Table of Contents

- **The Initial Question**
- **Exploratory Data Analysis:**
  - **Heatmaps**
  - **A new Question**
  - **Time Series Graph**
- **The Broader Questions**
- **Prediction Model**

Are tech companies <u>relocating</u>?

Have tech companies attempted to **move away** from busier central areas of a market **after covid** and the **advent of remote working**?
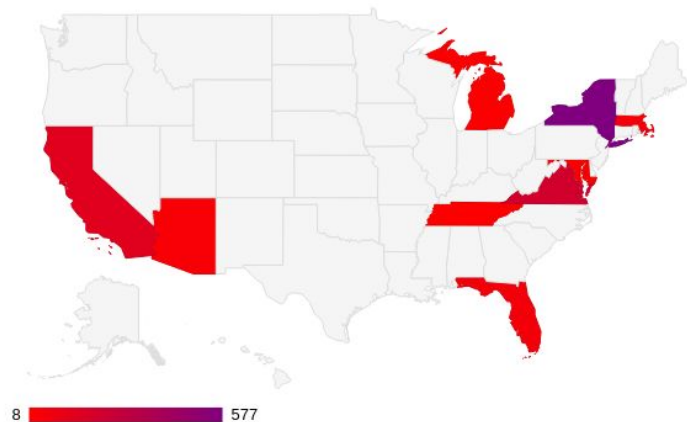
How did we explore this data?

Geographical Heatmap

We designed an simple heatmap that just showed the amount of relocations in the tech industry **by state**.

Now all that was left to do was to explore where the relocations were happening more precisely.

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A more precise look

Interactive Heatmap and the Answer

- An external dataset that included zip codes and their geographic coordinates
- We managed to plot the exact locations on a heatmap

The heatmap showed us that the answer to our initial question: No. Most tech companies remain within New York City, and more specifically within Manhattan.

Where are tech companies <u>leasing?</u>

Exploratory data analysis shows:

- **STILL New York City**
- **Is this reflective of every industry?**
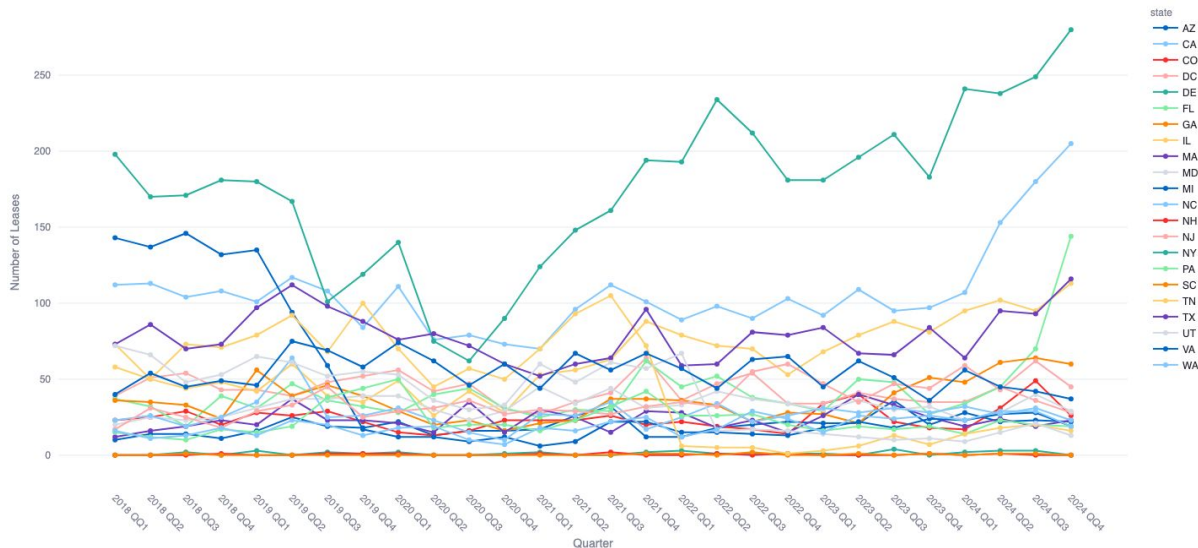- **Has this changed within the past few years?**

Time Series Graph

- **After covid**, New york became a **more attractive** market for all industries to lease office space with **California** close behind

- But, do **specific industries** prefer **specific cities** or states?

