

San Diego Airbnb

Group 13: Kevin Hau, Ahnaf Ahmed,
Jesi-Miranda Santos, Zhizuo Zhang & Zibo
Zhang



Motivation



Airbnb

Mainstream Platform
for Travelers



Data Analytics

Optimize Business
Decisions



Investment

Ideal Match for
Popular Demand

Key Metrics for Airbnbs

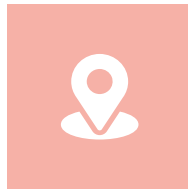
Price

Budget | Median | Luxury



Location

Coastal | Downtown | Suburbs



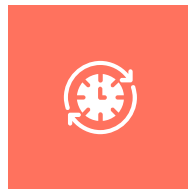
Room Type

Entire Home | Shared Room
Private Room | Hotel



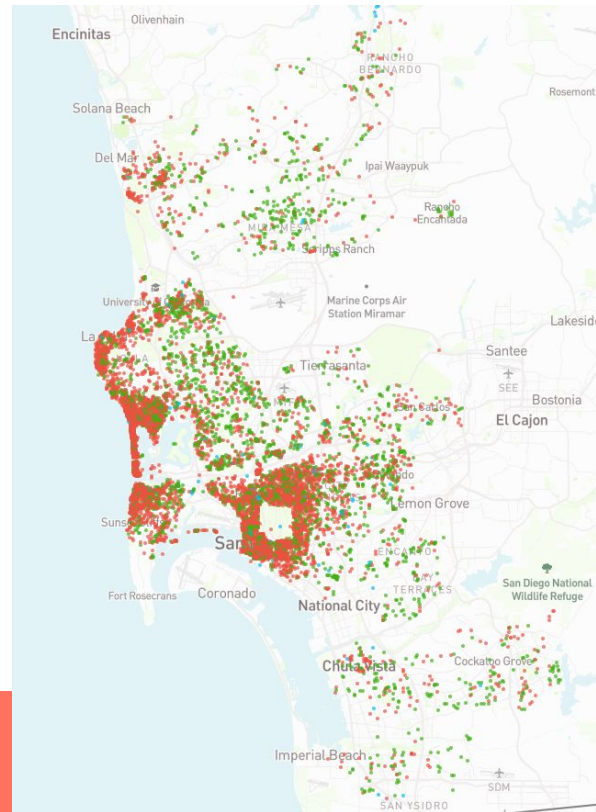
Availability

Annual | Minimum Nights



Inside Airbnb Dataset

Strengths	Limitations
<ol style="list-style-type: none"> 1. Monthly data from 2018 to present 2. Quantitative data for key metrics 3. Geographical locations 	<ol style="list-style-type: none"> 1. Annual data prior to 2017 2. Extreme outliers in data

