Microsoft Azure Project

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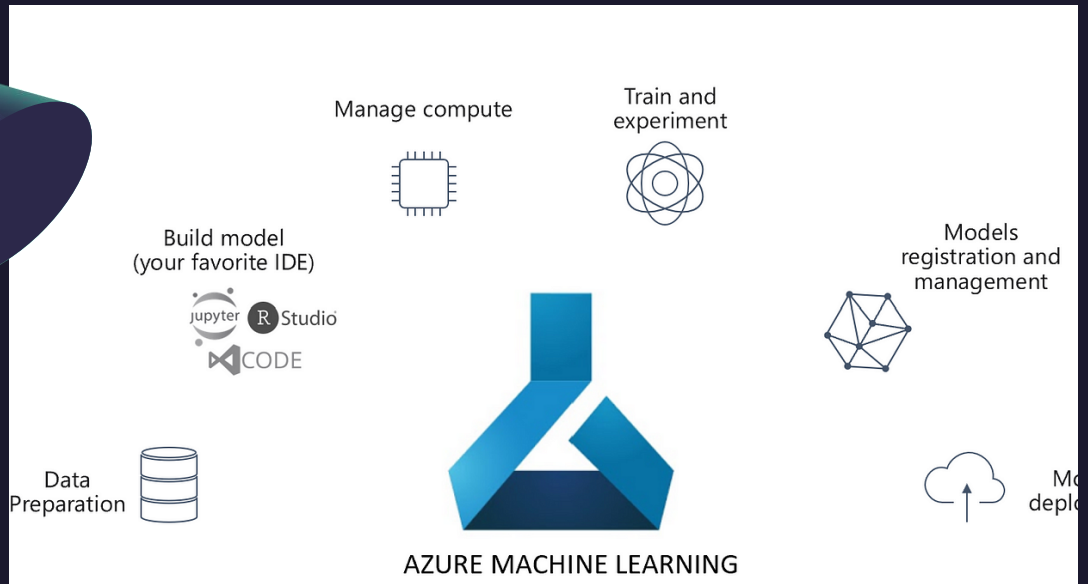
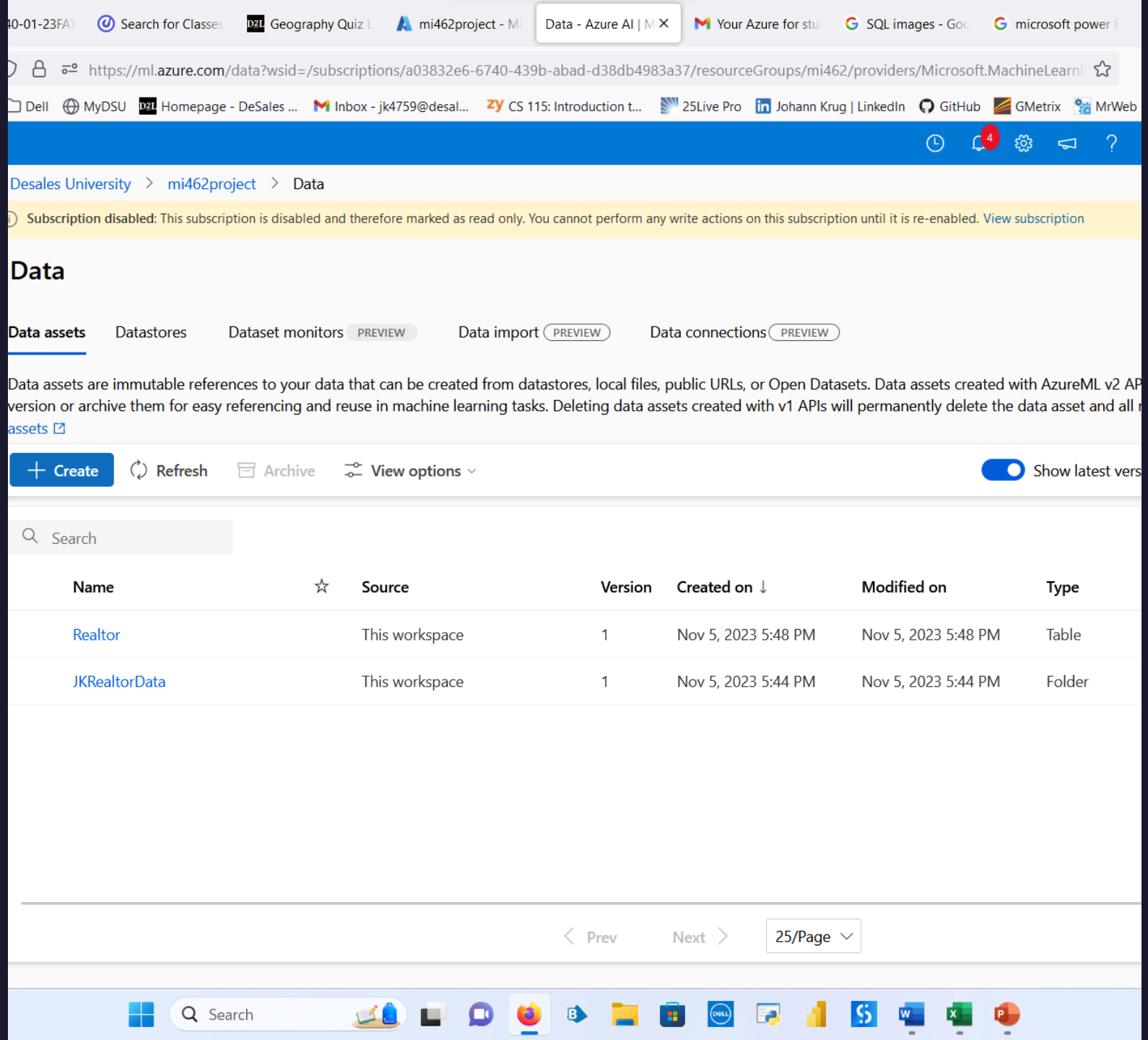
Opening

My experience with Microsoft Azure could have been better. I chose to use Machine Learning as my resource because that is what I trained in, but I was never successful in spinning up a machine. I then decided to transition to Power BI in Azure instead, where I made visualizations of my data.



