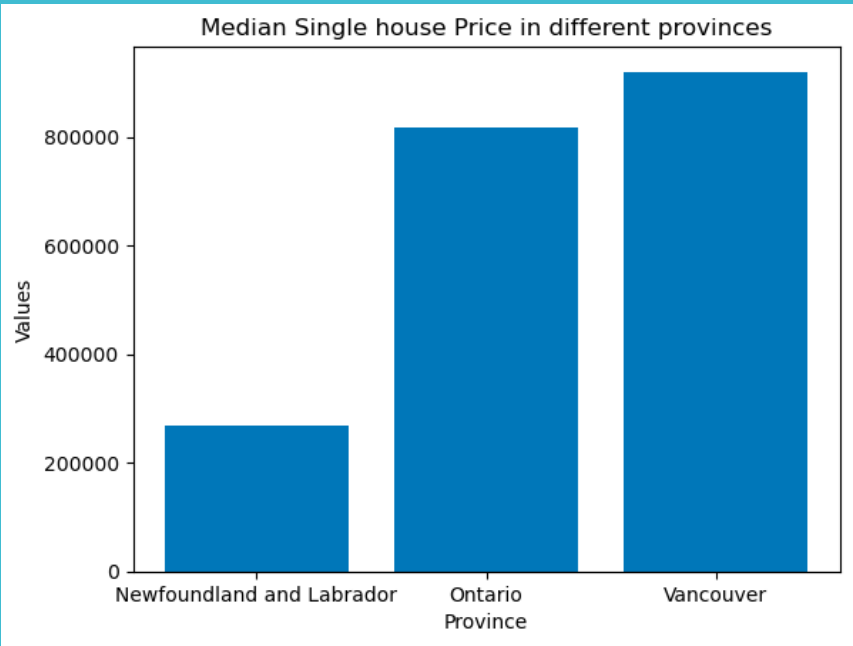
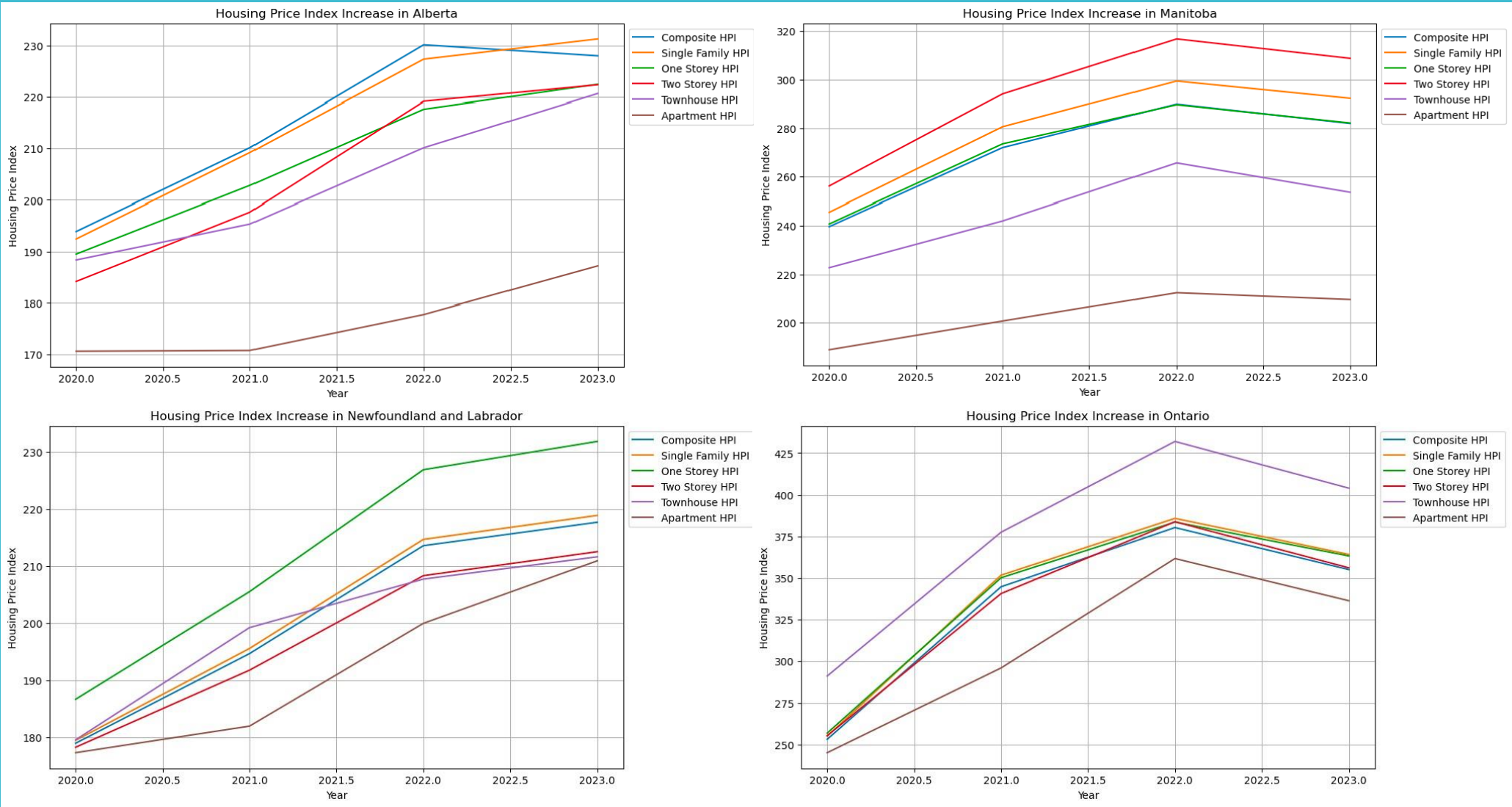
Province	Total Cases
Nunavut	397217
Yukon	532563
Northwest Territories	1221625
Prince Edward Island	5210457
Newfoundland and Labrador	5455730