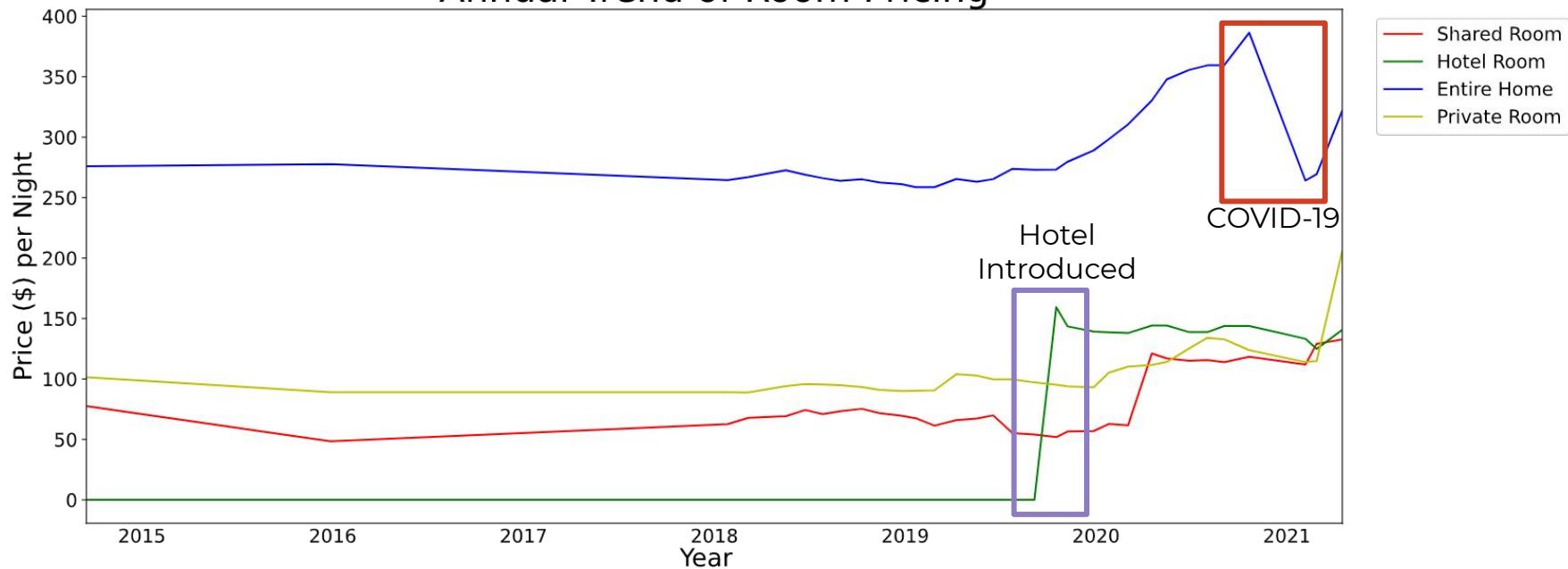


Data Extraction

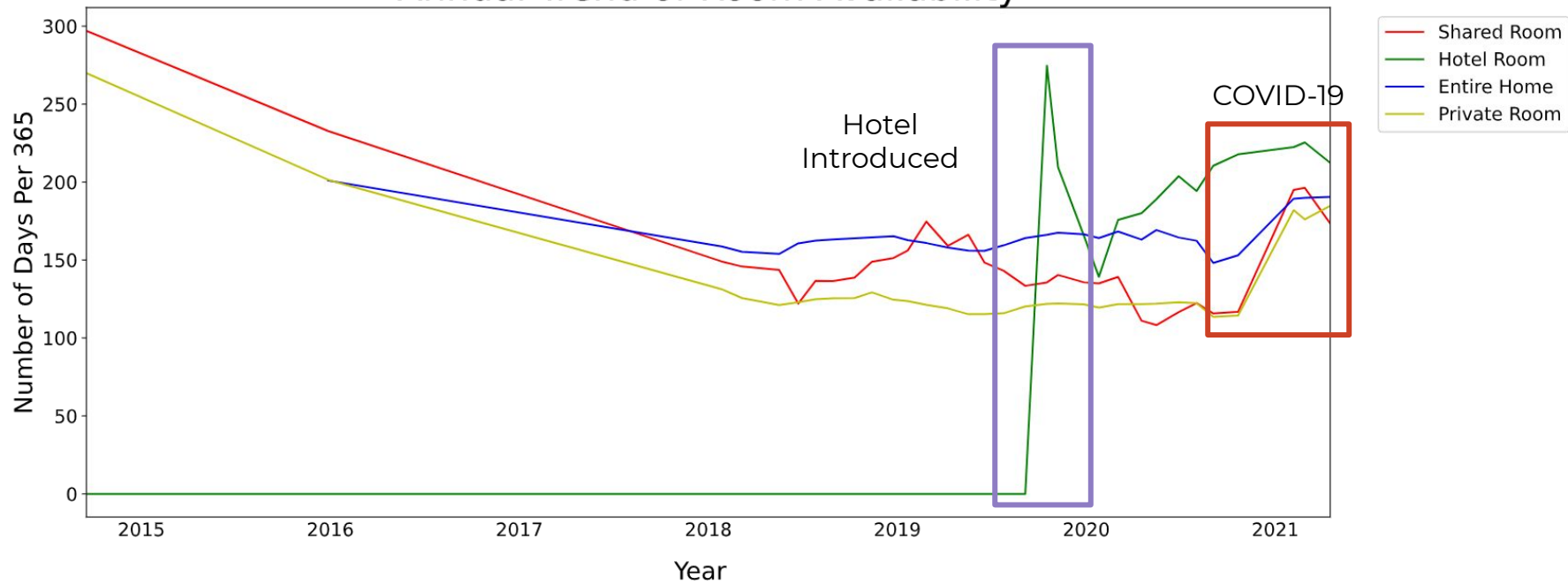
- Removed extraneous data - host names and IDs, URLs, etc
- Filtered Quantitative Data
- Split data by month & year

	NEIGHBOURHOOD	LATITUDE	LONGITUDE	ROOM_TYPE	PRICE	MINIMUM_NIGHTS	NUMBER_OF_REVIEWS	CALCULATED_HOST_LISTINGS_COUNT	AVAILABILITY_365
0	Mission Bay	32.78430	-117.25258	Entire home/apt	2050	3	0	3	207
1	Pacific Beach	32.80724	-117.25630	Entire home/apt	261	4	62	5	213
2	Roseville	32.74202	-117.21870	Private room	74	1	143	3	359
3	La Jolla	32.81301	-117.26856	Entire home/apt	110	3	244	2	99
4	Pacific Beach	32.80734	-117.24243	Entire home/apt	74	1	620	2	320
...
9243	Carmel Valley	32.91599	-117.22823	Private room	1639	1	0	114	363
9244	La Jolla	32.81478	-117.26819	Entire home/apt	330	3	0	163	329
9245	Loma Portal	32.74936	-117.24163	Entire home/apt	85	3	0	163	342
9246	Mission Bay	32.78300	-117.25392	Entire home/apt	112	3	0	163	353
9247	La Jolla	32.81315	-117.27116	Entire home/apt	545	3	0	163	252