Azure Machine Learning

Where I started

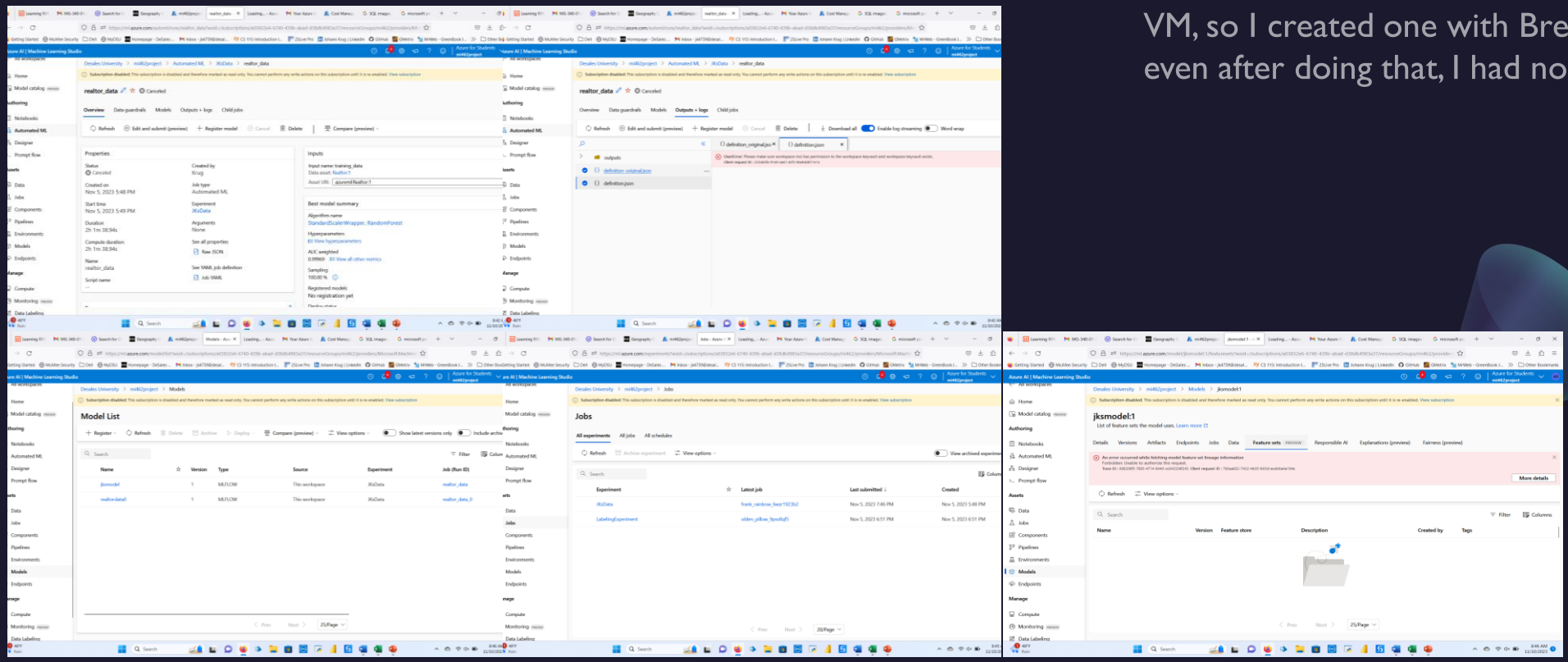


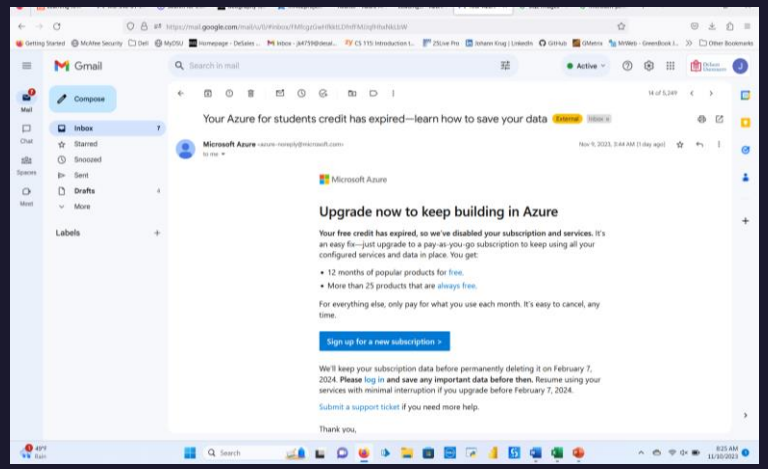
Data

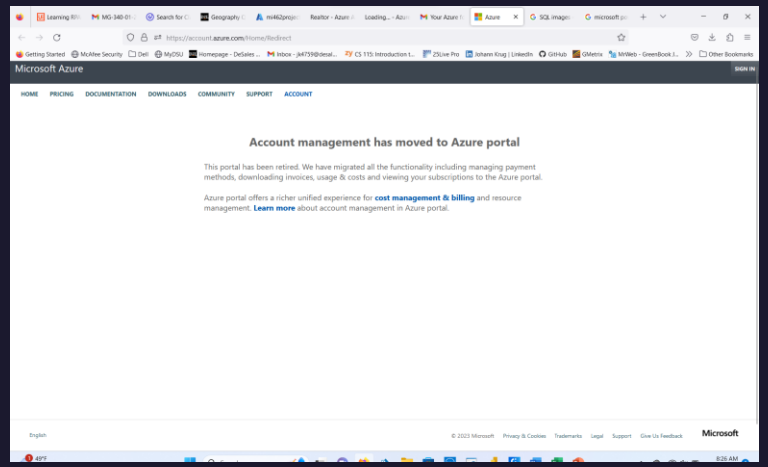
I was able to get my dataset into the project relatively easily allowing me to view a preview of it