Bottom 5 Provinces affected by COVID-19

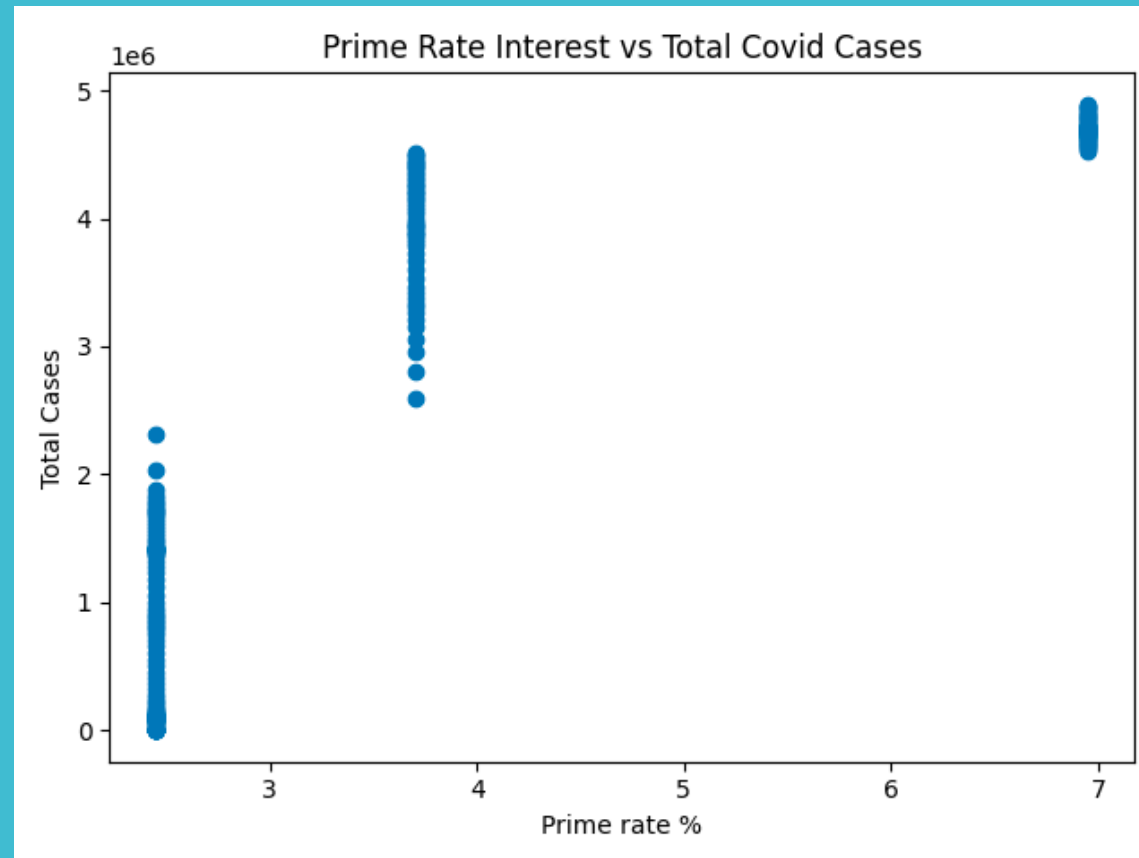
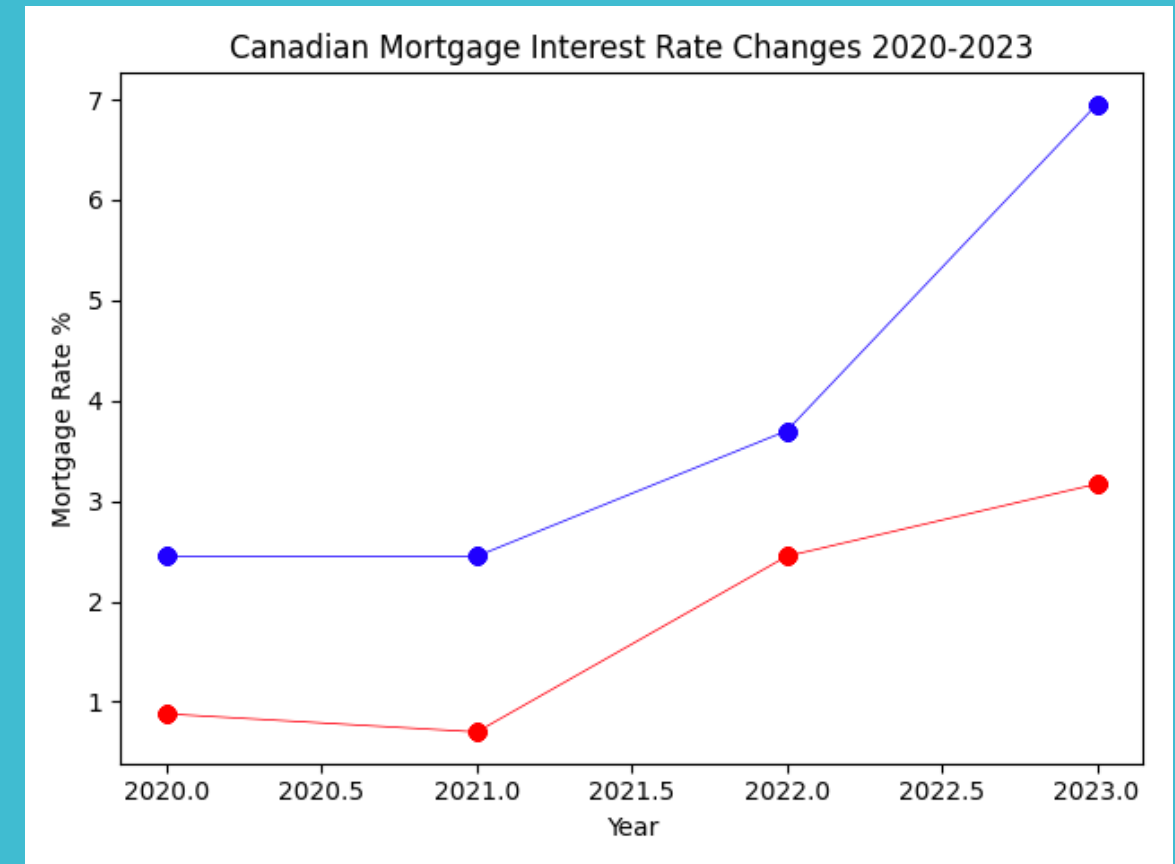
