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Project Part II

Professor Milan Miric
DSO 574 - Using Big Data: Opportunities & Challenges

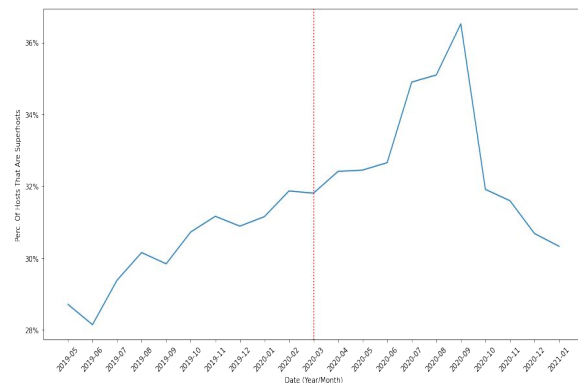
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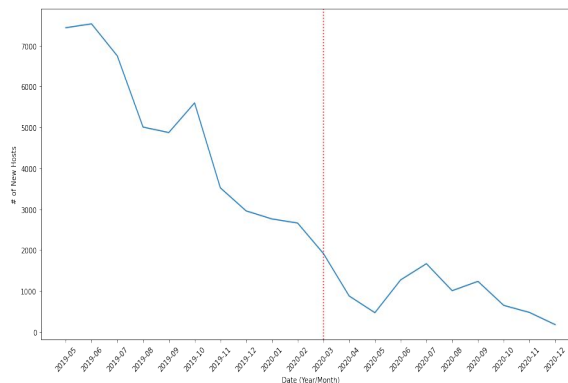
Analysis of Host Type, Number of New Hosts, and Number of Unique Hosts

Comparing trends in the 10 months pre Covid with the 10 months post Covid



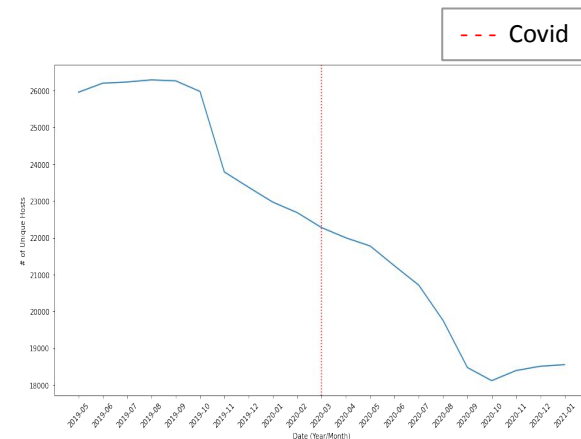
Proportion of Superhosts

- Superhosts have become increasingly popular on the platform, with the trend emerging prior to Covid
- This trend strengthened post Covid up until September 2020, where the proportion peaked at 36.5% from just 31.8% 6 months prior
- Currently, it seems that the proportion has returned to pre Covid levels at around 30% of the host population



Number of New Hosts

- The number of new hosts joining the platform was already declining pre Covid and following Covid that trend has continued
- New hosts started joining the platform again in June/July 2020 but then we see a steady decline again
- This could signify a move towards more “professional” hosts consolidating listings, or a growing perception that hosting Airbnbs is not a profitable business venture post-Covid



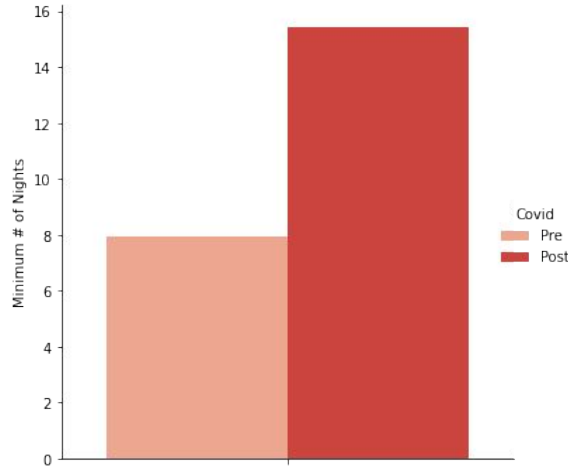
Number of Unique Hosts

- The number of unique hosts was already declining pre Covid, possibly due to over saturation of the market
- Post Covid we saw this trend strengthen, especially in September 2020
- Number of hosts has not rebounded since the start of Covid. This could signal a continuing decline in the popularity of Airbnb in a post Covid world.

Key Takeaway: Fewer new hosts joining the platform and fewer unique hosts may signal one of two things; a growing perception that hosting Airbnbs in the Los Angeles market will no longer be profitable post Covid or the market is beginning to prefer more “professional” Superhosts that may be managing multiple listings.