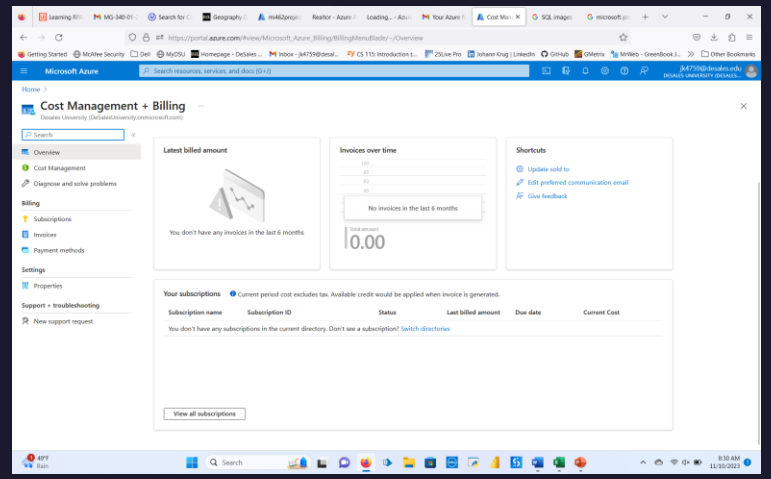
Problem Occurred

It would never work whenever I tried to put my data into Automated ML, Job, or Models. I would run it for a few hours and then have no luck. I would either get an error or have no results. I thought the issue was a VM, so I created one with Brennan and Brandon, but even after doing that, I had no luck.







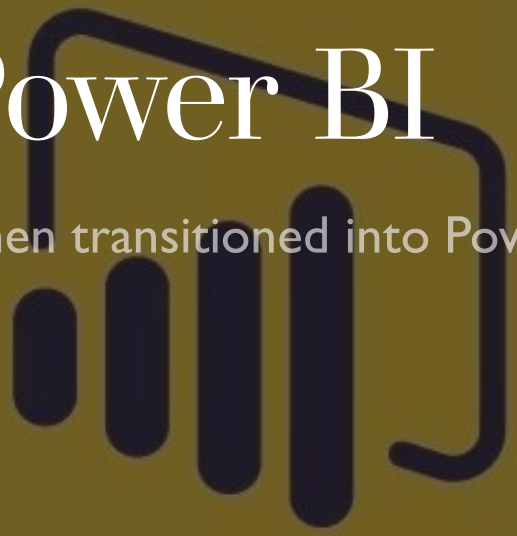


Subscription Expired

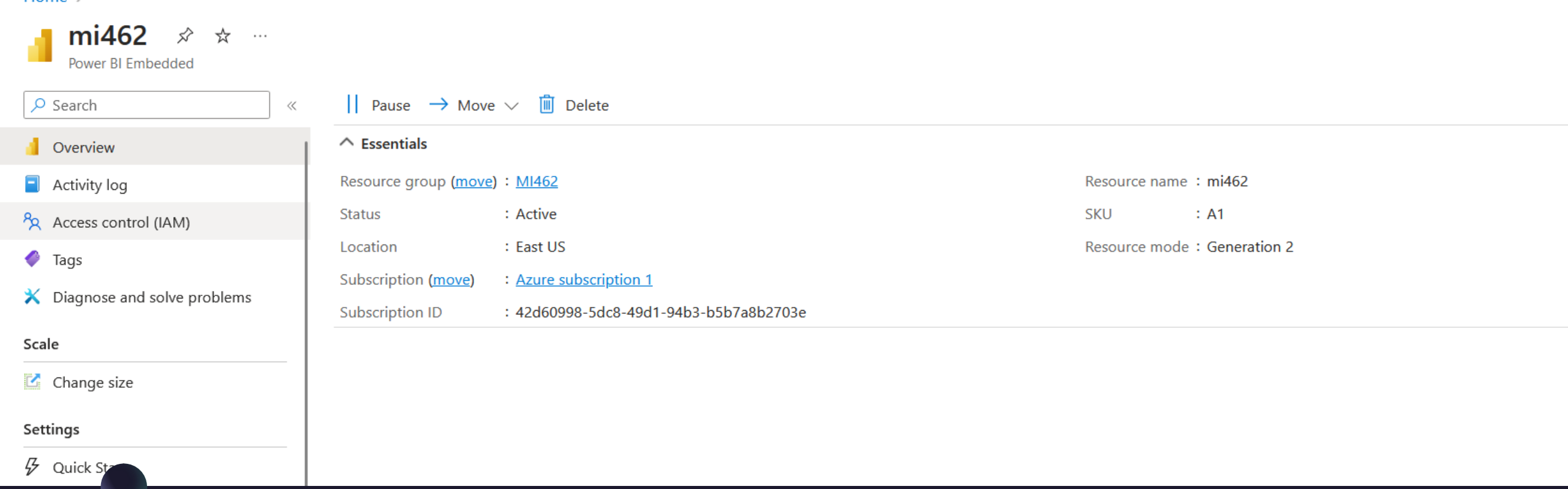
Thursday morning, I woke up to an expired subscription, and when I clicked sign up for a new subscription, the second image appeared. Then, I clicked on the link to manage my subscription and got the third image. So, I could not completely access some of the work I did.