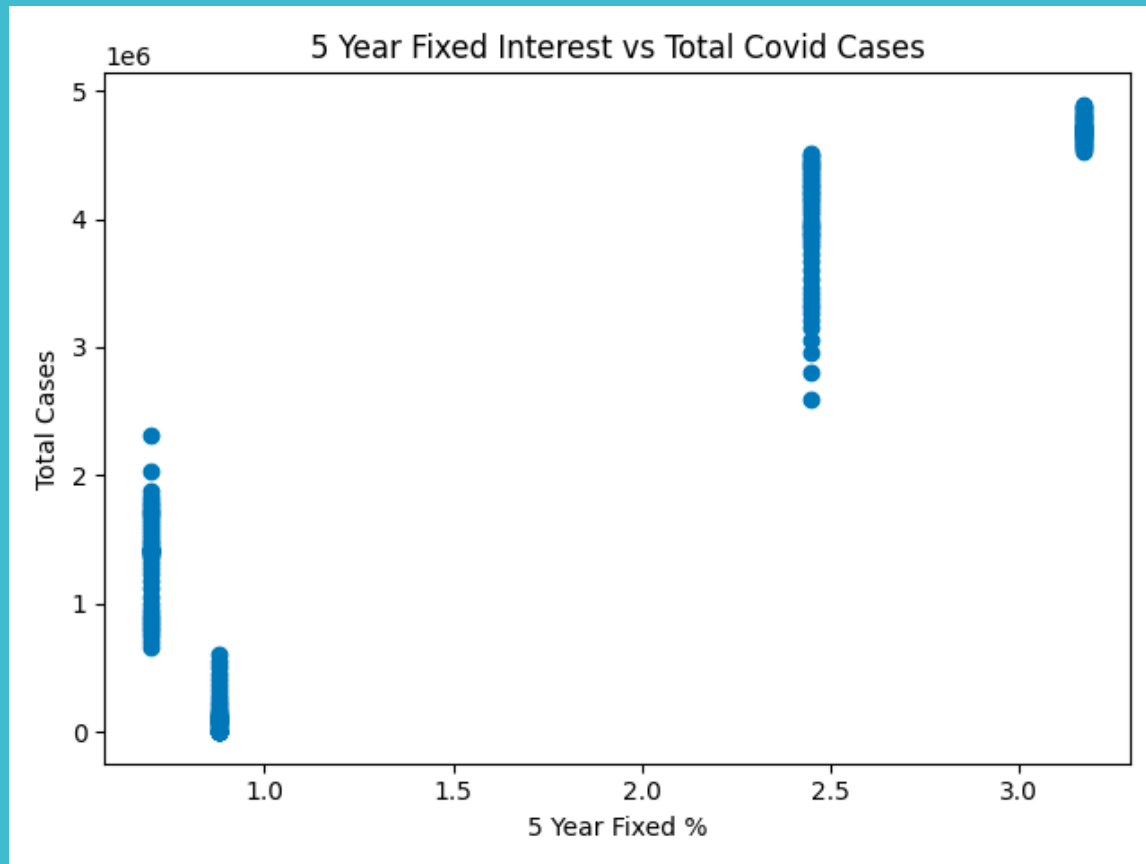
Correlation between COVID Cases and House Prices in provinces



