



Impact of Covid19 on Clark County, Nevada

Motivation & Problem Statement

- Pandemic affected different professions in different and unequal ways.
- Assumed that tourism is the primary employment generating industry in Clark County.
- Analyse the impact of Covid19 on the tourism industry in Clark County via the lens of Airbnb listings during the pandemic.

Datasets used

1. The [RAW us confirmed cases.csv](#) file from the Kaggle repository of John Hopkins University COVID-19 data. This is where I got information about confirmed Covid-19 case counts.
2. The CDC dataset of [masking mandates by county](#). Here I got information about the dates during which a mask mandate was enforced in Clark county.
3. The New York Times [mask compliance survey](#) data. This dataset provided information about mask mandate compliance probabilities.

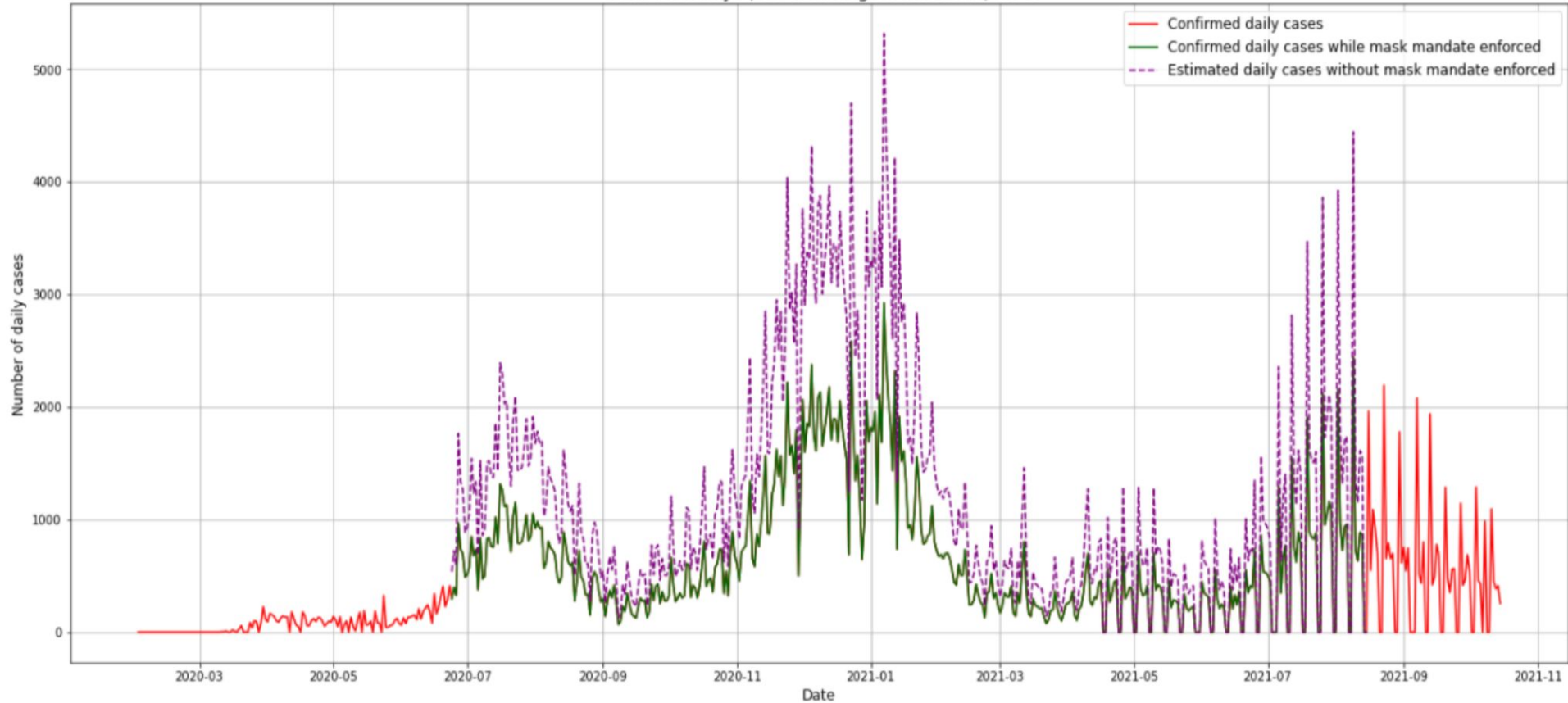
Datasets used

Inside Airbnb data: The data is a collection of Airbnb data that is publicly available on its website, across multiple cities. The data is aimed at providing a detailed insight into Airbnb's presence in a city. Dataset URL: [Get the Data - Inside Airbnb. Adding data to the debate.](#)

This dataset is composed of host listing details, aggregated by city and broken down by individual listings. Users are allowed to have multiple listings, so uniqueness is determined by a numerical identifier with a matching link URL. The Clark county data has 96 columns and well over 10,270 rows.

