

# THAT'S THE WAY THE COOKIE CRUMBLES

## HEATHER HARVEY

### Introduction:

- A local cookie company reached out and offered their data to be analyzed
- They expected nothing in return, but hoped that something insightful would come from this analysis
- Being close friends with the owner's daughter, I wanted to try and help them in some way with their company
- After looking at the data, there were a few ideas and questions relating to the data that I decided to pursue

### Initial questions:

- How far can one small business reach?
- What areas do they sell the most in?
- Can a map be created in order to visualize this information?

### Alison's Homemade Welsh Cookies

- Founded officially in 2005
- Owned by Alison Johnson
- Located in Clarkes Summit, PA
- Make over 15 different flavors, depending on the time of year
- Their packs come in 2 sizes: dozen and half dozen

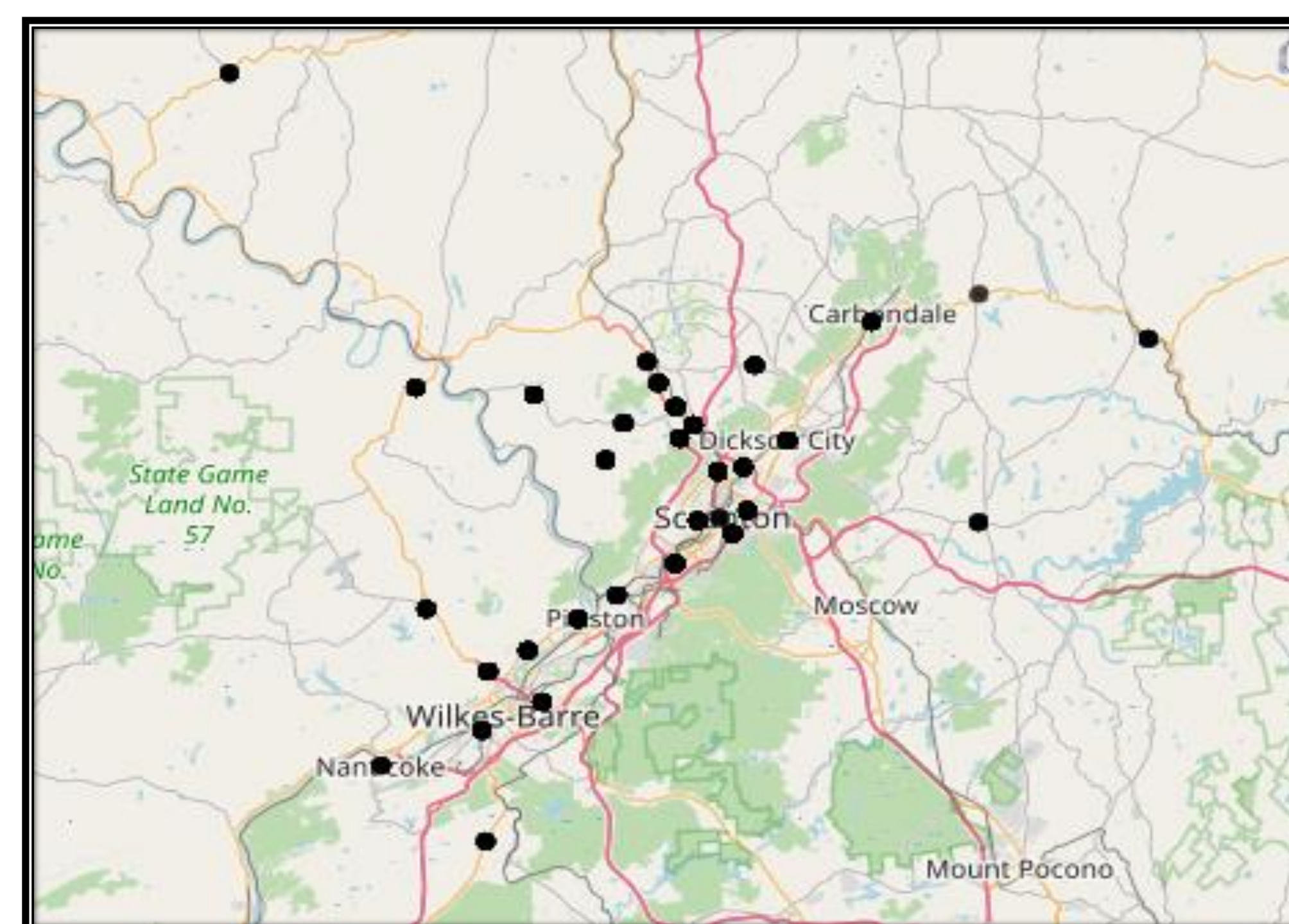


### Process:

- Search through and collect all their data from 2019
- Input data into Excel
- Double check & clean data
- Run analysis on data and create maps
- Share the results with the company