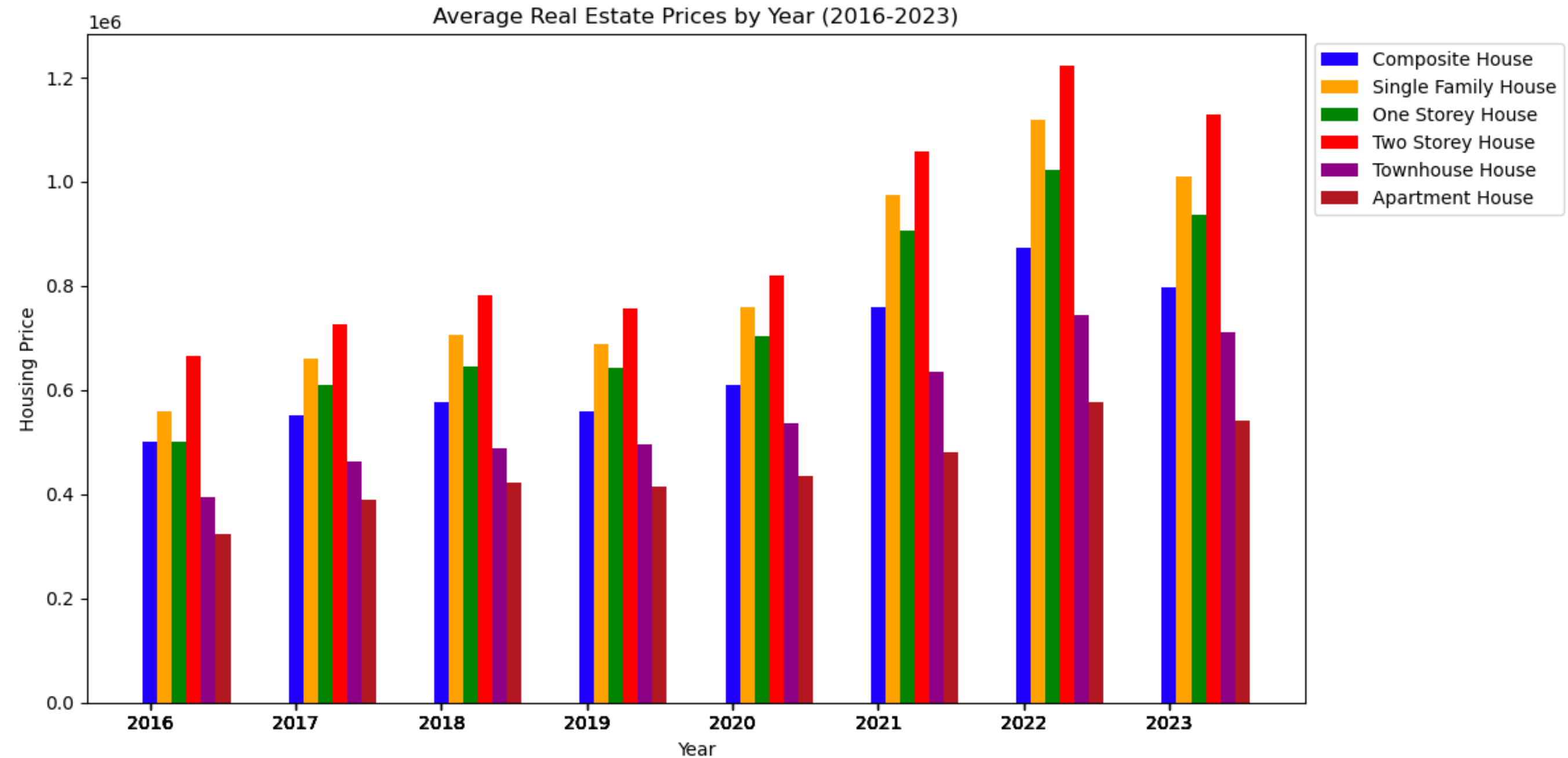
Correlation between COVID Cases and House Prices in provinces