Power BI

I then transitioned into Power BI



Power BI

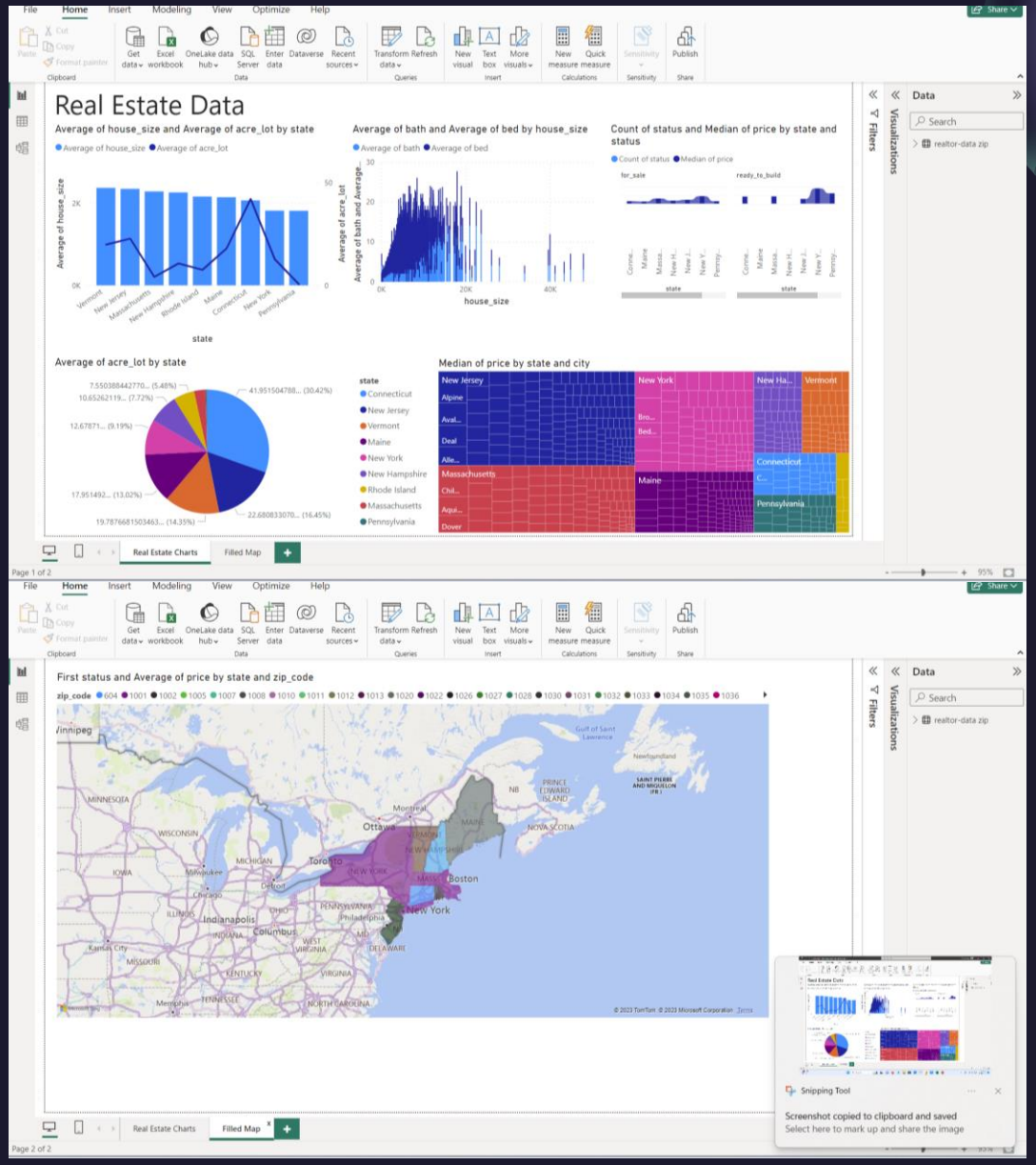


Power BI in Azure

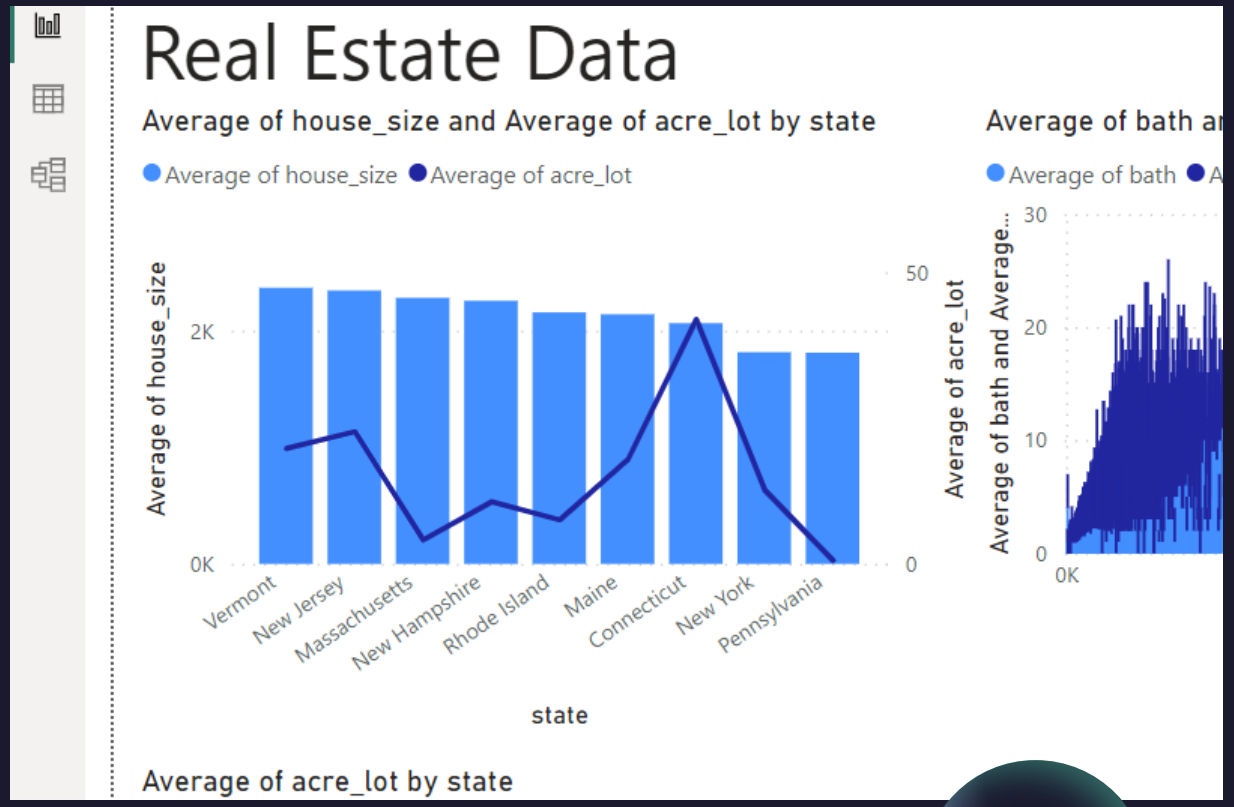
- I went to Microsoft Azure Fabric and Power BI because my training also had a little Power BI in it. Then began to create visualizations.