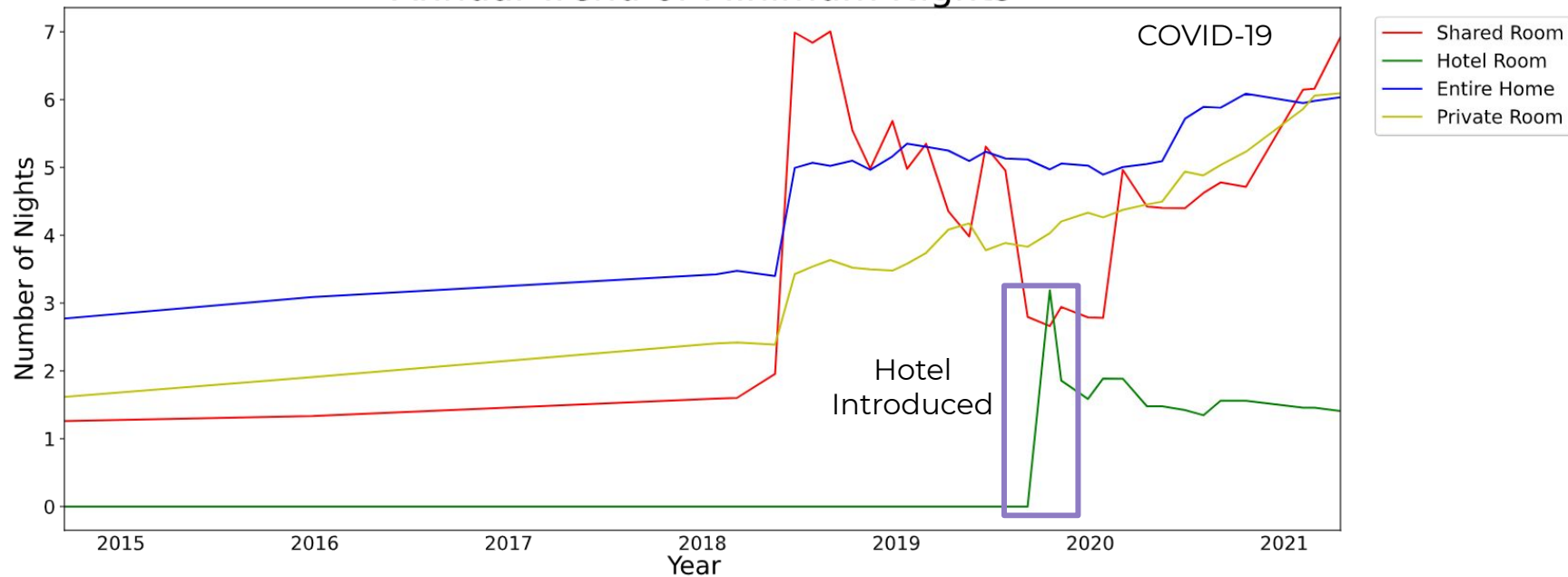
Annual Trend of Room Pricing



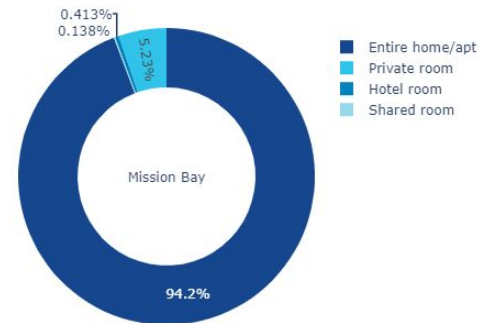
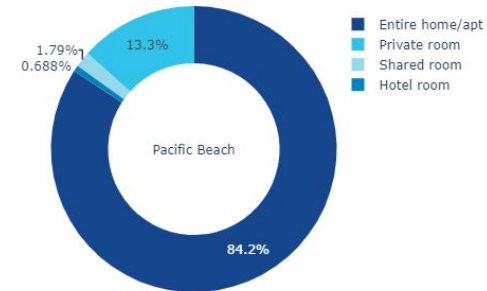
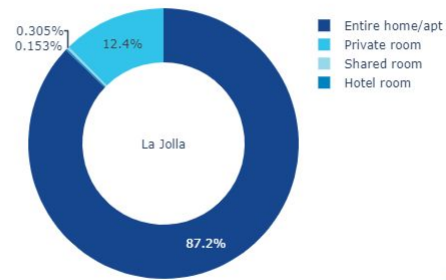
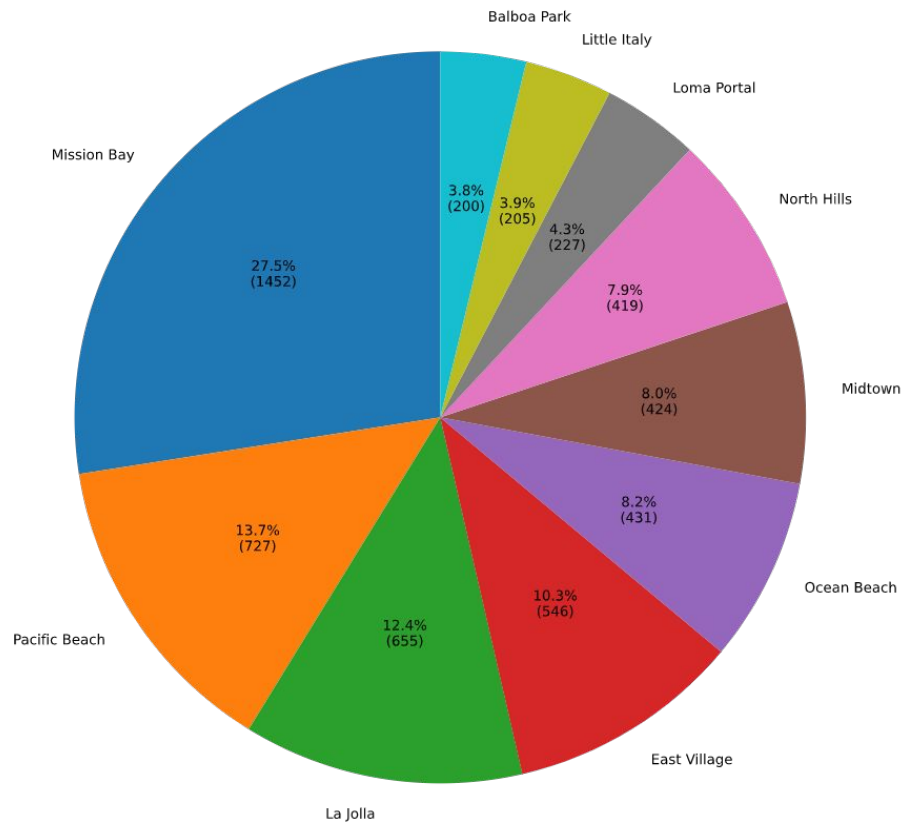
Annual Trend of Room Availability



