OpenTable Forcasting

By Juliet Day

About Me

Juliet Day

- George Washington University: Bachelors in Criminal Justice (2019)
- Institute of Culinary Education: Culinary and Business Management (2020)
- Owner of Baked By Juliet (2020-2022)

Agenda

1) Stakeholder
2) Business Problem
3) Data Overview
4) Modeling
5) Recommendations
6) Future Steps

STAKEHOLDER

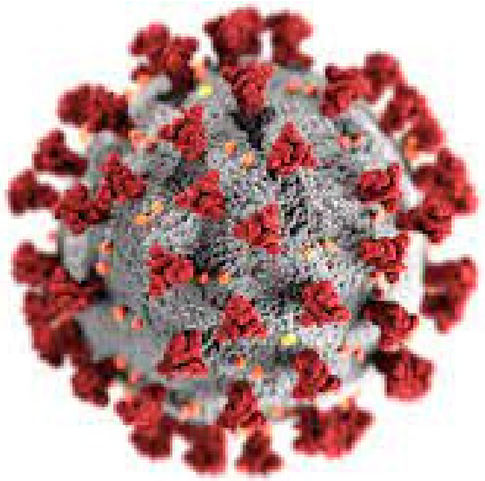
Stakeholder

NATIONAL RESTAURANT ASSOCIATION®

Mission:
To serve the food and restaurant industry and impact its success by: strengthening operations, mitigate risk, develop talent, advance and protect business vitality through national, state and local advocacy, drive knowledge and collaboration

BUSINESS PROBLEM

Business Problem



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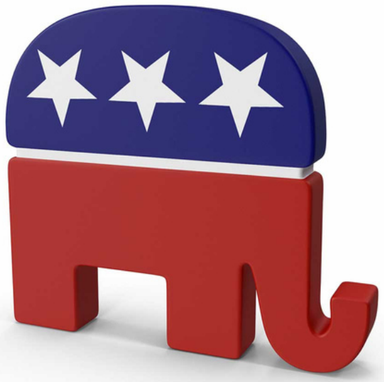

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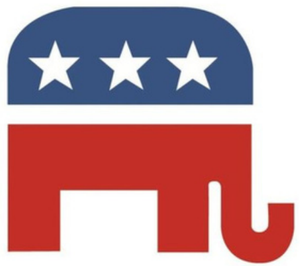
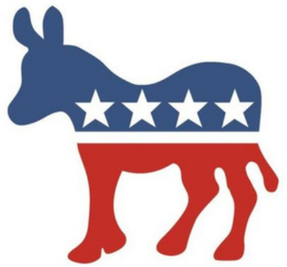
Cities Analyzed



Republican	Democratic
Miami, FL	New Orleans, LA
Dallas, TX	Los Angeles, CA
Phoenix, AZ	New York City, NY



Business Problem

↑ECONOMY

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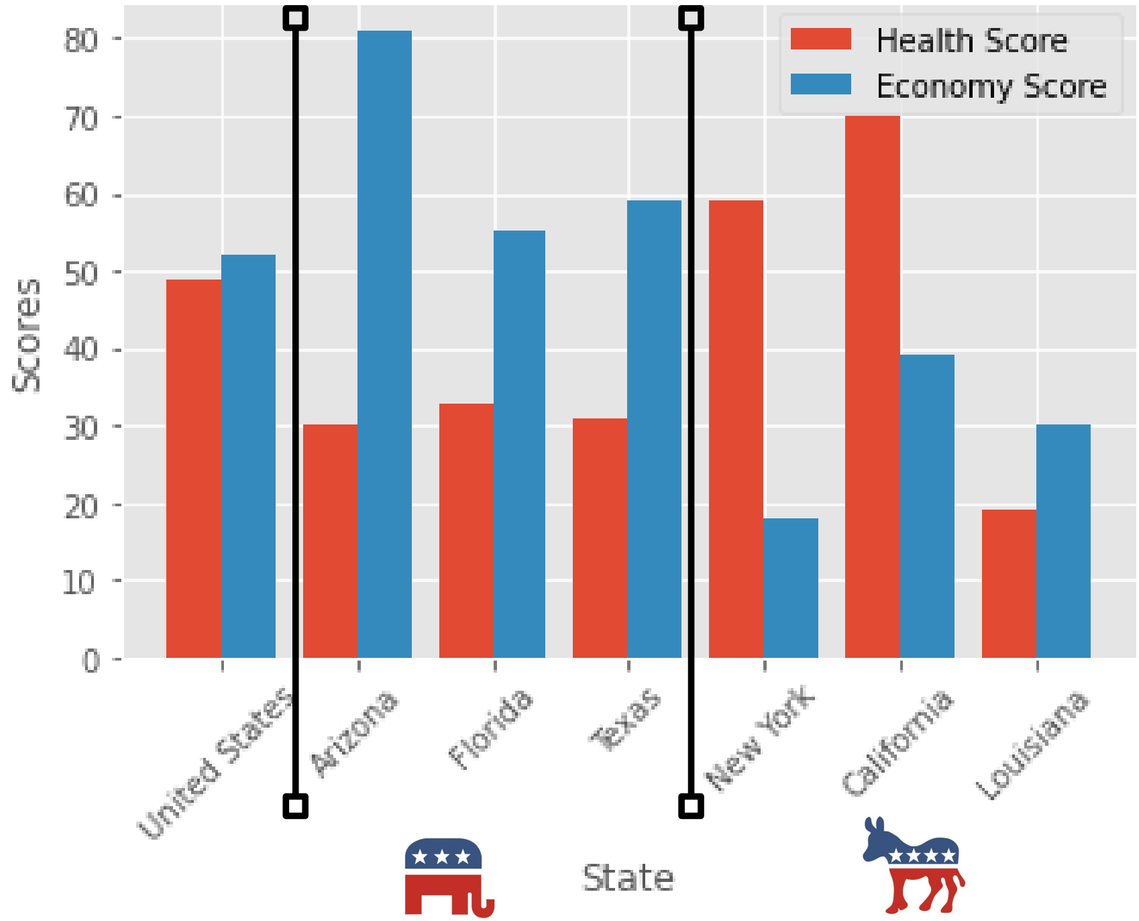
↓HEALTH