My Project in Power BI

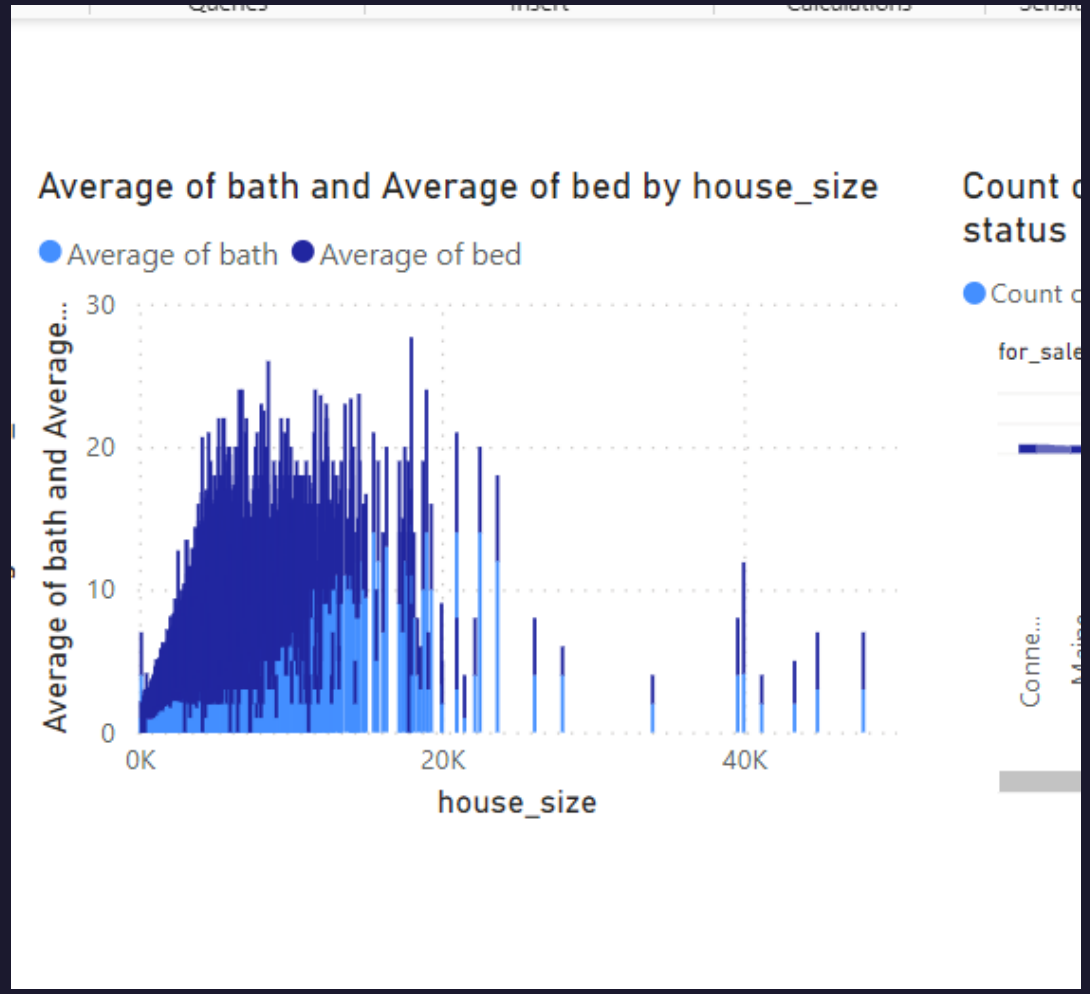
I devised six visualizations from my data to help people better understand it. All the data has been filtered only to show the states in the Northeast because They were the best represented, and the other states were sporadic. The house size is in Square Feet, the acres are in acres, and prices are standard.



Average House Size vs. Average Acre Lot



In this visualization I showed the average house size per state to the average acre lot per state to determine if their was a state with large houses and small acre lot and vice versa. In this visualization I found out that the average house size per state is relatively similar, but the acre lots vary. This shows Connecticut with the highest and Pennsylvania with the lowest.



