



# Industry Intel with Savills

## **The Standard Deviants**

Haley Bohn

Grace Garver

Mia Parker

Parker Gauldin



# Meet The Standard Deviants



## —Haley Bohn

Major(s): Data Science & Statistics

Minor(s): ARTH, Computer Science, & Applied Math

## —Grace Garver

Major(s): Computer Science

Minor(s): Data Science

## —Mia Parker

Major(s): Data Science

Minor(s): Computer Science

## —Parker Gauldin

Major(s): Data Science & PPLE


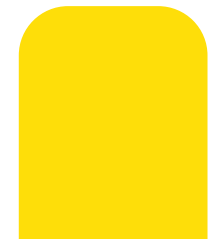
Minor(s): Computer Science





Question:

**How can we aid **Savills** in  
finding the best office space  
for a client by industry?**



# Our Variables

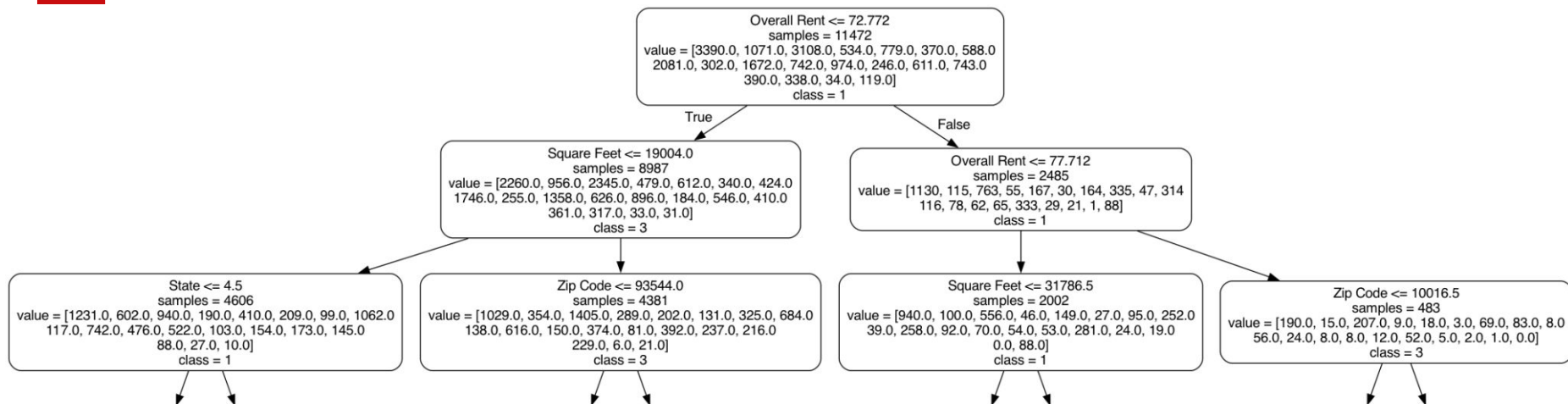
## Variables Used

- 'Internal\_industry': the industry type that signed the lease
- 'Market': a region that contains several industries
- 'leasedSF': the square footage of the office space leased
- 'CBD\_suburban': a classification of location, either CBD (central business district) or suburban
- 'Zip': zip code of the office space
- 'State': state in which the space is located
- 'Overall\_rent': average rent in a market for the quarter

## Changes Made

- We removed all observations with NA 'internal\_industry'
- Replaced variables in 'internal\_industry', state, 'cbd\_suburban' with number corresponding to variable