Annual Trend of Minimum Nights

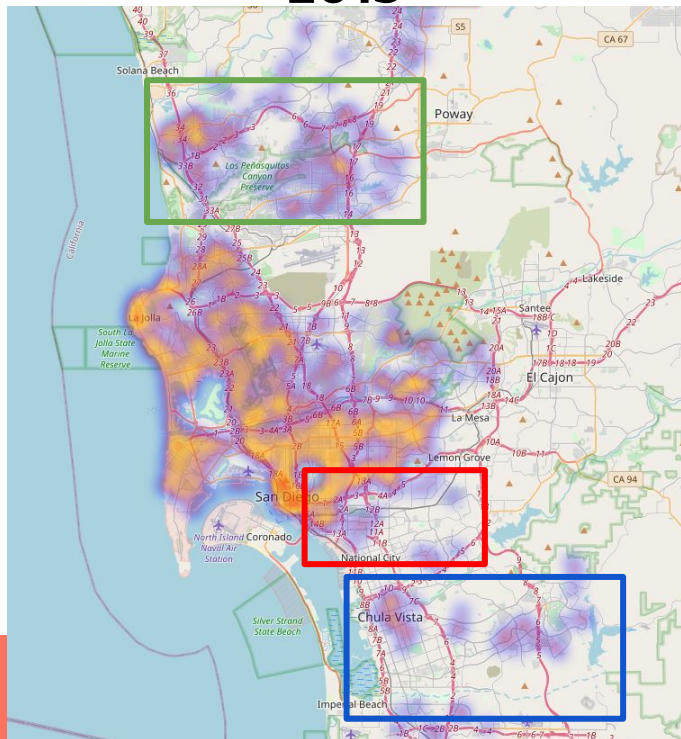


Neighborhood Occupancy in San Diego

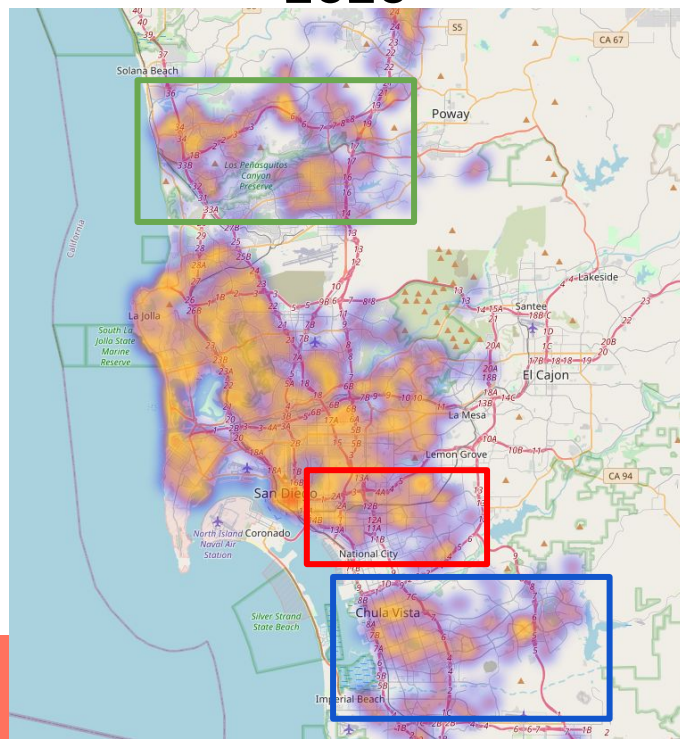


Density of Airbnb Listings San Diego

2015

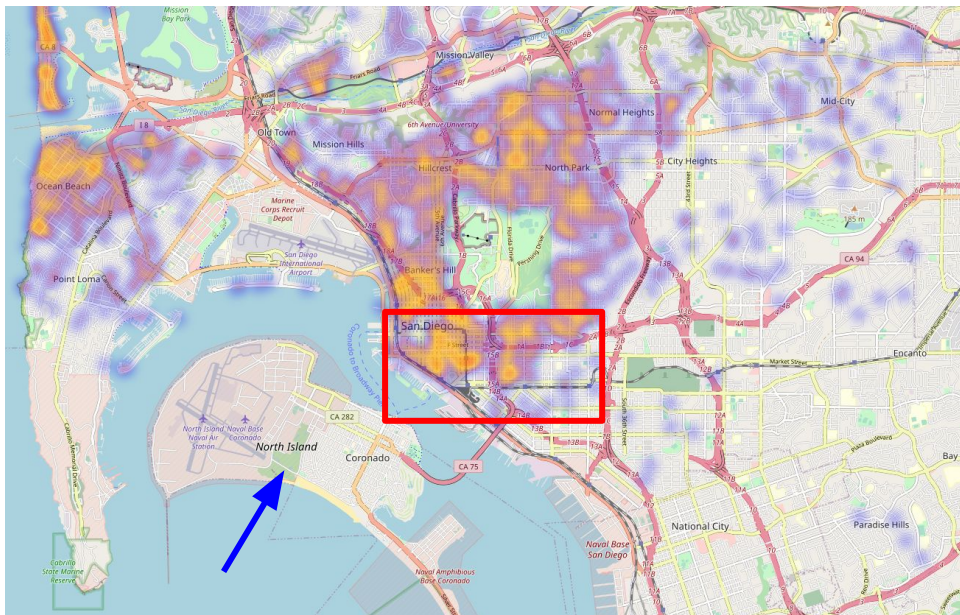


2020

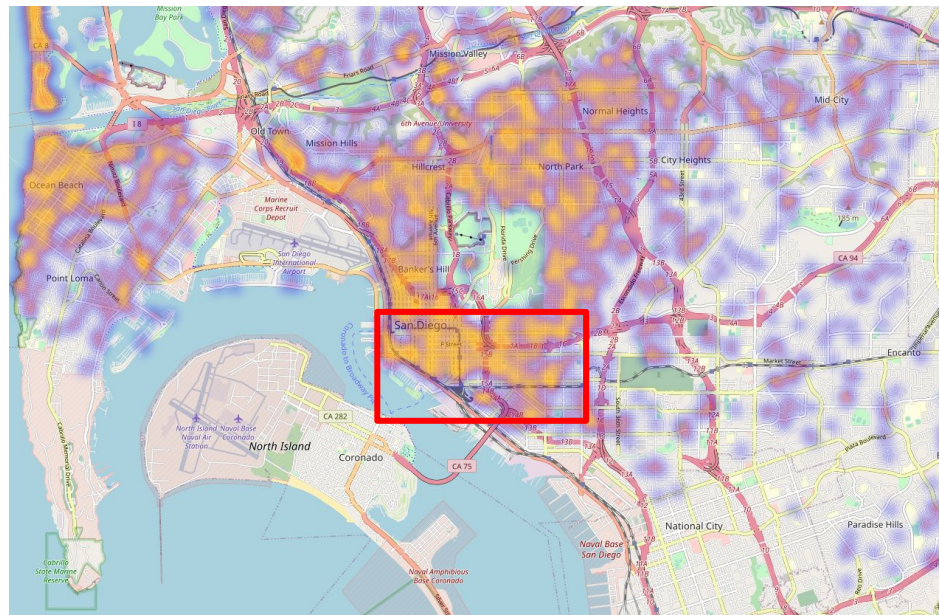