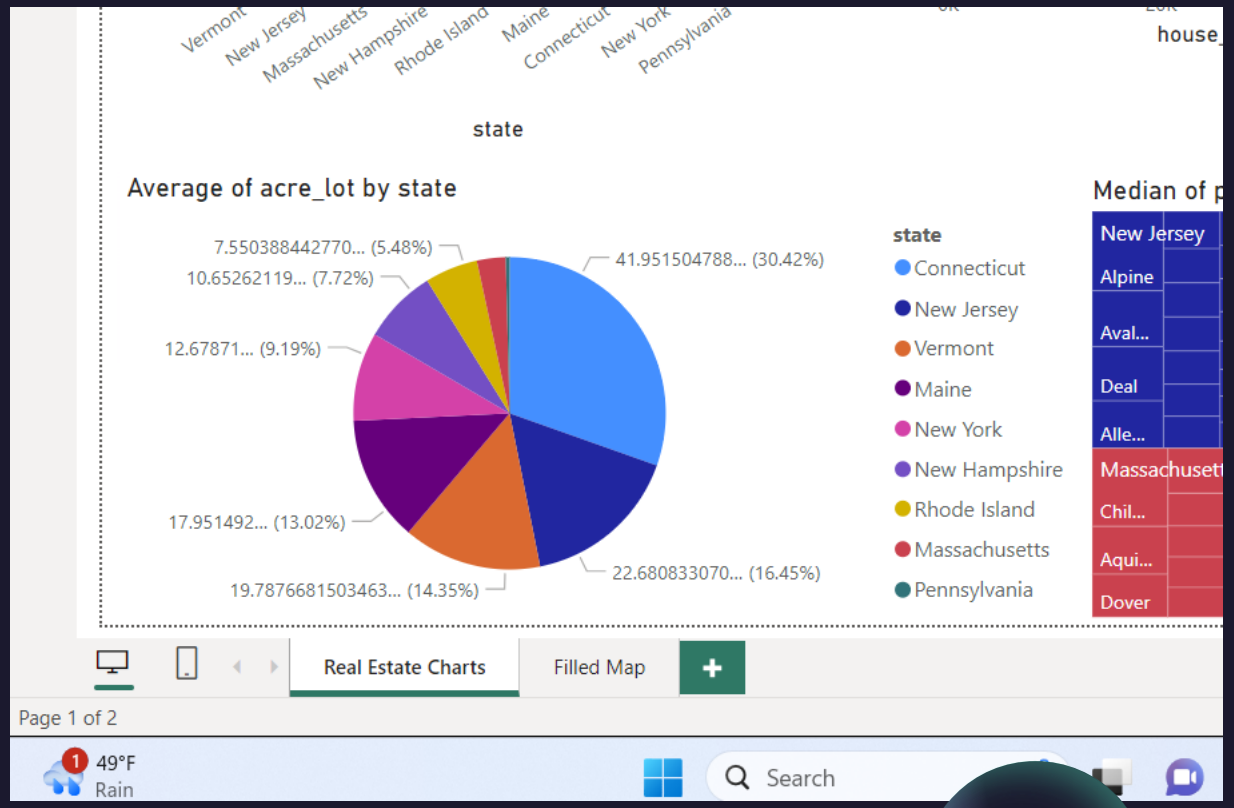
Average Bed and Bath Rooms for each house size

I was trying to find the average bedrooms and bathrooms per house size in this visualization. This visualization did not come out the best because it can be a little confusing to tell the bedrooms and bathrooms total, but when you are on Power BI it is clearer. I discovered that the bathrooms of houses under 20 thousand square feet have more bathrooms then expected.

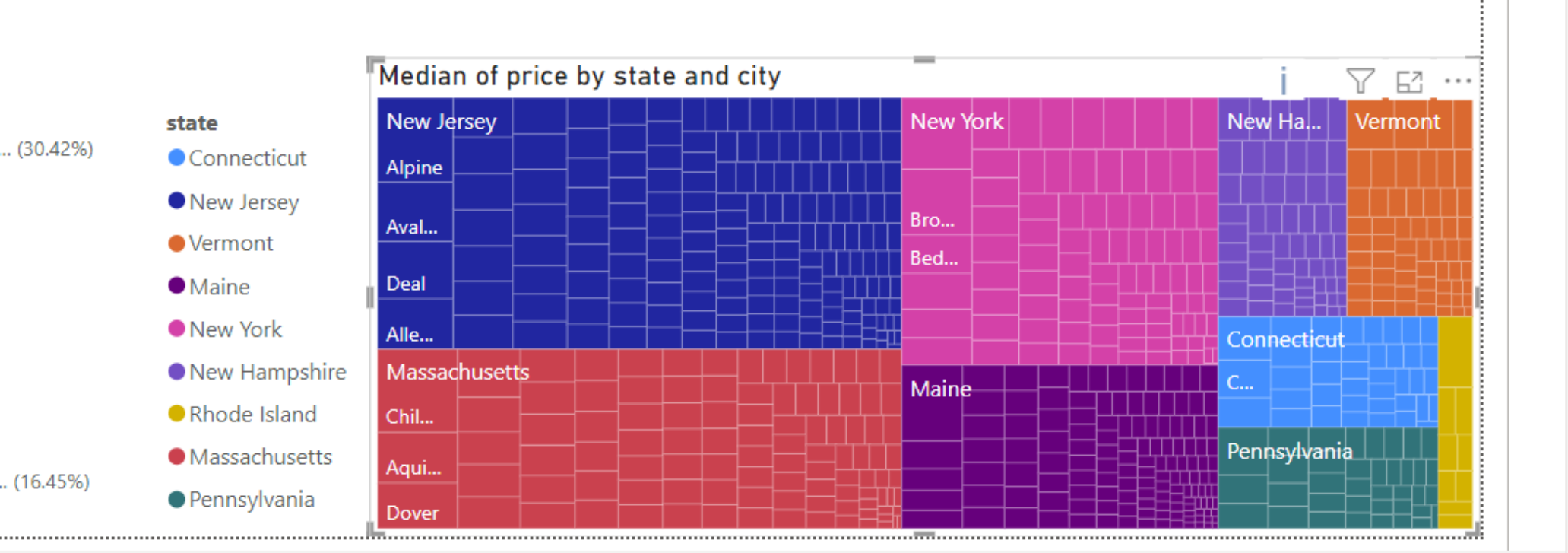
Finding the Median Cost per status (For Sale or Ready to be Built)

In this ribbon chart, I wanted to see the varying costs state by state to determine how much more or less a house costs in a different state and the difference in building costs. From this chart I could determine that New York and New Jersey were about 30% more than Pennsylvania regarding building. They were also higher than other states, especially New York.

Average Acre Lot of each house per State



I used this pie chart to find the average lot of the houses in the states. I know you are probably saying he already did that earlies this is true I did show the average acres, but this chart was not created to just see the average acre lot I am using it to help me with my next visualization to gain more specific data when it comes to pricing of houses per state and city. Power BI highlights what part of the acres are being used from the tree map to the pie chart, so this chart was used in combination with the next to help see what acres effect the price.