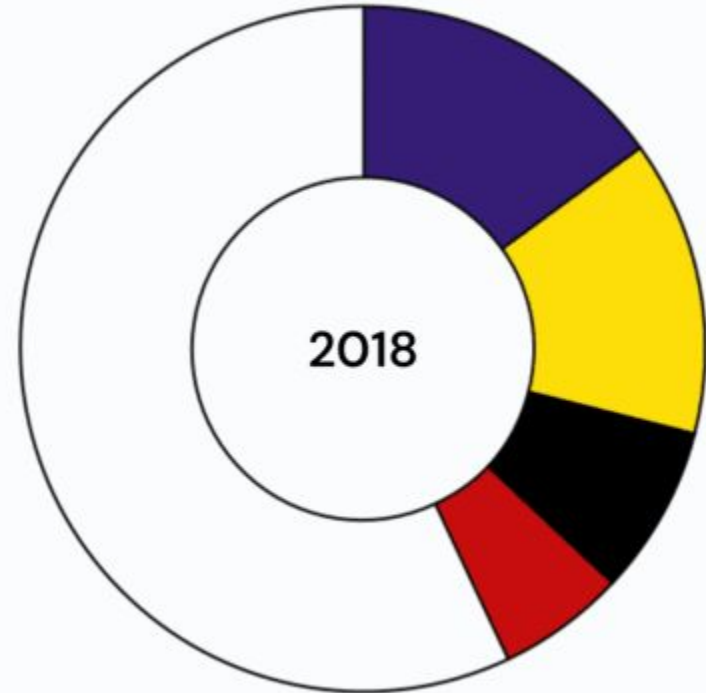
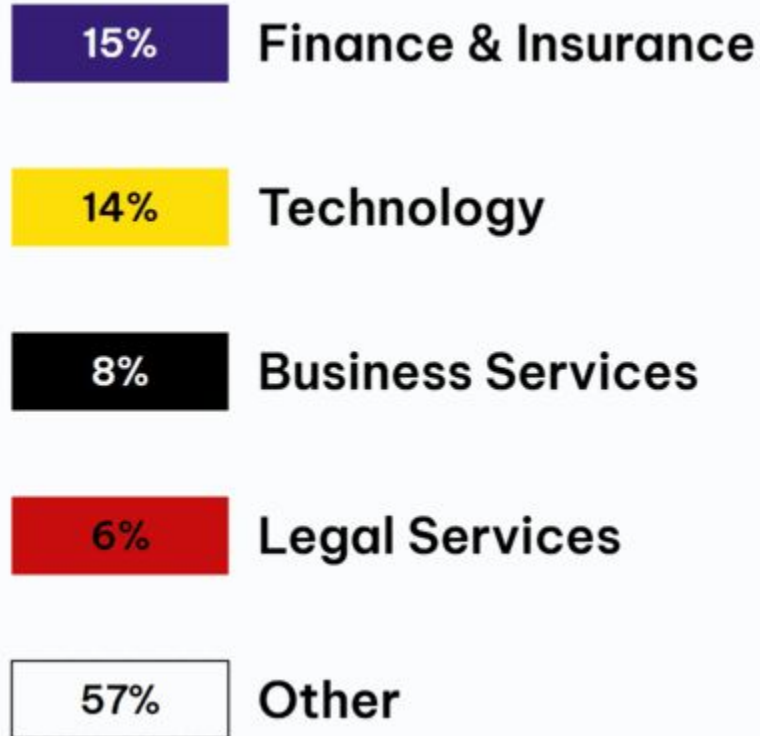
# Example Tree Across All Industries