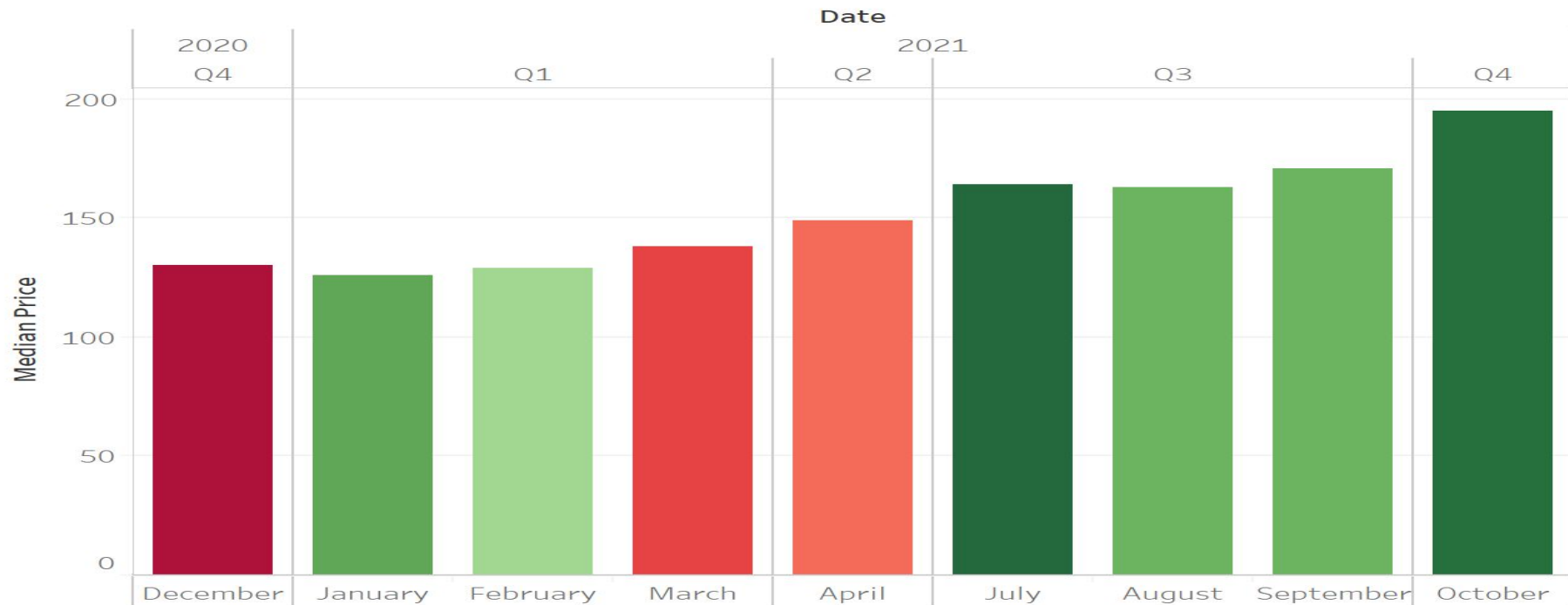
Progression of the Pandemic in Clark County

Progression of confirmed COVID-19 cases in Clark County, Nevada
From February 1, 2020 through October 15, 2021