Health Vs. Economy Score Per State (March 2020-December 2021)



Source: Politico

DATA OVERVIEW

Data

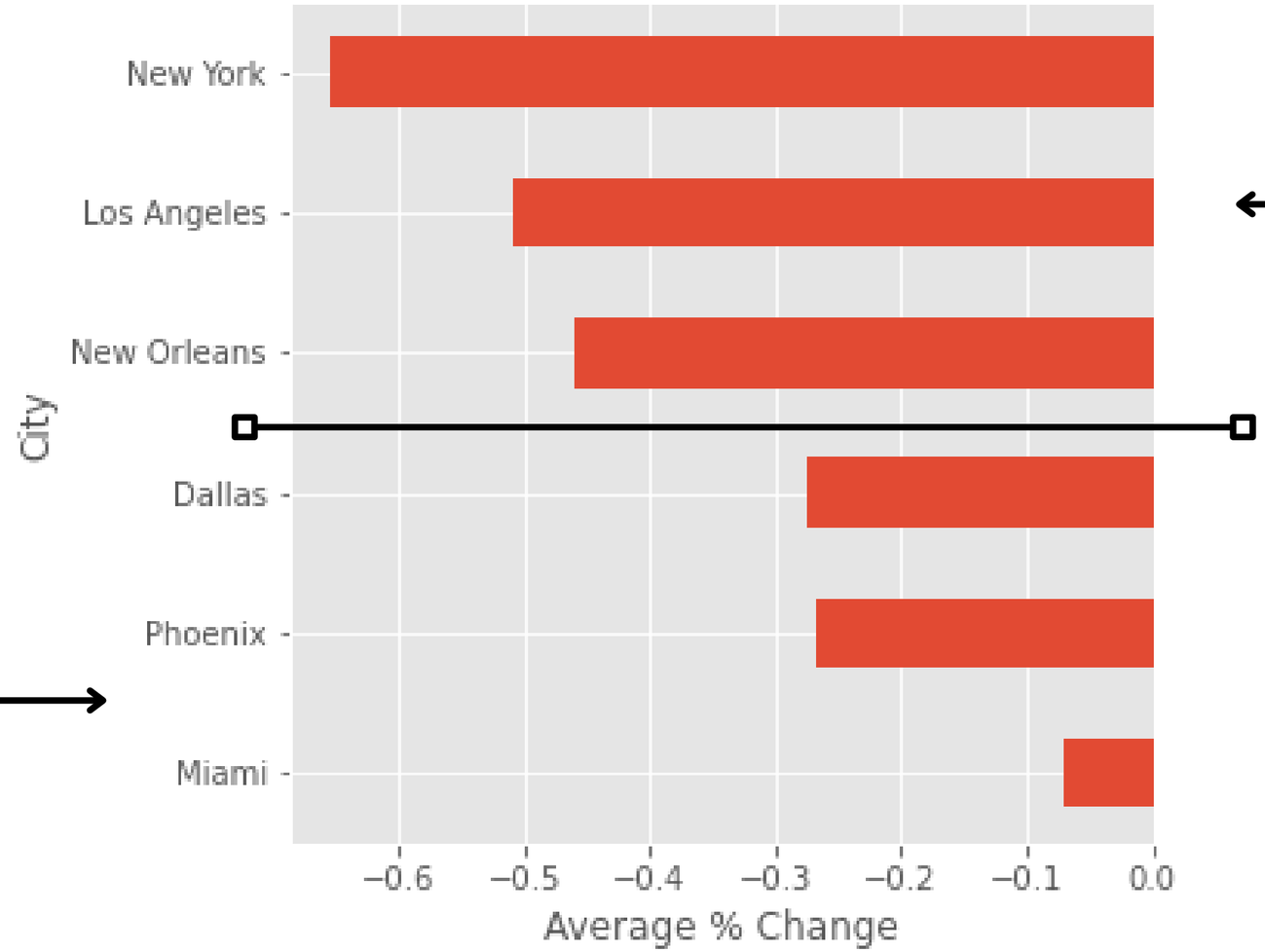
TUESDAY OF WEEK 11 IN 2019 → TUESDAY OF WEEK 11 IN 2020 → TUESDAY OF WEEK 11 IN 2021