Density of Airbnb Listings Downtown

2015

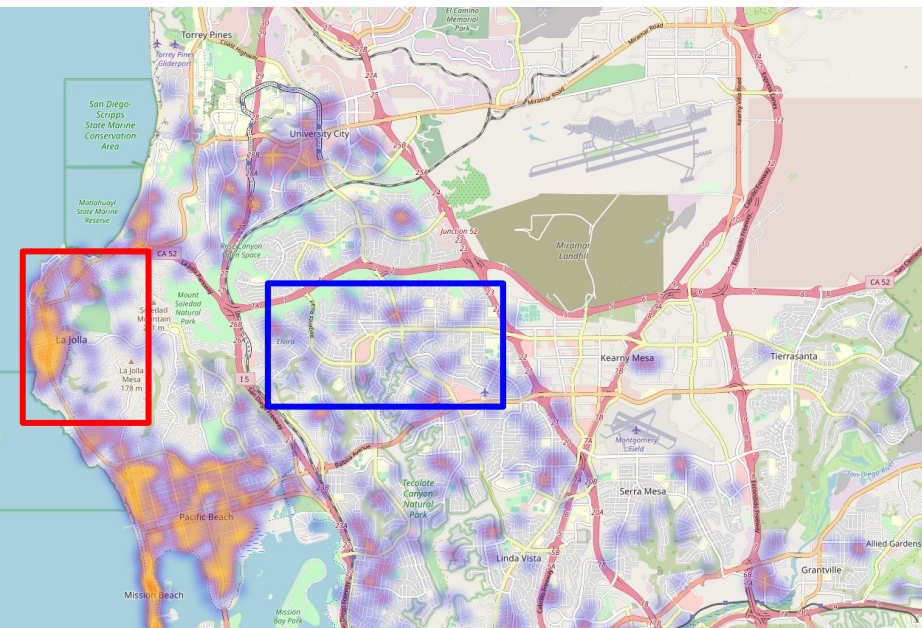


2020

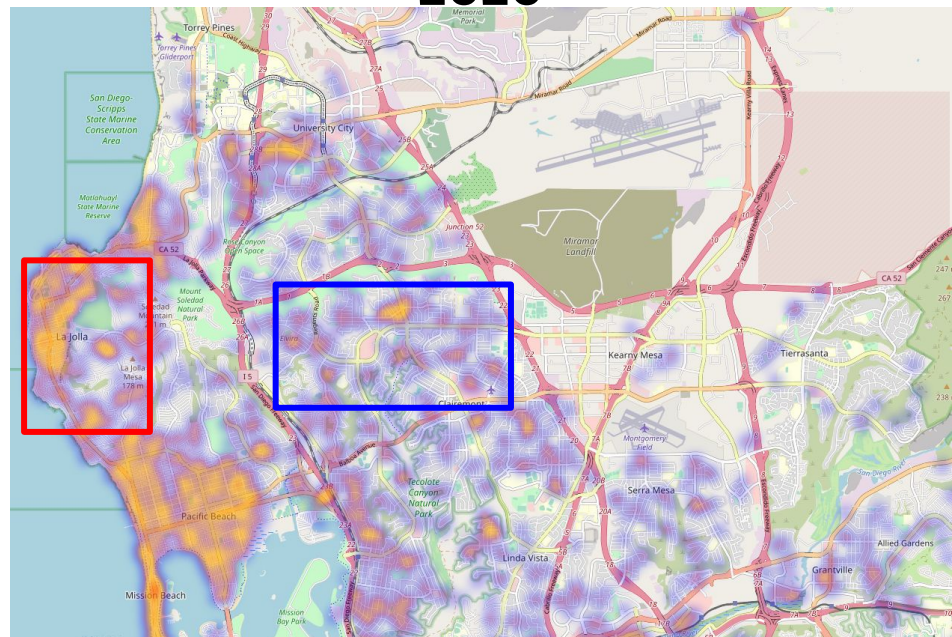


Density of Airbnb Listings Coastal

2015

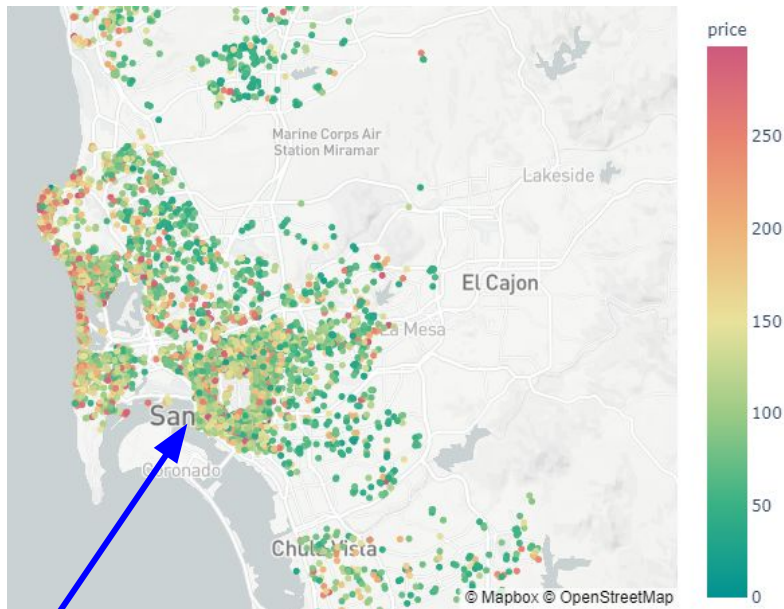


2020

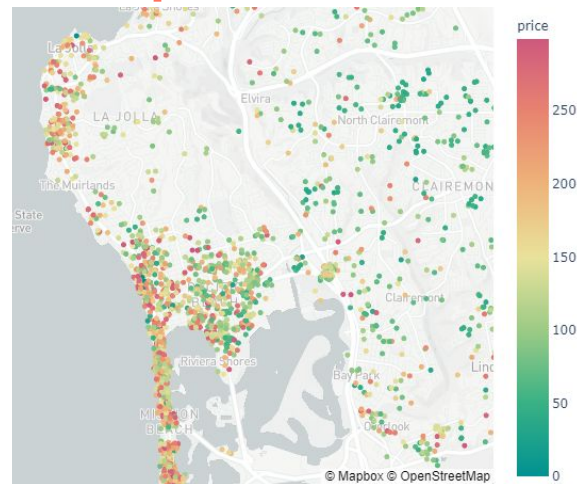