Accuracy: 0.227

Feature	Importance
Leased SF	0.499
Zip Code	0.247

# Dominating Industries: 2018 - 2024



# Top 2 Influencers for Top 4 Industries

## Legal Services

Accuracy: 0.888

Feature	Importance
Leased SF	0.569
Zip Code	0.200

## Technology

Accuracy: 0.821

Feature	Importance
Leased SF	0.517
Zip Code	0.253

## Finance & Insurance

Accuracy: 0.798

Feature	Importance
Leased SF	0.513
Zip Code	0.213

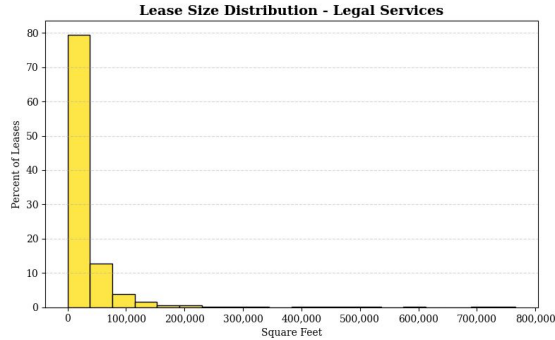
## Business & Services

Accuracy: 0.859

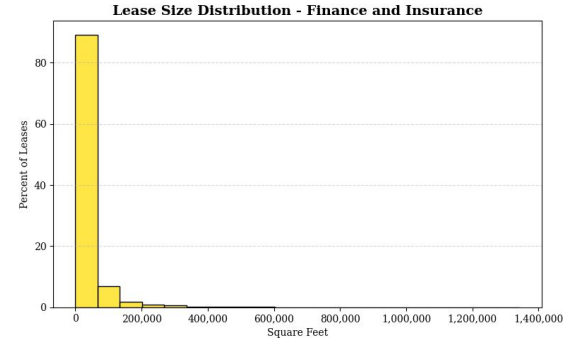
Feature	Importance
Leased SF	0.537
Zip Code	0.253