Lease Counts by Quarter for Each Market

The Broader Questions

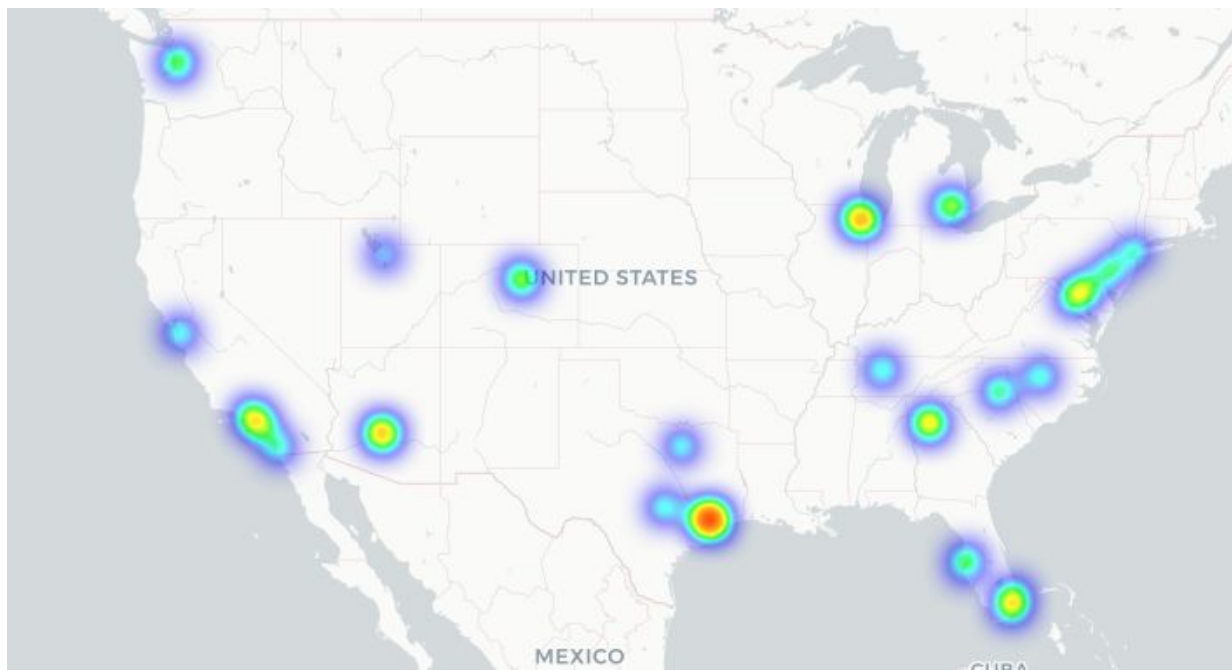## How can we visualize the lease activity for specific industries?

- A wider interactive heatmap
- A bar chart comparing the states for each industry
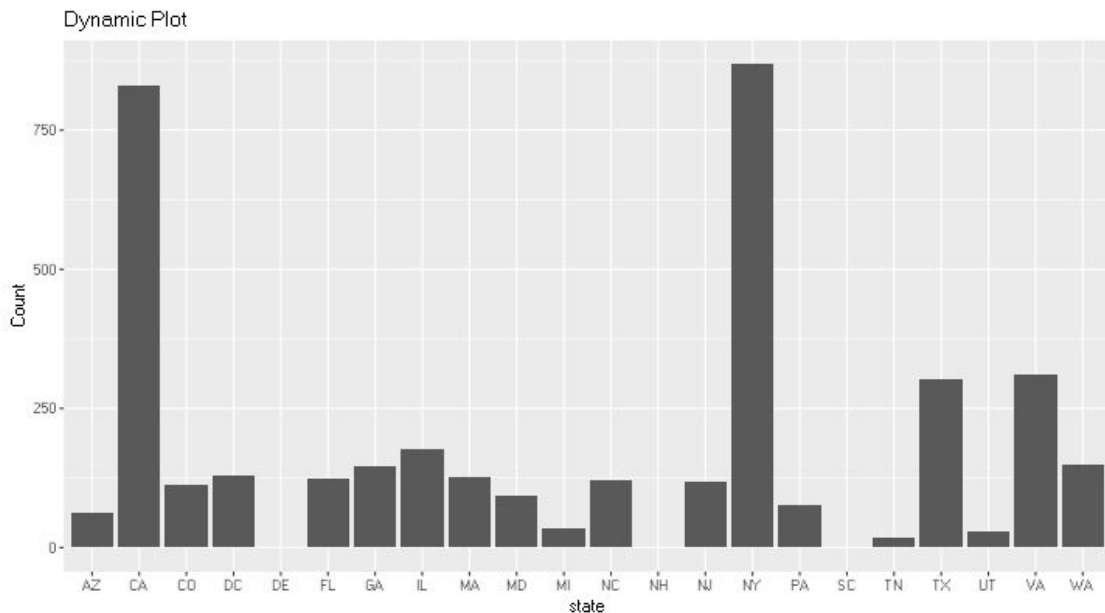
Filterable Interactive Heatmap