Price Map of Listings < \$300

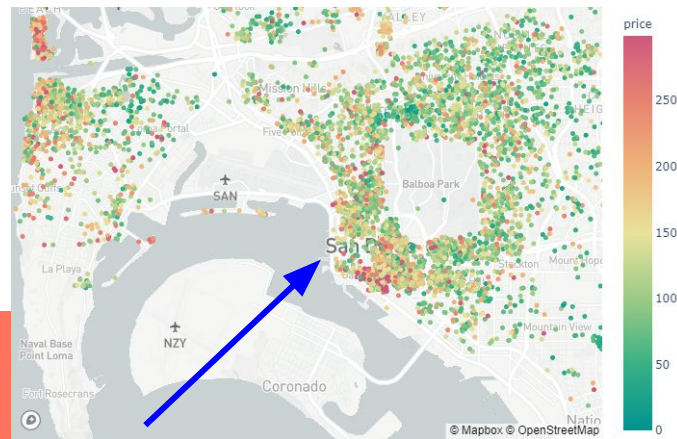
San Diego County



Coastal

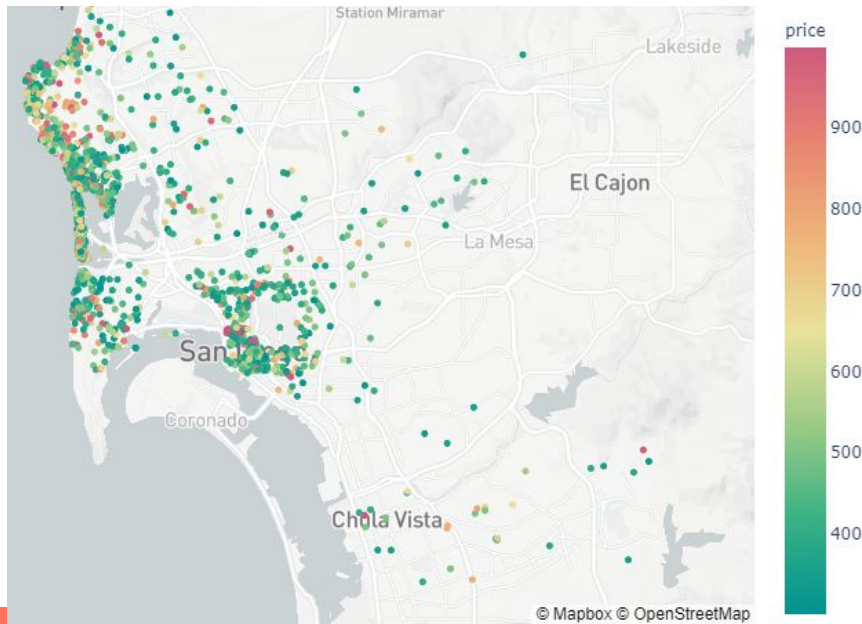


Downtown

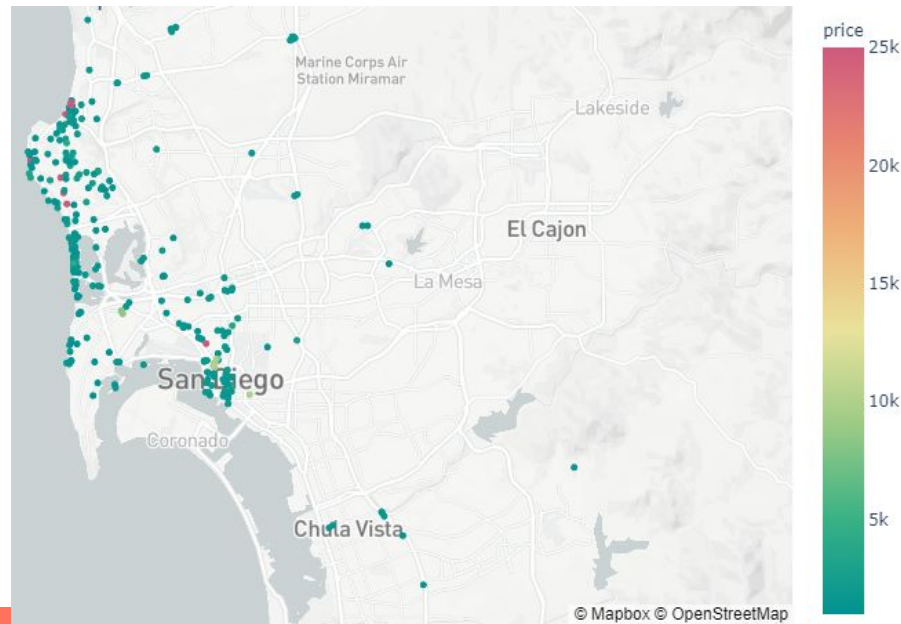


Price Map of Listings

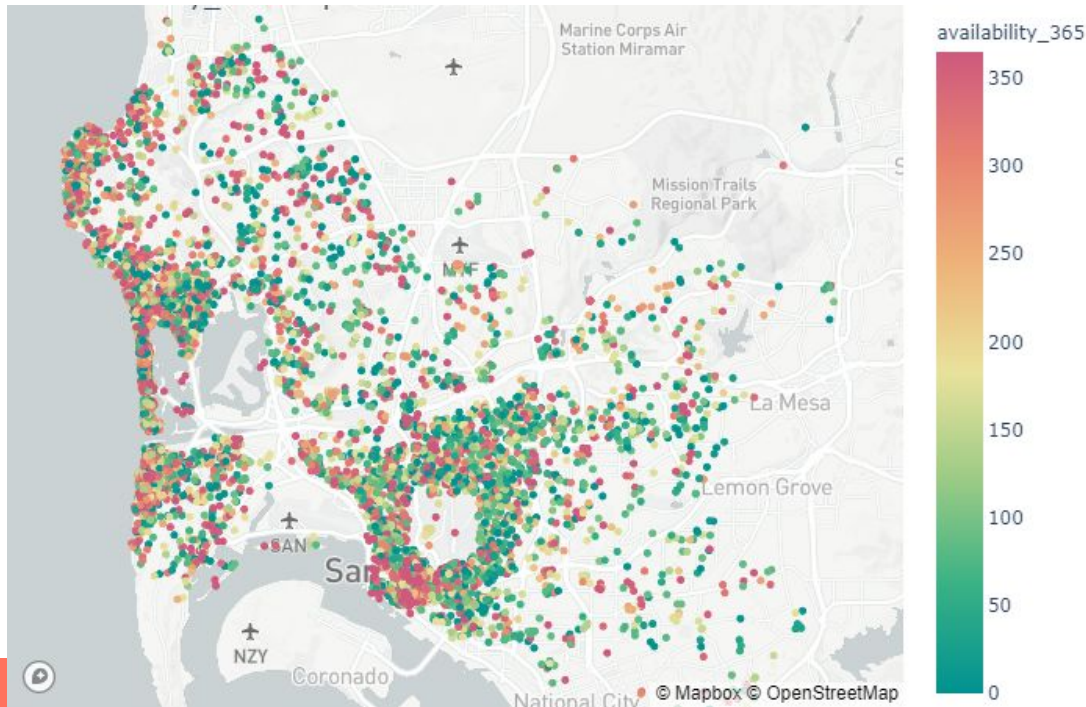
\$300 < Price < \$1000



Price > \$1000