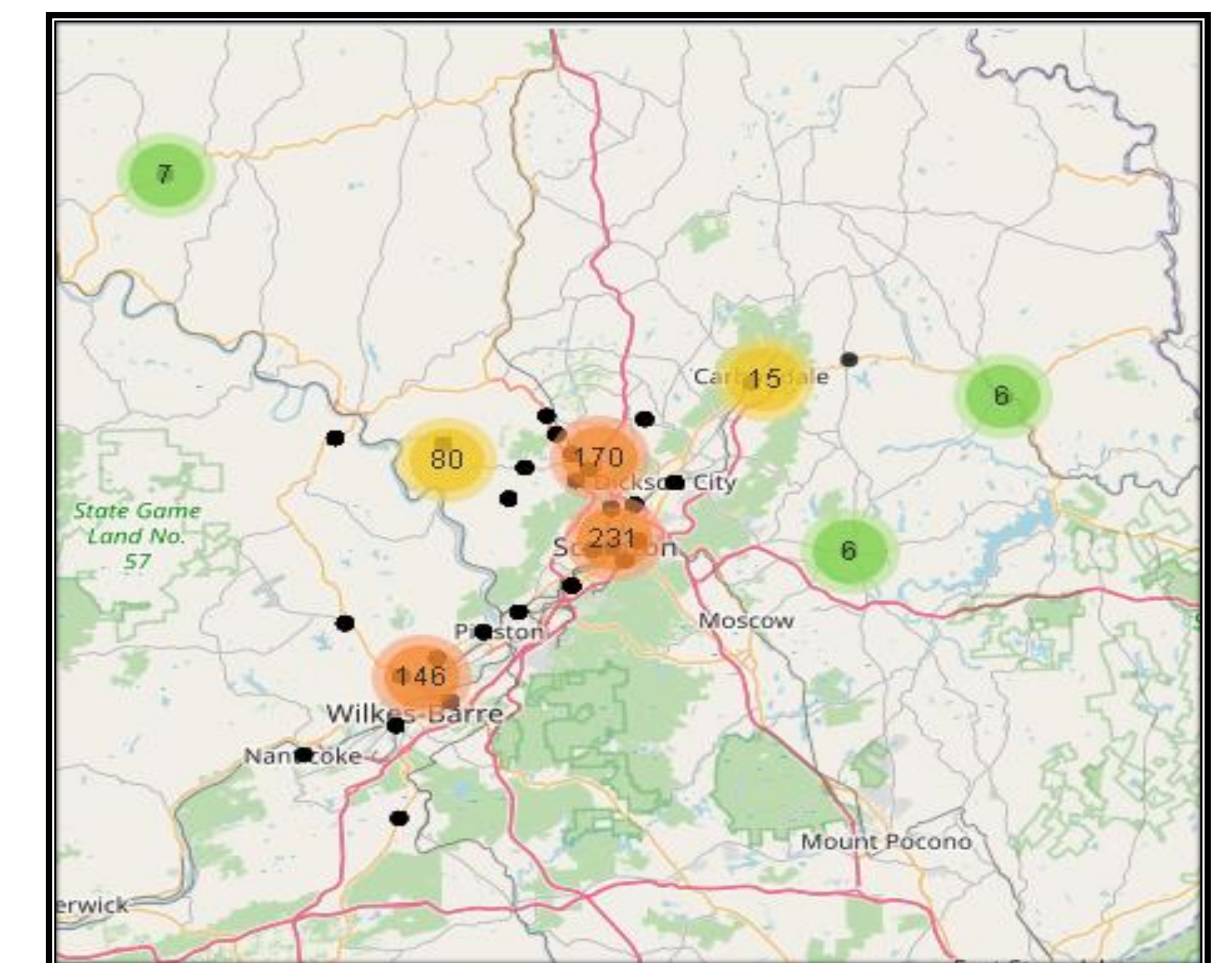
### Maps:

- Using the Leaflet in R along with the latitude and longitude of each business, a map was created showing everywhere the cookies were sold in 2019



- The next part was the difficult part
- The amounts sold at each location needed to be added onto the map in order to know which area sold the most
- `addMarkers()` was used to add the circles that changed color based on the intensity of the amounts.

- The map combines the numbers for certain areas, in order to see which area has the most sales.
- Green: 1-10, Yellow:11-99, Red:100+



### Conclusions:

- Though the area isn't the largest, for a small cookie shop in someone's garage, this is quite an area
- Their largest sales in 2019 happened in the Scranton and Dickson City area
- As for the areas that contain really small sales, the company either stopped selling here early on 2019 or started selling in late 2019

### Personal Take Away:

- One small business can have this much of a reach in a year
- Considering that they deliver most of their cookies, this is a lot of driving for one person to do for deliveries