- **We expanded the scope of the heatmap to all of the USA and every industry**
- **This revealed hot spots not previously noticed through the tech industry alone and the ability to observe through map through specific industries**

Filterable Bar Chart

Dynamic Plot

The filterable bar chart works to explore the amount of leases within an industry in regards to each state, this gives us a more numerical representation of the concentration of industries.
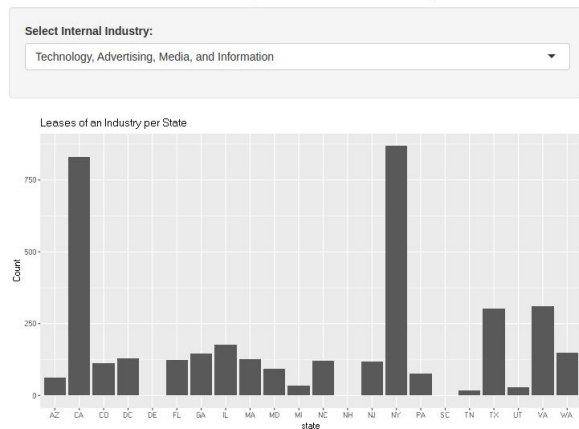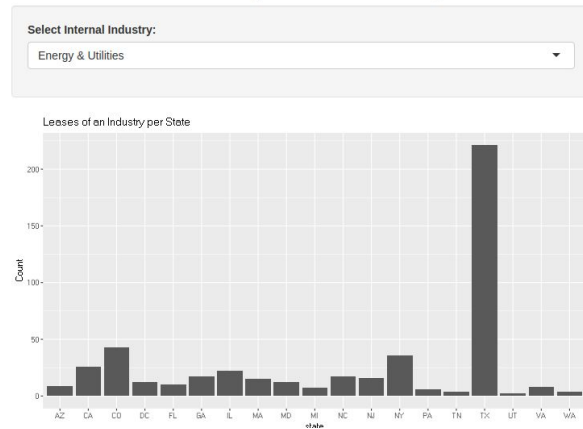
Exploratory Findings

Filterable Bar Chart

- **Works in a similar manner to the heatmap**
- **Shows that industry DOES matter**
- **There can be incredible variety in regards to industry**

Leases in each state by Internal Industry

Select Internal Industry:

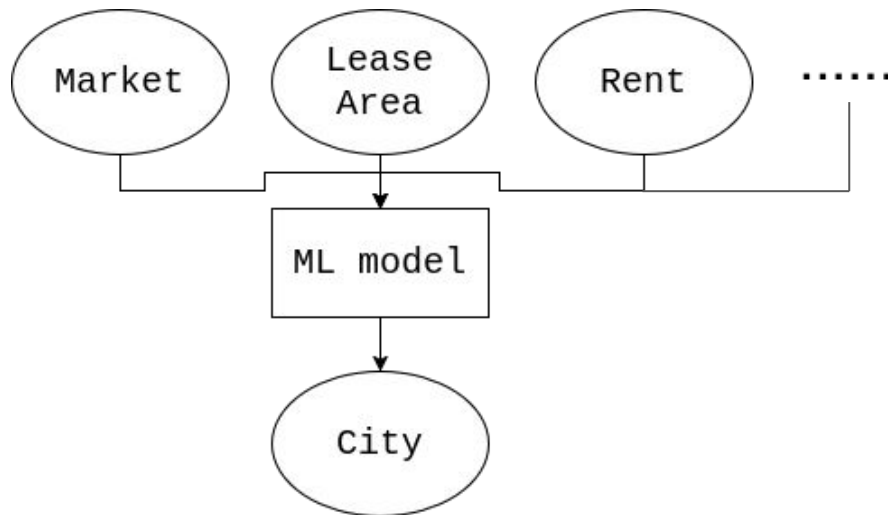Technology, Advertising, Media, and Information ▼

Leases in each state by Internal Industry

Select Internal Industry:

Energy & Utilities ▼

Can we predict the best location for each industry?

Predicting suitable office spaces using multivariable linear regression

Limitations: Uses simple linear regression model which is unable to model complex non linear relationships in the data
Improvements: Use a neural network with non linear activation functions

Exploratory data analysis shows:

- Companies stayed **dominantly within the New York city** central area
- Despite covid and remote working, **tech** companies <u>**did not move**</u>

Possible Inaccuracies:

- **Imbalance** of data in different market
- **Word of mouth** data is sometimes **unreliable**

Thank you all for listening