# Square Footage

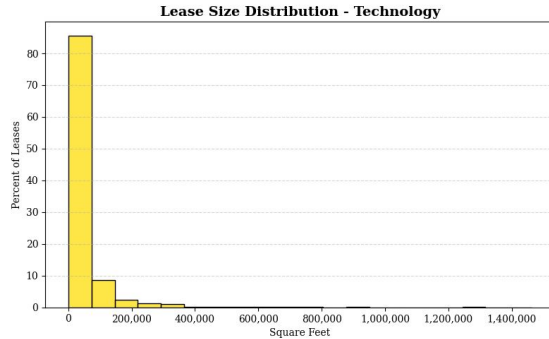
## Legal Services



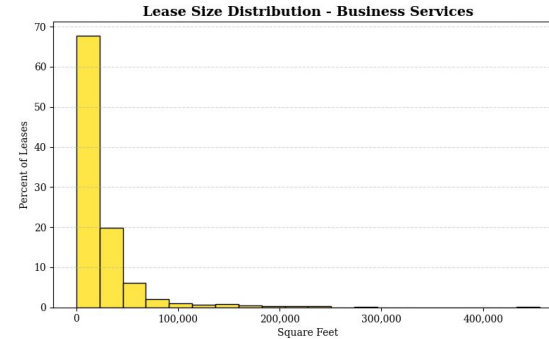
## Finance & Insurance



## Technology

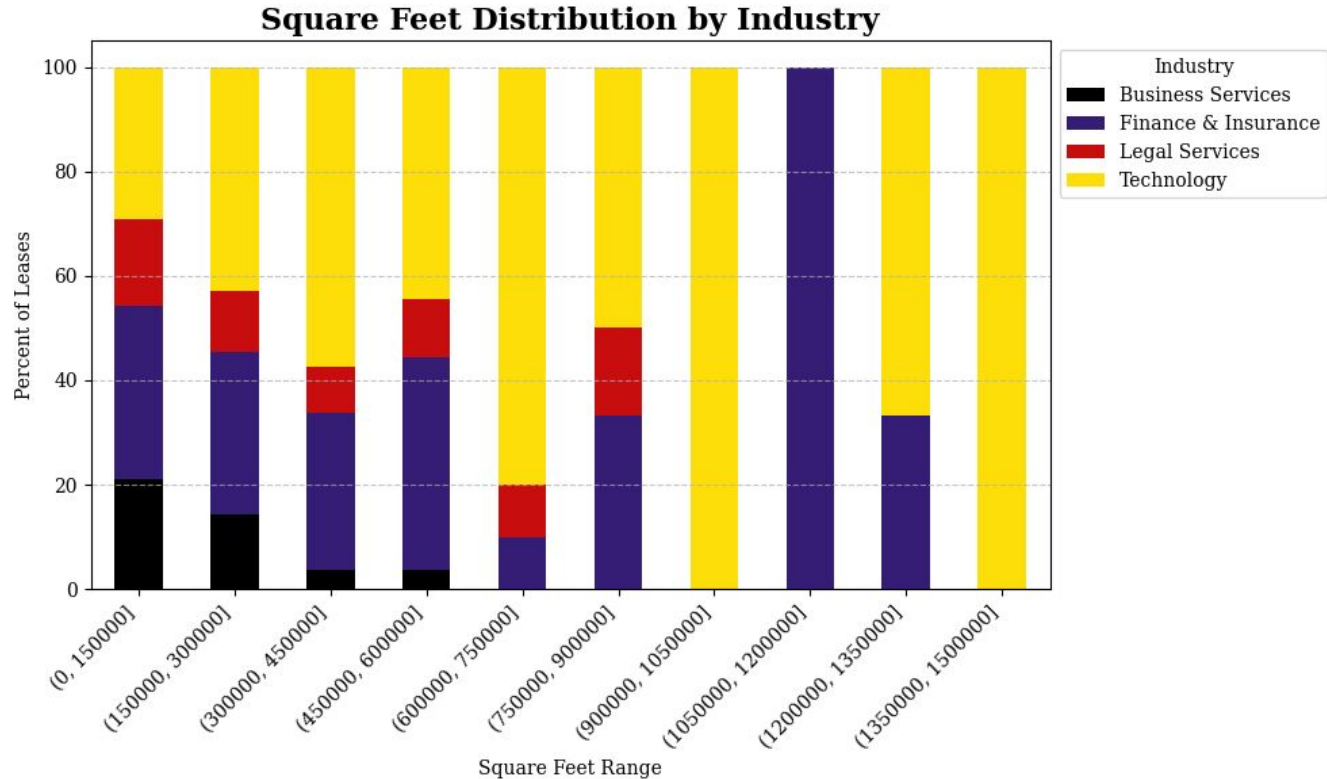


## Business Services





# Square Footage



# ZIP Codes & Counties



## Legal Services

100 – New York City  
200 – Washington DC  
606 – Chicago  
770 – Houston, TX  
900 – Los Angeles



## Finance & Insurance

100 – New York City  
101 – New York City  
606 – Chicago  
303 – Atlanta  
770 – Houston, TX



## Technology

100 – New York City  
941 – San Francisco  
606 – Chicago  
201 – New Jersey  
787 – Austin, TX



## Business Services

100 – New York City  
201 – New Jersey  
200 – Washington DC  
606 – Chicago  
222 – North Virginia

# Industry Distribution







# Analyzing Results

We chose to examine the top four most prominent industries in our dataset: Legal, Business, Technology, and Finance.

Our analysis reveals that square footage and zip code location are the most influential factors, with importance values of approximately 0.55 and 0.25, respectively.

Our square footage analysis showed that Business Services are likely to be placed in smaller locations. When matching for larger spaces, Savills should focus on Finance & Insurance and Technology. Legal Services prefer placements in small to medium locations.

While all four industries have a strong preference for NYC, it's possible that the city is becoming oversaturated with these sectors.