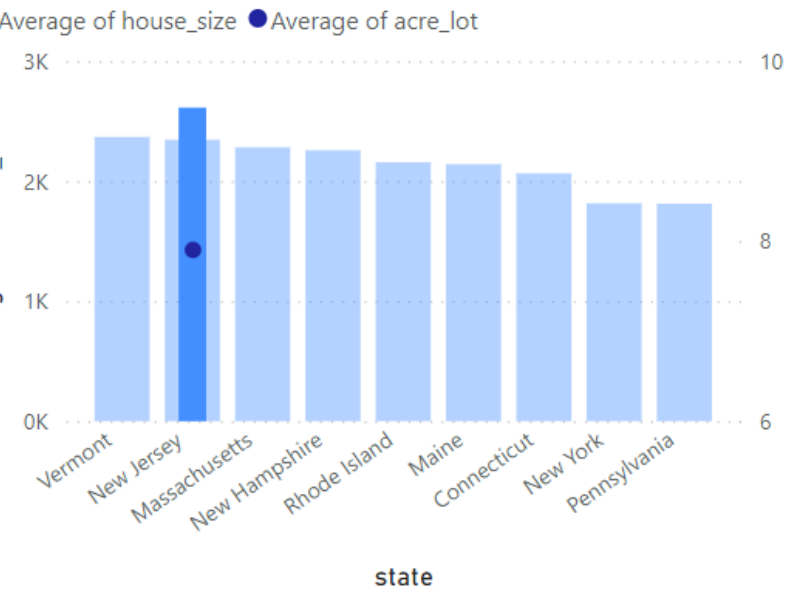


Median price by State and City

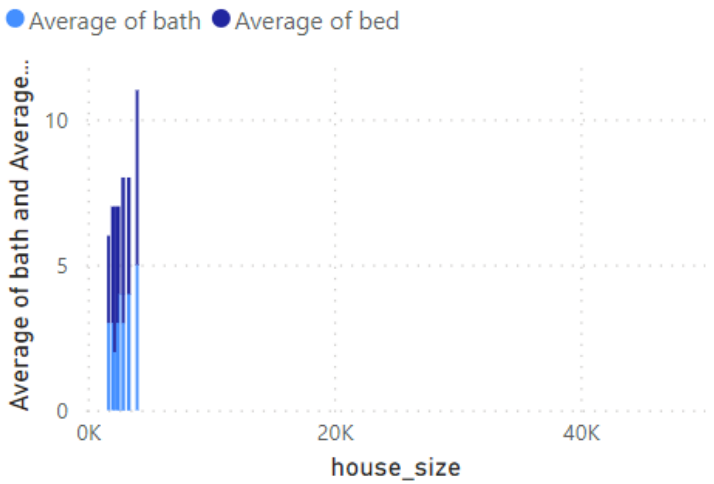
This Tree Map is the anchor of my visualizations because it shows the price of the houses by both the city and state. It also helps get specific data from the other visualizations showing the average bedroom and bathroom, house size, and acre lot size. It breaks down everything how I want it to determine the medians and averages I am looking for from a specific city. Example of what I mean on the next slide.

Real Estate Data

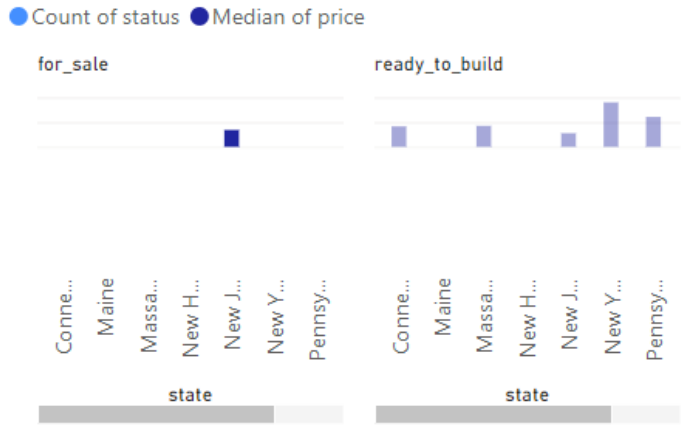
verage of house_size and Average of acre_lot by state



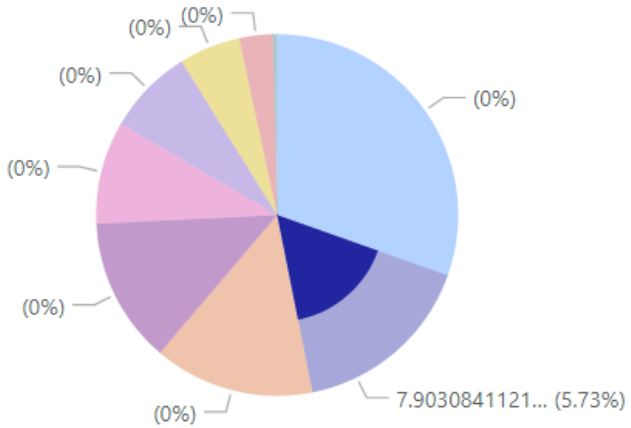
Average of bath and Average of bed by house_size