Airbnb listings in Clark County during the pandemic

Prices & Availability of Airbnb Listings in Clark County, NV

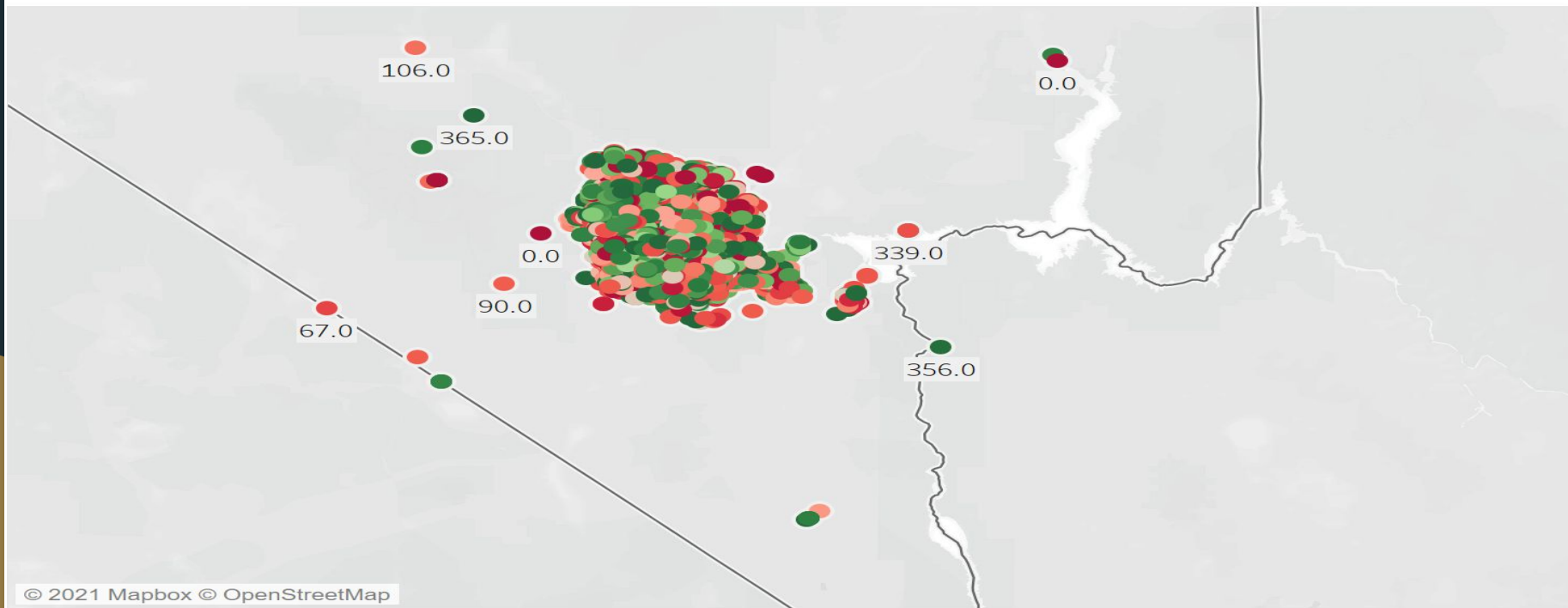


Median of Price for each Date Month broken down by Date Year and Date Quarter. Color shows median of Availability 365.



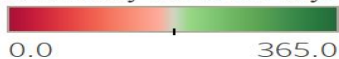
Airbnb listings in Clark County during the pandemic

Median Availability of Airbnb Listings in Clark County, NV (Dec 2020 - Oct 2021)



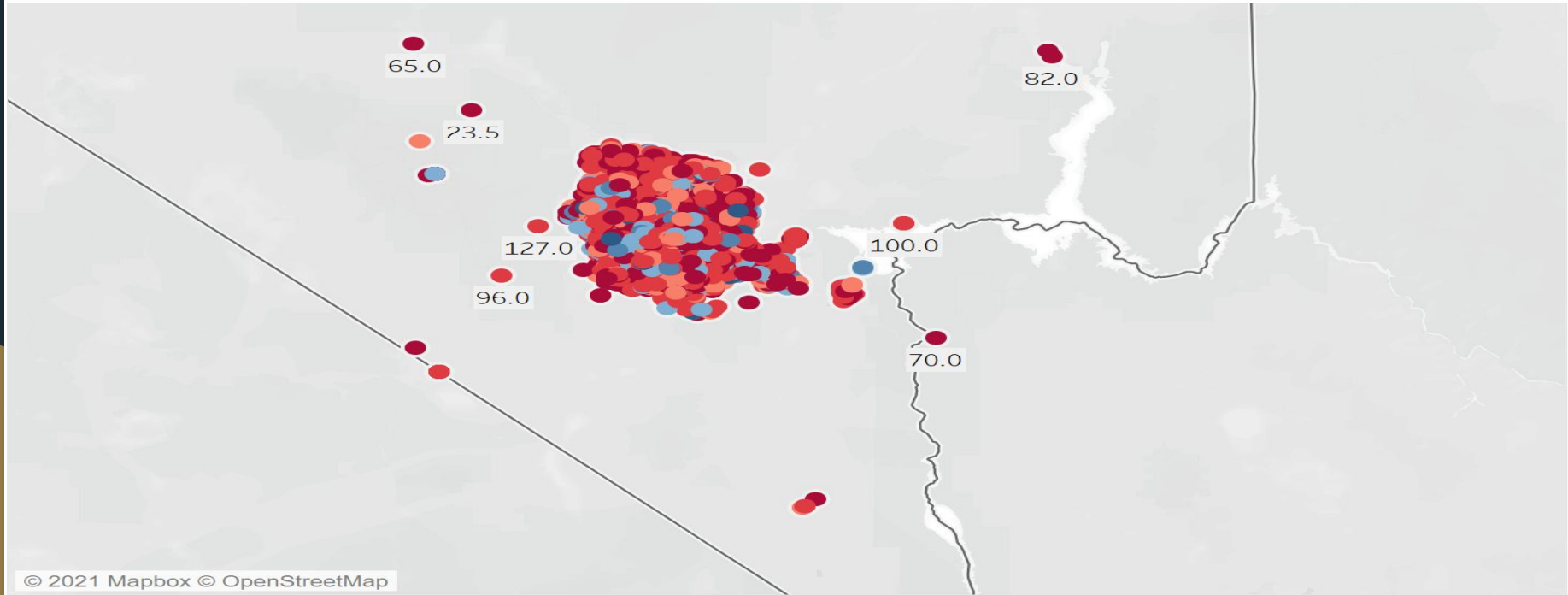
Map based on average of Longitude and average of Latitude. Color shows median of Availability 365. The marks are labeled by median of Availability 365. Details are shown for Id.