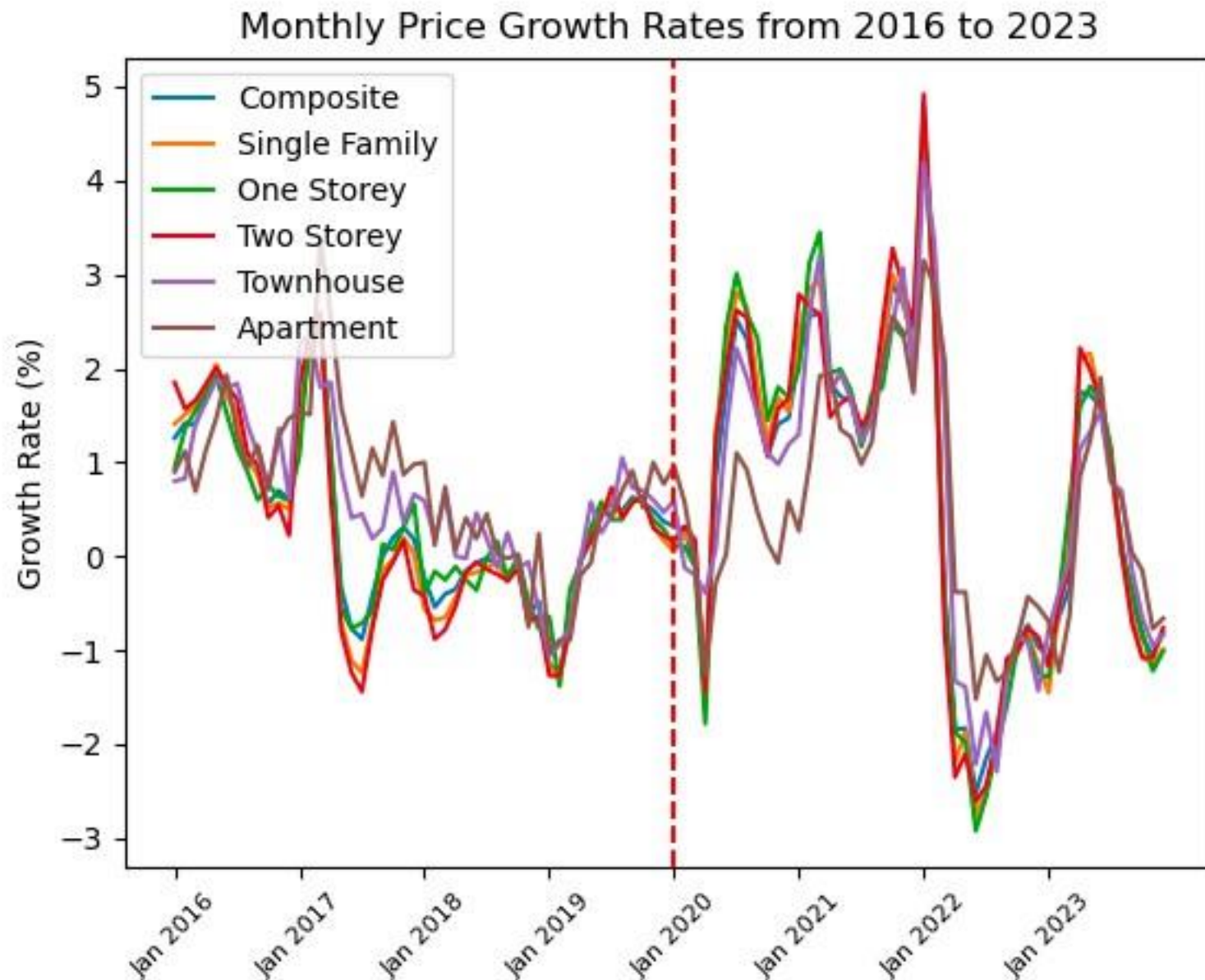
COVID-19 and its affect on Mortgage Rate (interest)