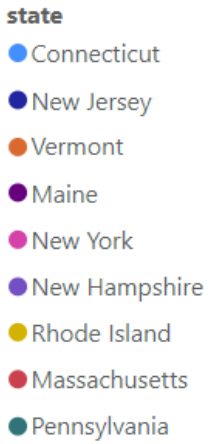


Count of status and Median of price by state and status

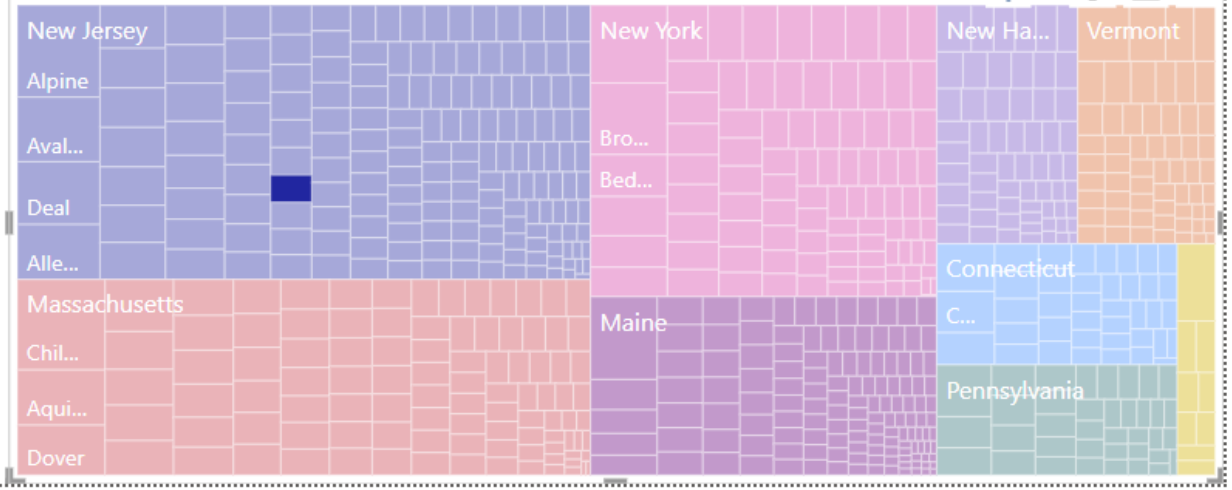


verage of acre_lot by state





Median of price by state and city



Filters

Visualizations

Data

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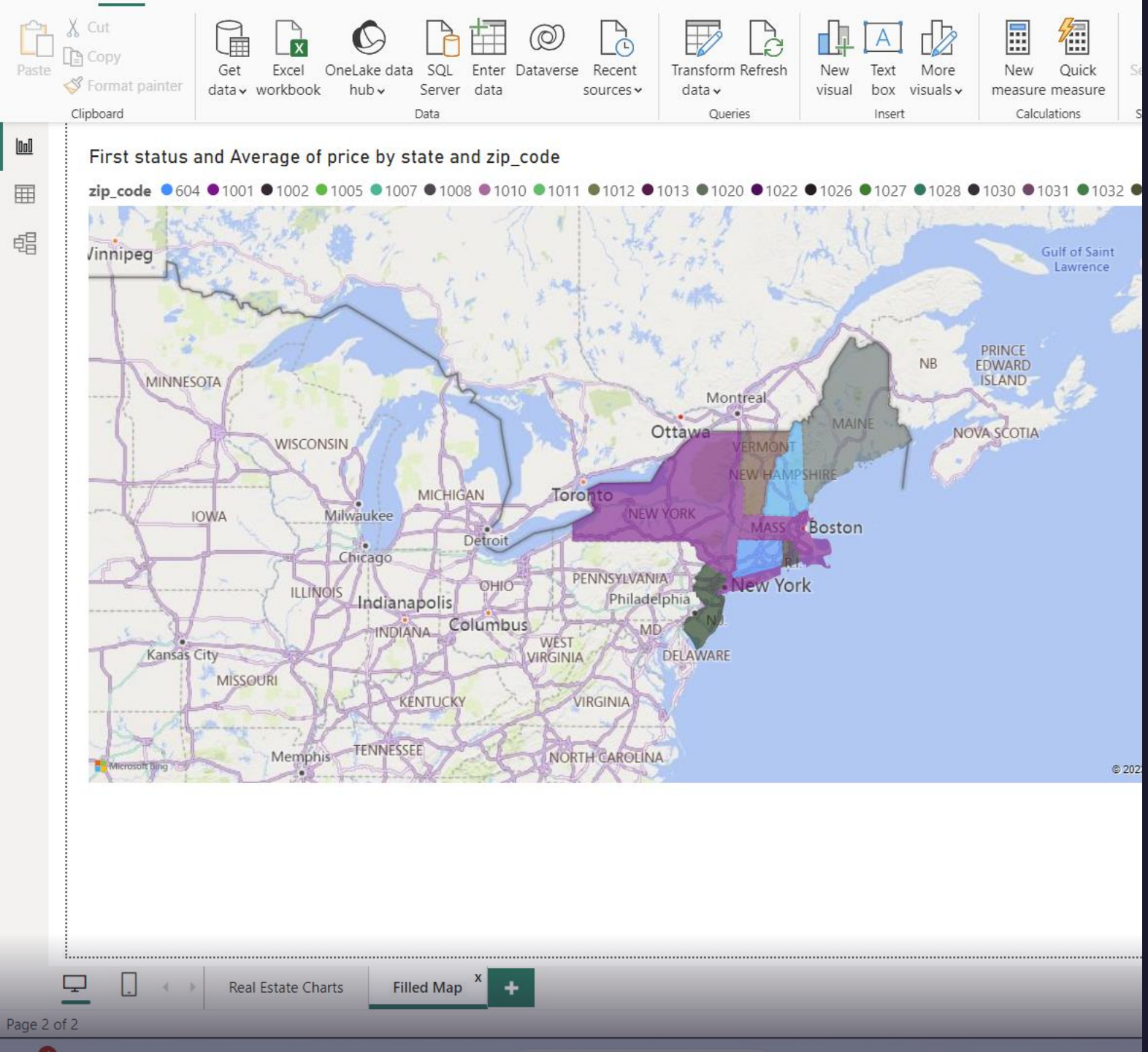
Real Estate Charts

Filled Map



Map of Status with Average Price per Zip Code

I made my last visualization a map to help determine what houses were for sale or being built and the average price per zip code. This allowed me to see where the most available houses are and the average price per zip code it seemed New York currently has the most.

Summary

I tried my best to use Machine Learning, but it did not work even when I tried a VM. This led me to go to Power BI, where I made six consultations to help me break down the median price of a house, the average bedrooms and bathrooms, and the average acre lot summed up and highlighted using the tree map. I was able to determine the price difference per state using the ribbon chart, and finally, the location of which state had the most houses for sale using the map.

Thank You