% CHANGE

2019 DATA AS BASELINE

50+ RESTAURANTS PER CITY

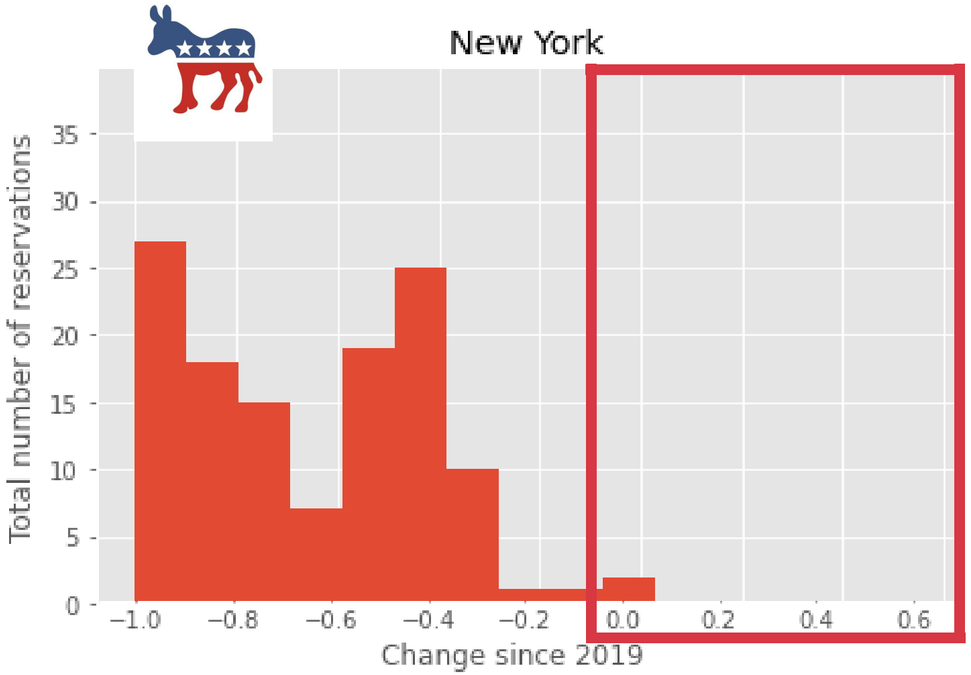
Average % Change

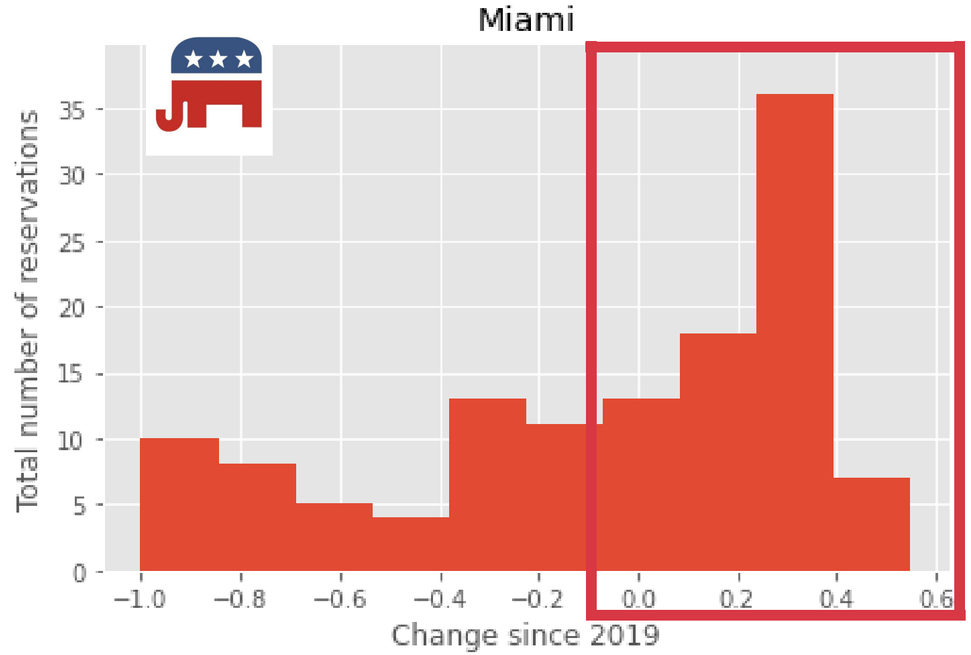


(from 2020-2022, compared to 2019)

Total Number of Reservations

(from 2020-2022, compared to 2019)





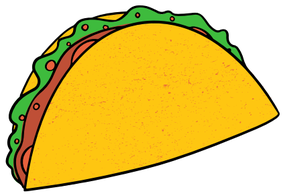
Data Limitations

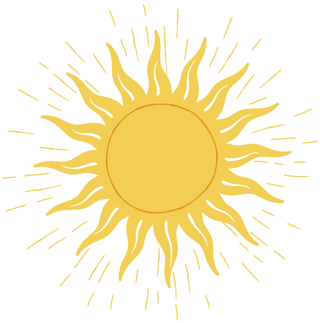
Lack of data (about 2.5 years)