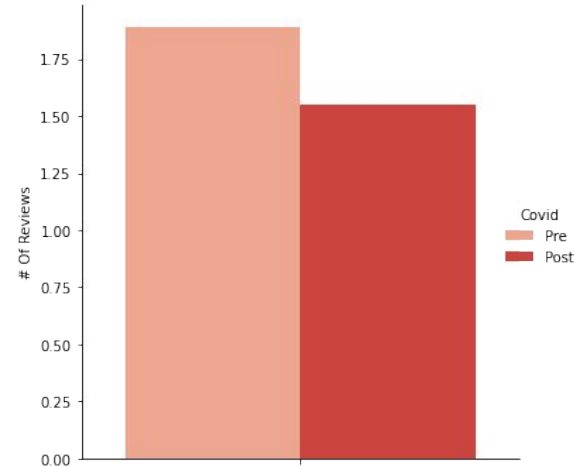
Analysis for Mean # of Minimum Nights and Mean # of Monthly Reviews

Aggregation of statistics for the 10 months pre Covid and the 10 months post Covid



Mean # of Minimum Nights

- There was a 95% increase observed between the two time periods, with the mean number of minimum nights nearly doubling from 7.9 to 15.4
- It seems that hosts prefer longer stay bookings, possibly due to increased cleaning costs between stays
- This could also be an attempt by hosts to generate more steady sources from income, as the pandemic has made consumer demand more unpredictable



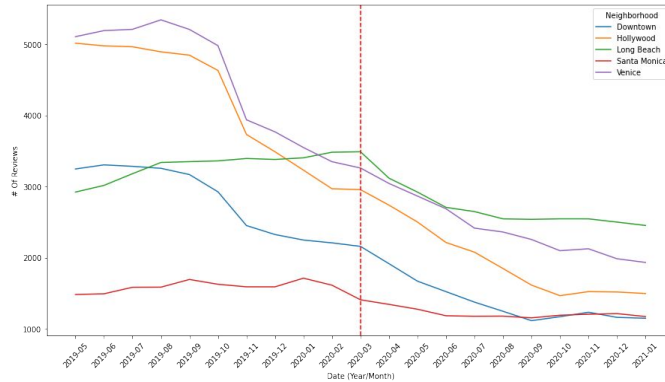
Mean # of Monthly Reviews

- There was an 18% decrease in monthly reviews between the two time periods
- This indicates a lower frequency of bookings on the Airbnb platform
- This is likely due to the increase in minimum nights set by hosts and shifted customer booking preference during the pandemic

Key Takeaway: We hypothesize that a significant increase in the minimum number of nights required per stay coupled with a decrease in average number of monthly reviews indicates hosts are trying to offset losses from a decrease in booking volume by increasing the required length of each booking. This may also indicate that hosts will prefer to have less changeover and traffic at their listings in a post Covid world.

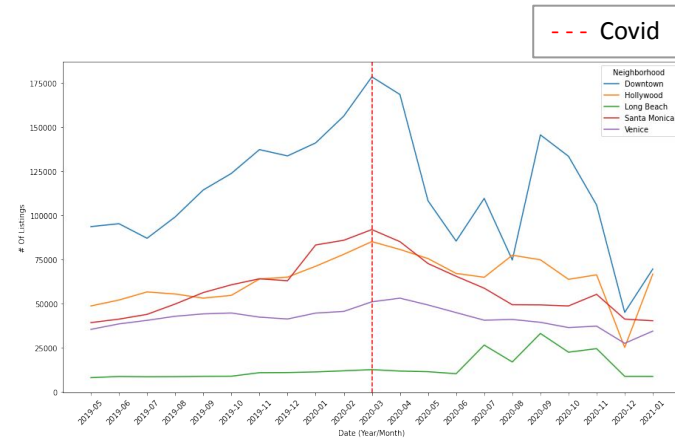
Analysis of Top Five Neighborhoods – Volume of Bookings and Host Listings Count

Comparing the 10 months pre Covid with the 10 months post Covid



Cumulative Reviews Per Month

- The total number of reviews per month has steadily decreased across all top five neighborhoods
- Downtown and Hollywood have been the hardest hit, while Santa Monica and Long Beach have seen less drastic declines



Volume of Host Listings Count

- There was an upward trend for the sum of host listing count for most of the top five neighborhoods prior to Covid
- After Covid, a sharp decline occurred for Downtown, Santa Monica, and Hollywood which currently face reductions by 61%, 55% and 22% respectively
- Long beach was the least affected, and it was the only neighbourhood that experienced higher demand in some Covid months relative to pre Covid levels

Key Takeaway: It appears that neighborhoods that are more condensed and further inland have been the hardest hit, while the neighborhoods along the coast have seen less drastic changes since Covid. This may indicate that Airbnb renters are looking for listings in neighborhoods outside of the city, where they have more options for outdoor activities.