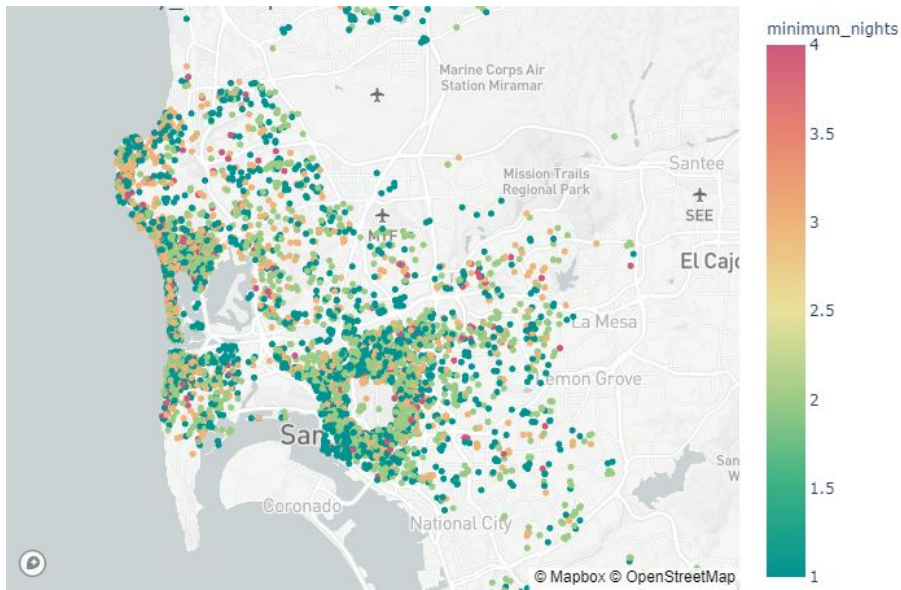


Availability Map of Listings

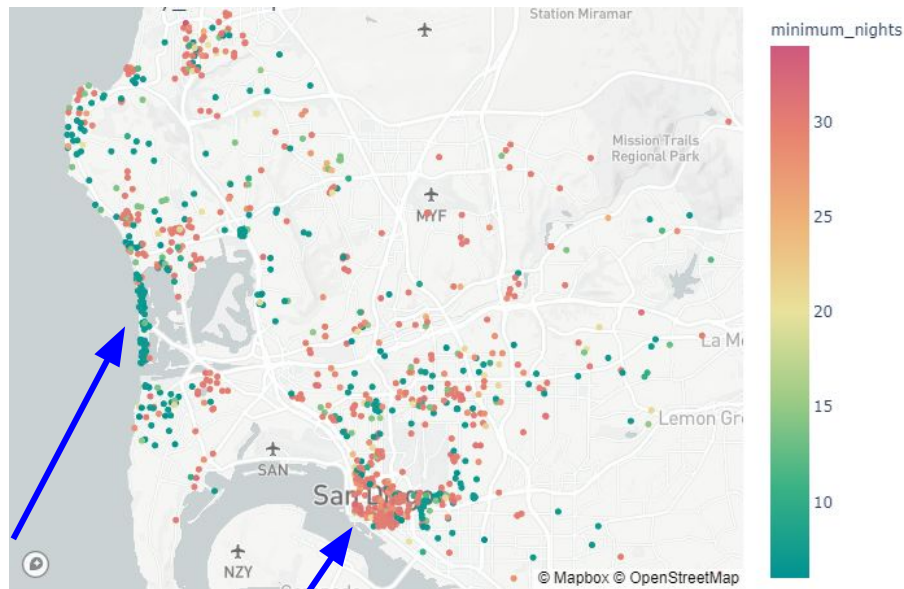


Minimum Nights Map

< 5 Days

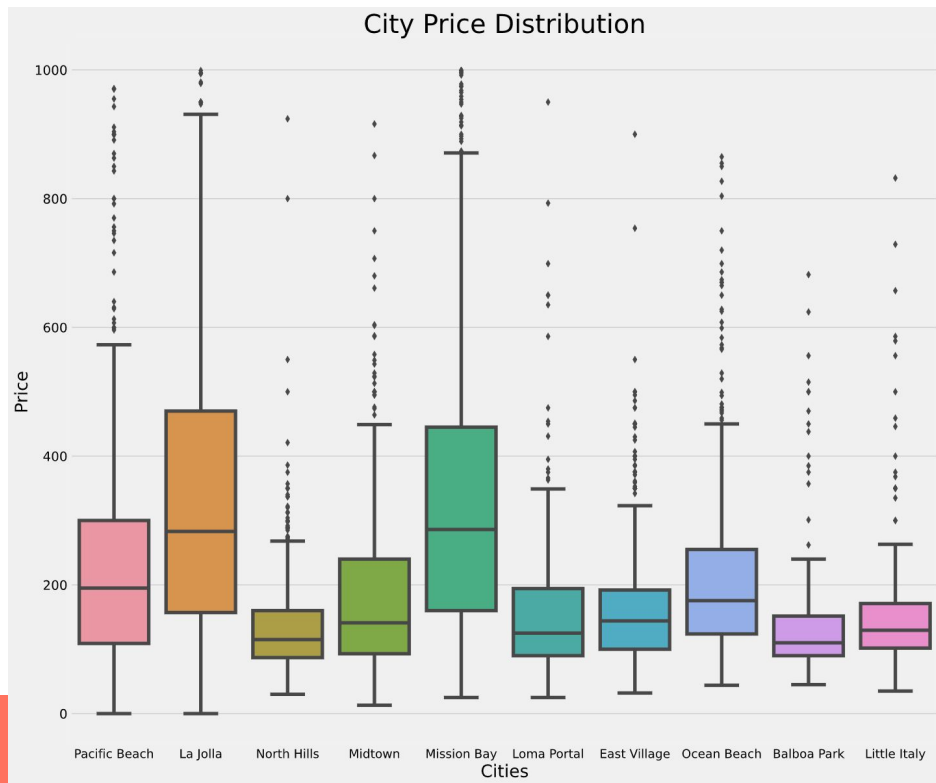


5 Days < Nights < 35 Days



Trends

	Price	Density	Growth	Invest
Coastal	\$\$\$	<i>H</i>	↗	👍
Down-town	\$\$	<i>H</i>	→	👎
Suburb	\$	<i>L</i>	↑	👍



Conclusions

- Growth in inland & suburban areas
- Consistent trends through the years
- Future Work:
 - Impact of amenities
 - Proximity to attractions / transportation
 - Cost-benefit analysis of investment



THANK YOU!

QUESTIONS?