Availability out of 365 days



Airbnb listings in Clark County during the pandemic

Prices of Airbnb Listings in Clark County, NV (Dec 2020 - Oct 2021)



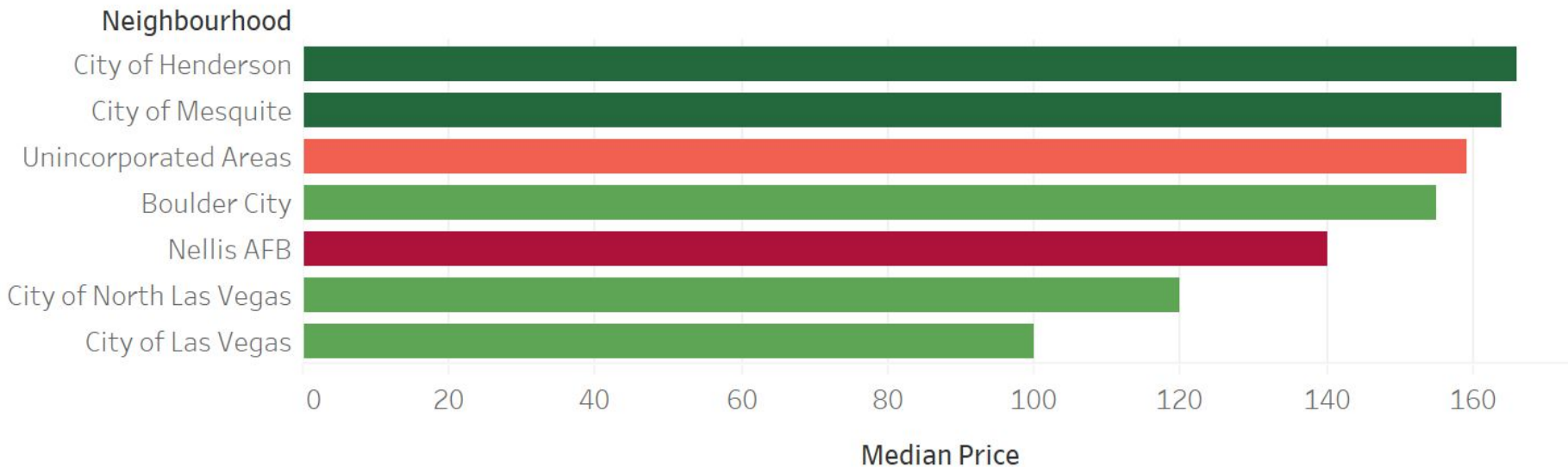
Map based on average of Longitude and average of Latitude. Color shows average of Price. The marks are labeled by average of Price. Details are shown for Id. The view is filtered on average of Price, which includes values less than or equal to 500.0.

Average Daily Price in USD



Airbnb listings in Clark County during the pandemic

Prices & Availability of Airbnb Listings in Clark County, NV (Dec 2020 - Oct 2021)



Median of Price for each Neighbourhood. Color shows median of Availability 365.

Median Availability of 365 days



Hypothesis Test

Our guess: We suspect that prices of Airbnb listings have increased in Q3 of 2021 in Las Vegas, because of increased vaccination rates and willingness of population to travel.

Null Hypothesis: The average prices of Airbnb listings have remained the same in Las Vegas since the beginning of Q3 of 2021.

Alternate Hypothesis: The average prices of Airbnb listings have increased in Las Vegas since the beginning of Q3 of 2021.

Method: Large sample Z test.

Result

P value < alpha (0.05) so we reject the null hypothesis with 95% confidence.

This means that the average prices of Airbnb listings in Las Vegas have truly increased from July - October 2021 when compared to the average prices from December 2020 - April 2021.

Human implications of our analysis

- The progression of the pandemic affected the tourism industry and the livelihoods of the people who depended on the income from Airbnb listings in Clark County.
- Confidence in travelling after rollout of vaccinations, likely played a role in the eventual increase in prices and increase in availability of Airbnb listings within this county.