Result of Housing Price Forecasting During COVID 19 Pandemic

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housing-price-forecasting-during-covid-19-pandemic

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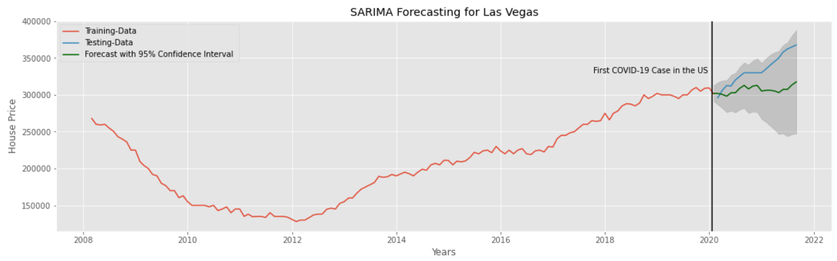

This one pager examines the housing price dynamics within a univariate time series forecast for the United States (US) cities Miami, Minneapolis and Las Vegas during the COVID-19 pandemic. The seasonal autoregressive integrated moving average model (SARIMA) was used as it is able to capture housing-price dynamics based on historical data. Subsequently, the resulting excess trend was regressed against total infections for each of the three cities.
Prices on the US real estate market, represented by selected local housing markets, are growing continuously despite the COVID-19 pandemic with an even accelerated trend for the observed characteristics.
A more detailed version of our housing price analysis is provided in the PDF report listed below.

Protocols:

1) DataAnalytics_house-price-forcast_COVID.pdf

Code:

1) Github

Datasets:

1) us-counties.csv
2) cities.csv

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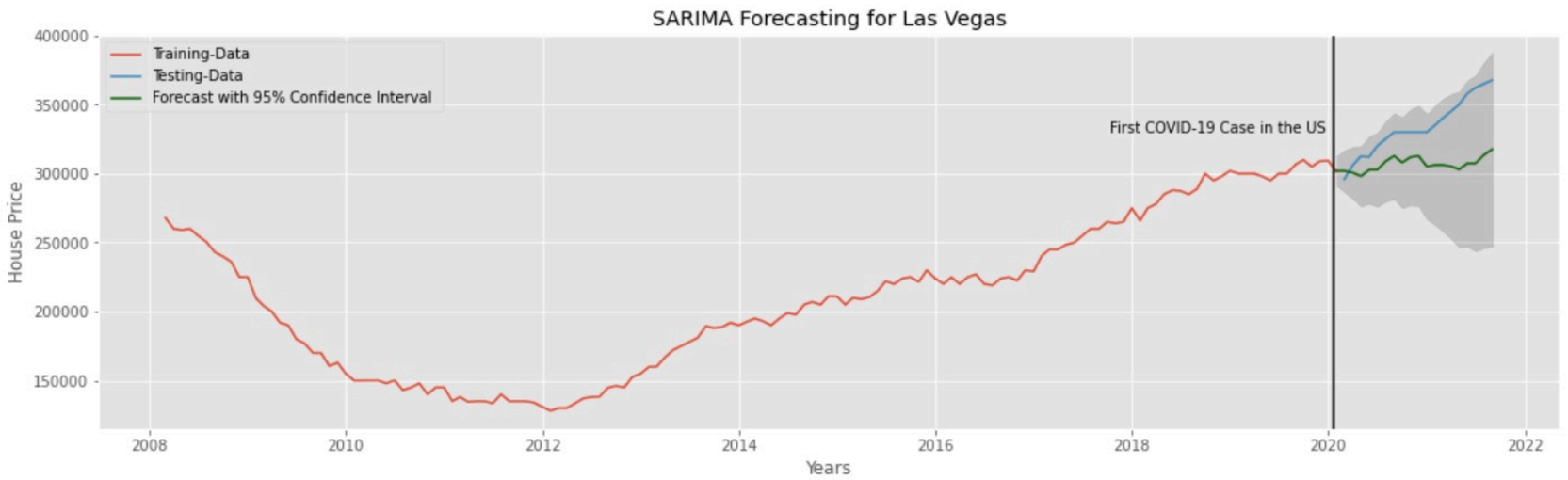
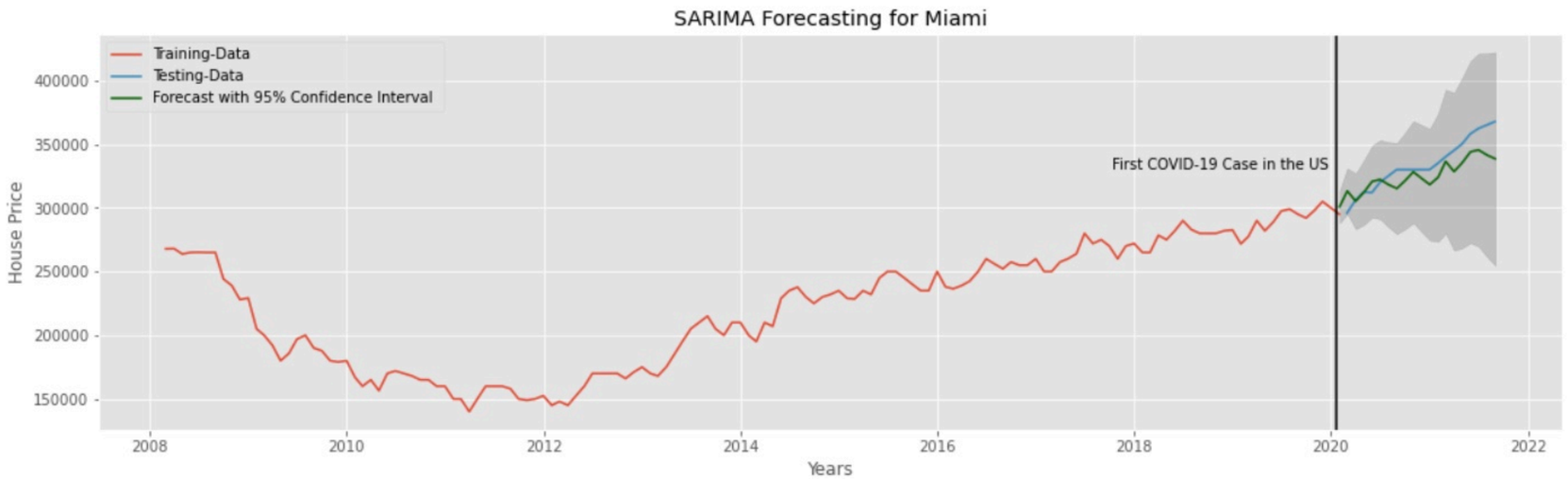
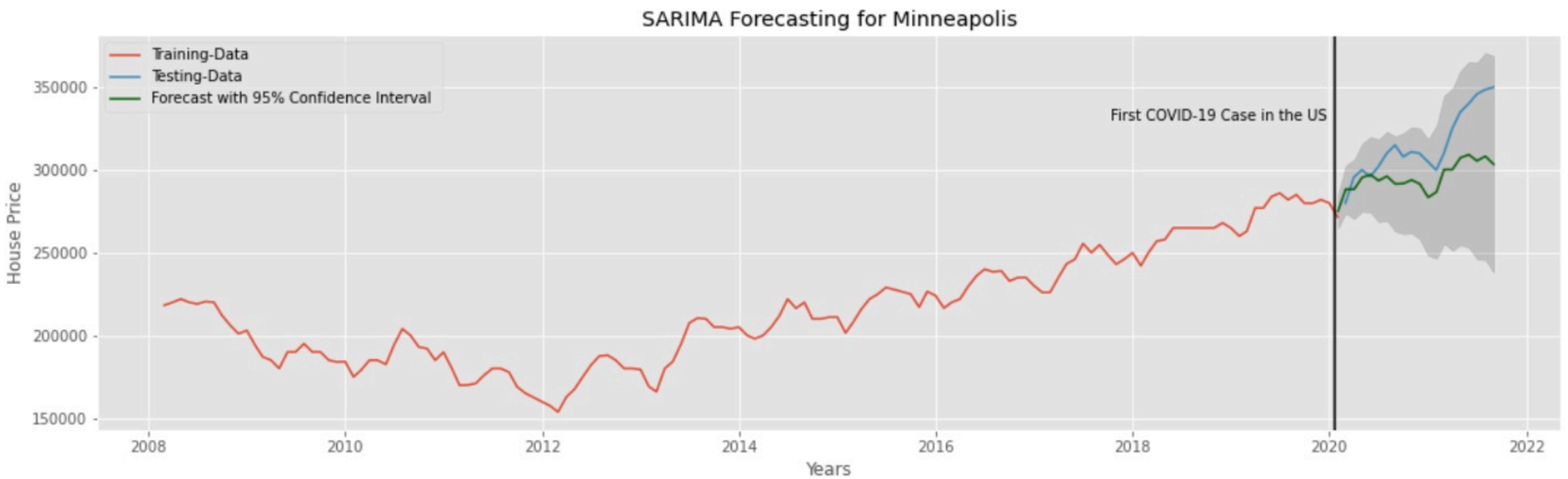

SARIMA Forecasting for Las Vegas
Training-Data
Testing-Data
Forecast with 95% Confidence Interval
First COVID-19 Case in the US
House Price
Years
400000
350000
300000
250000
200000
150000
2008
2010
2012
2014
2016
2018
2020
2022

b


SARIMA Forecasting for Miami
Training-Data
Testing-Data
Forecast with 95% Confidence Interval
First COVID-19 Case in the US
House Price
400000
350000
300000
250000
200000
150000
2008
2010
2012
2014
2016
2018
2020
2022
Years

C


SARIMA Forecasting for Minneapolis
Training-Data
Testing-Data
Forecast with 95% Confidence Interval
First COVID-19 Case in the US
House Price
350000
300000
250000
200000
150000
2008
2010
2012
2014
2016
2018
2020
2022
Years