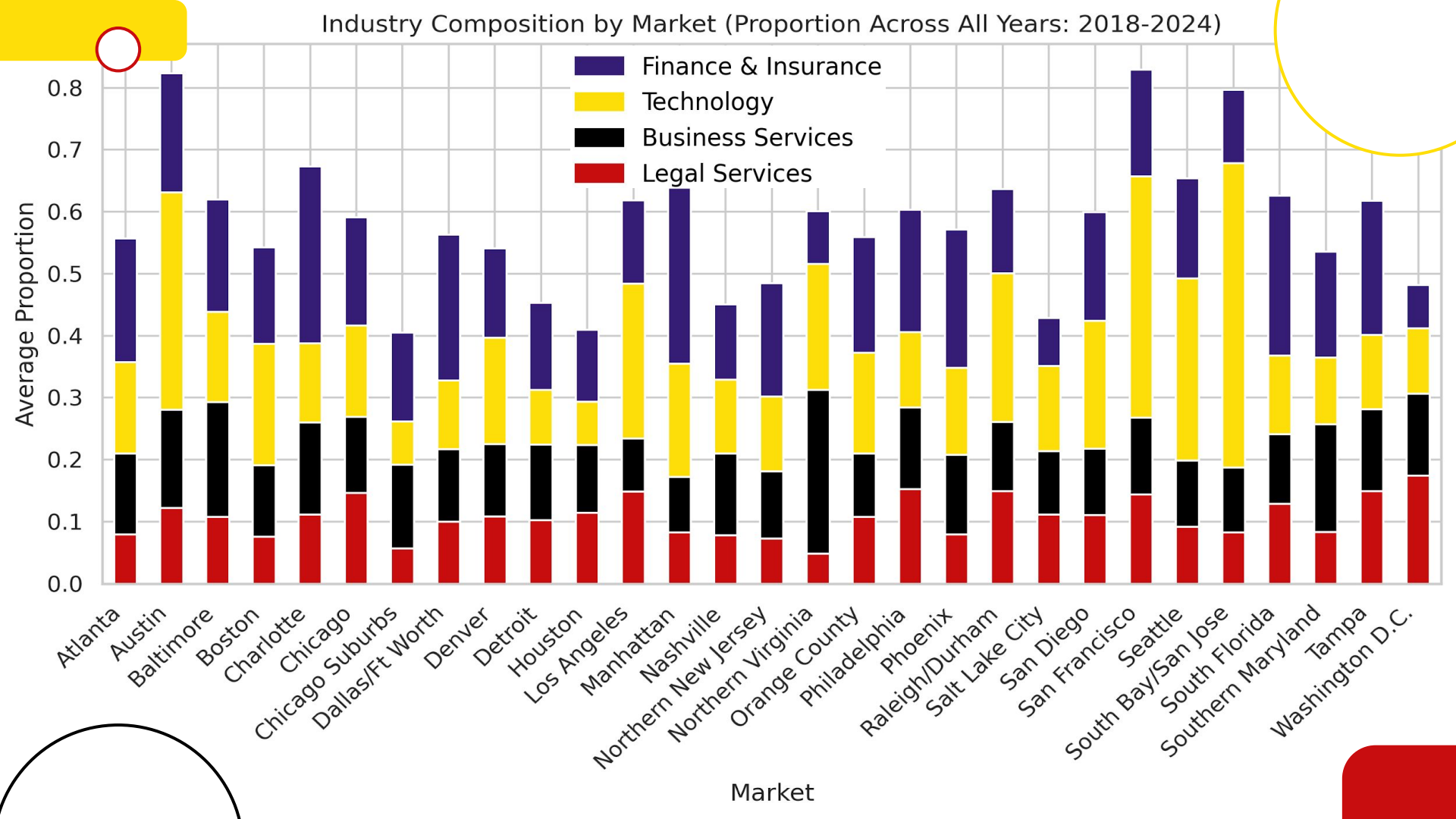


Question:

**How can we visualize the  
impact of COVID-19 on the  
top four industries?**



Industry Composition by Market (Proportion Across All Years: 2018-2024)