Not the same restaurants for each city

Type of cuisine

Weather in the city





MODELING

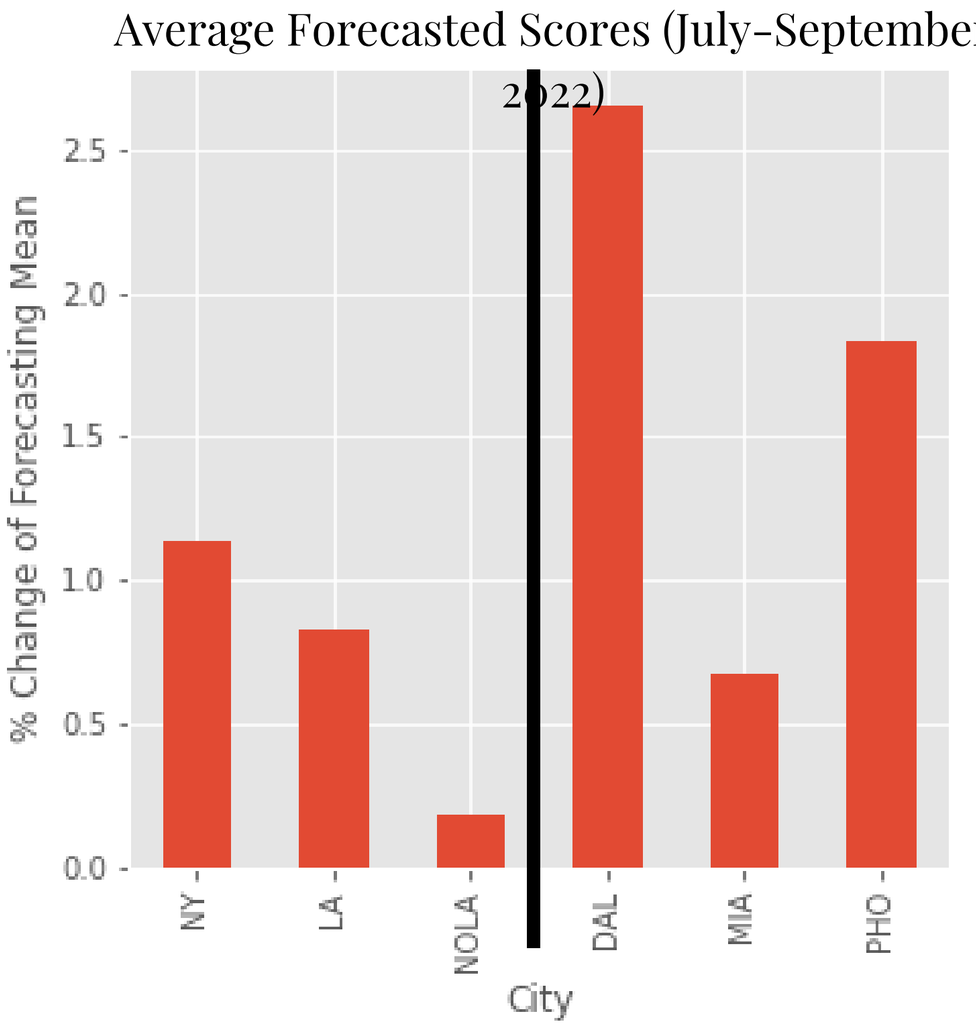
Modeling

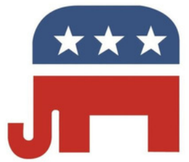
TIME SERIES

ARIMA AND SARIMA MODELS

PAST --> FORECAST FUTURE

Modeling





Predictions:

- MAE: 5.65%-13.06%
- All predictions close to the baseline of 0%

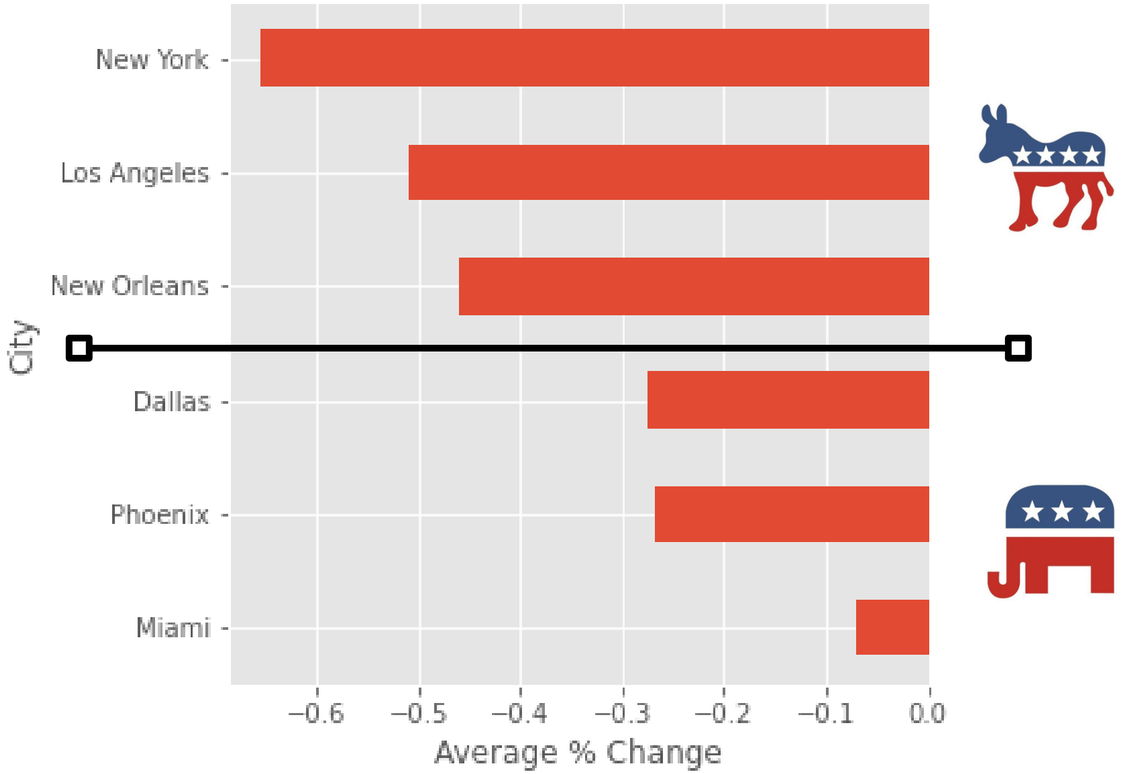
RECOMMENDATIONS

Recommendations

National Restaurant Association ≠ Covid Policymakers

Democratic cities need more help

Resources: financial, marketing, consumer trends, tracking inventory and cost of goods



(from 2020-2022, compared to 2019)

FUTURE STEPS

Future Steps

-START AFTER THE MARCH 2020 SHUTDOWN

- POINT INTERVENTION FOR THE BIG DIPS

- SAME RESTAURANTS FROM 2019- 2022

- SAME TYPES OF CUISINE

- MORE DATA: DATA FROM BEFORE 2019 OR COMBINE DEMOCRATIC CITIES AND REPUBLICAN CITIES

Thank You!

Questions?

Contact

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