COVID-19 and its affect on House prices



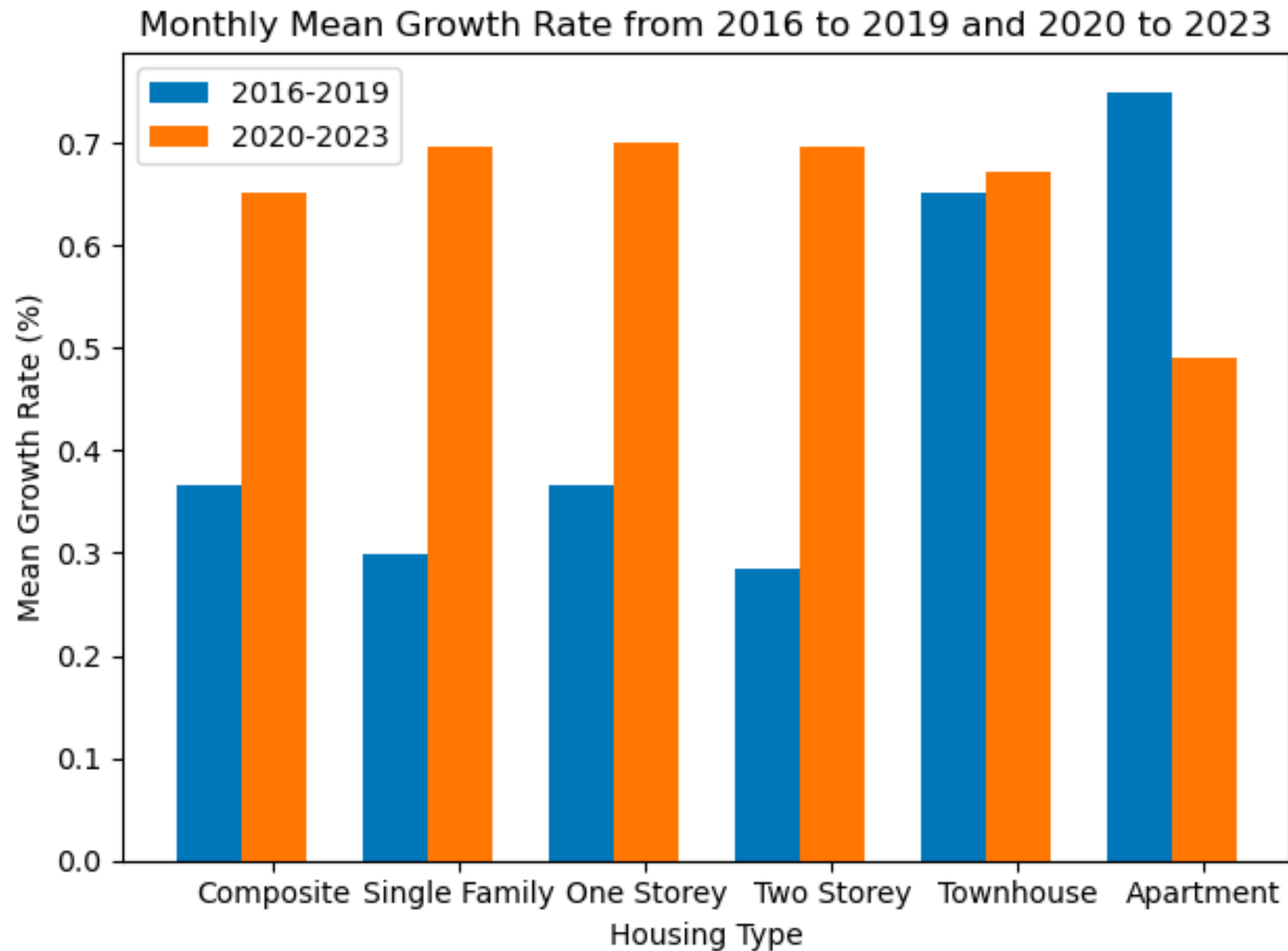
COVID-19 and its affect on House prices



- How were real estate prices effected by the emergence of Covid-19 in early 2020?

- Was there a significant change in the price growth rates of these real estate categories?

COVID-19 and its affect on House prices



The composite, single family, one storey and two storey indicate the potential for a statistically significant difference

Hypothesis and Findings of the Paired T-Test

Null Hypothesis: There is no statistically significant difference between the mean growth rate of real estate prices before and after January 2020 in the following categories: single family, one storey, two storey, townhouse and apartment.

Alternative Hypothesis: There is a statistically significant difference between the mean growth rate of real estate prices before and after January 2020 in the following categories: single family, one storey, two storey, townhouse and apartment.

Method: paired t-test

	Composite	Single Family	One Storey	Two Storey	Townhouse	Apartment
t-statistic	1.198402	1.517832	1.326231	1.532072	0.096452	-1.590426
p-value	0.236769	0.135755	0.191172	0.132209	0.923572	0.118444

Conclusion: Do not reject the null hypothesis. The test indicates that there was no statistically significant difference in the mean price growth rates after the emergence of Covid-19 in early 2020.

Reference

- <https://www.crea.ca/housing-market-stats/mls-home-price-index/hpi-tool/>

- [https://www.bankofcanada.ca/rates/interest-rates/canadian-interest-rates/?](https://www.bankofcanada.ca/rates/interest-rates/canadian-interest-rates/?lookupPage=lookup_canadian_interest.php&startRange=2014-02-08&rangeType=dates&dFrom=2020-01-01&dTo=2024-02-08&rangeValue=1&rangeWeeklyValue=1&rangeMonthlyValue=1&ByDate_frequency=daily&submit_button=Submit)

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Questions?