# COVID Recovery

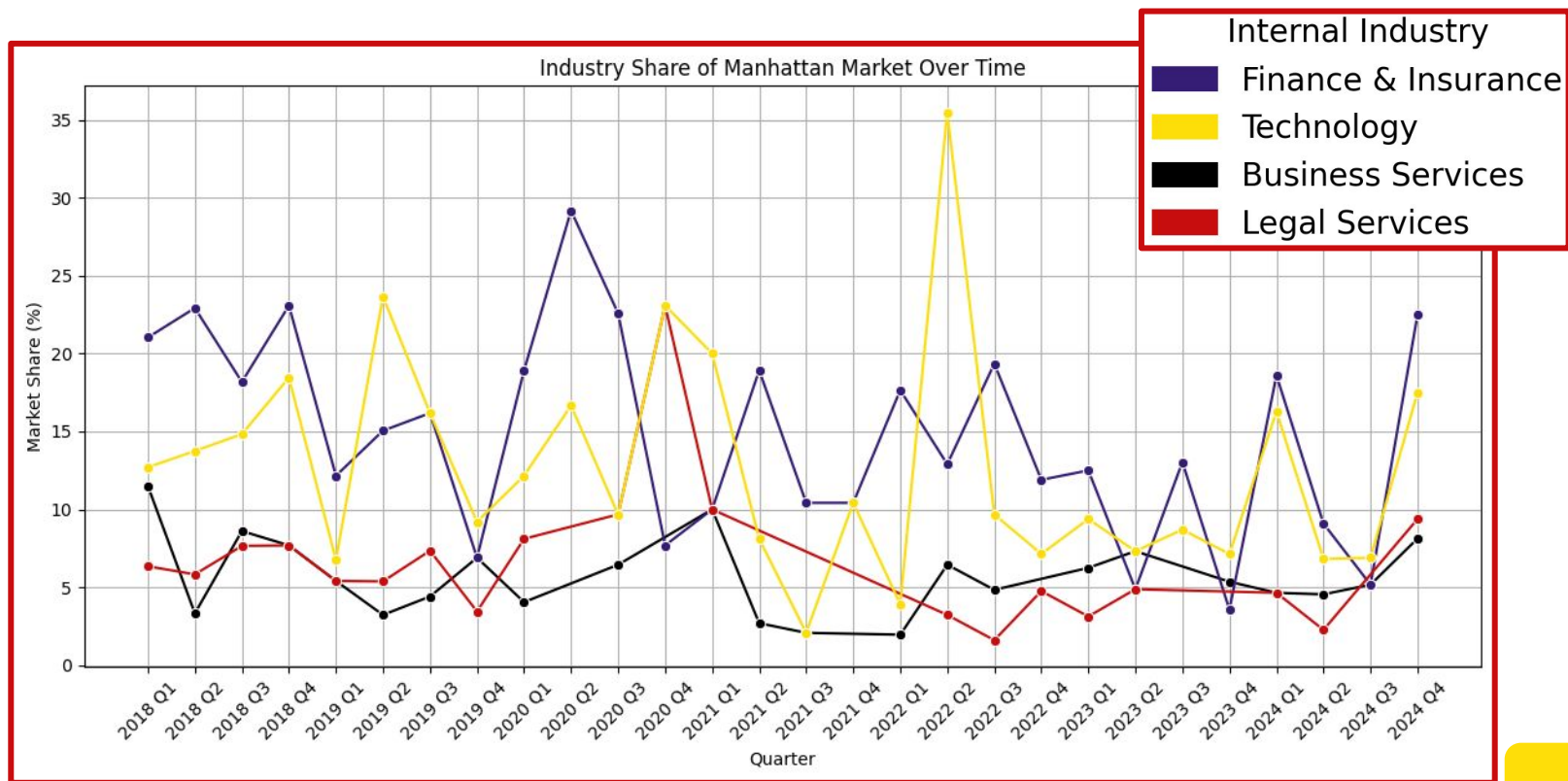
2018



2024



# Industry Shares of Manhattan








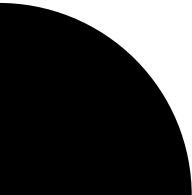
# Analysis and Observations



The **Finance and Insurance** sector consistently led the Manhattan market, starting at **21.03%** in Q1 2018 and growing to **22.5%** by Q4 2024. Despite some fluctuations, it maintained the largest market share.

**Business Services** remained under **10%** of the market for most of the period, reaching a low of **1.96%**. This could be attributed to long term effects of COVID, as many businesses were forced to shut down.

In **2020**, especially in **Q2**, there were irregular patterns, with **Financial Services** spiking to **29.17%**, likely due to other industries scaling down or temporarily shutting down, while financial services quickly adapted to new demands, such as remote work and virtual services. This period also saw a noticeable decline in **Business** and **Legal Services**.





# Thanks

Does anyone have any questions?