

# Brew-Venturing: North Carolina's Brewery Growth from 1990 - 2020

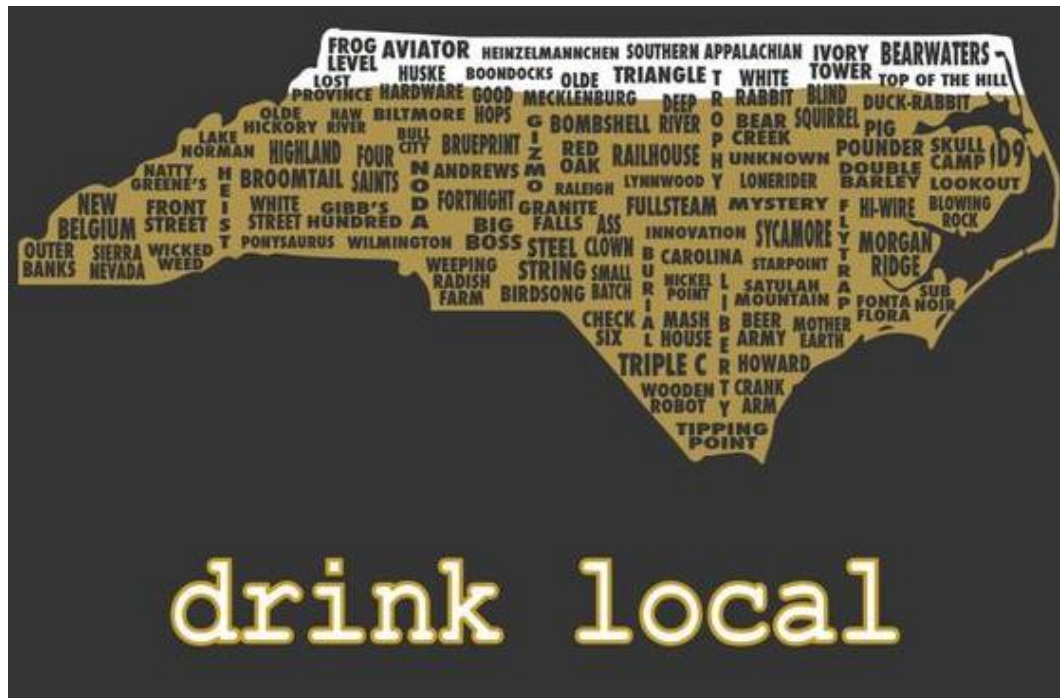
By: Jimmy Brawner, Jasmine Garcia,  
Michael Hargroder, Nathan Kosiba,  
and Chris Marchini

4/4/2020



# Key Objective

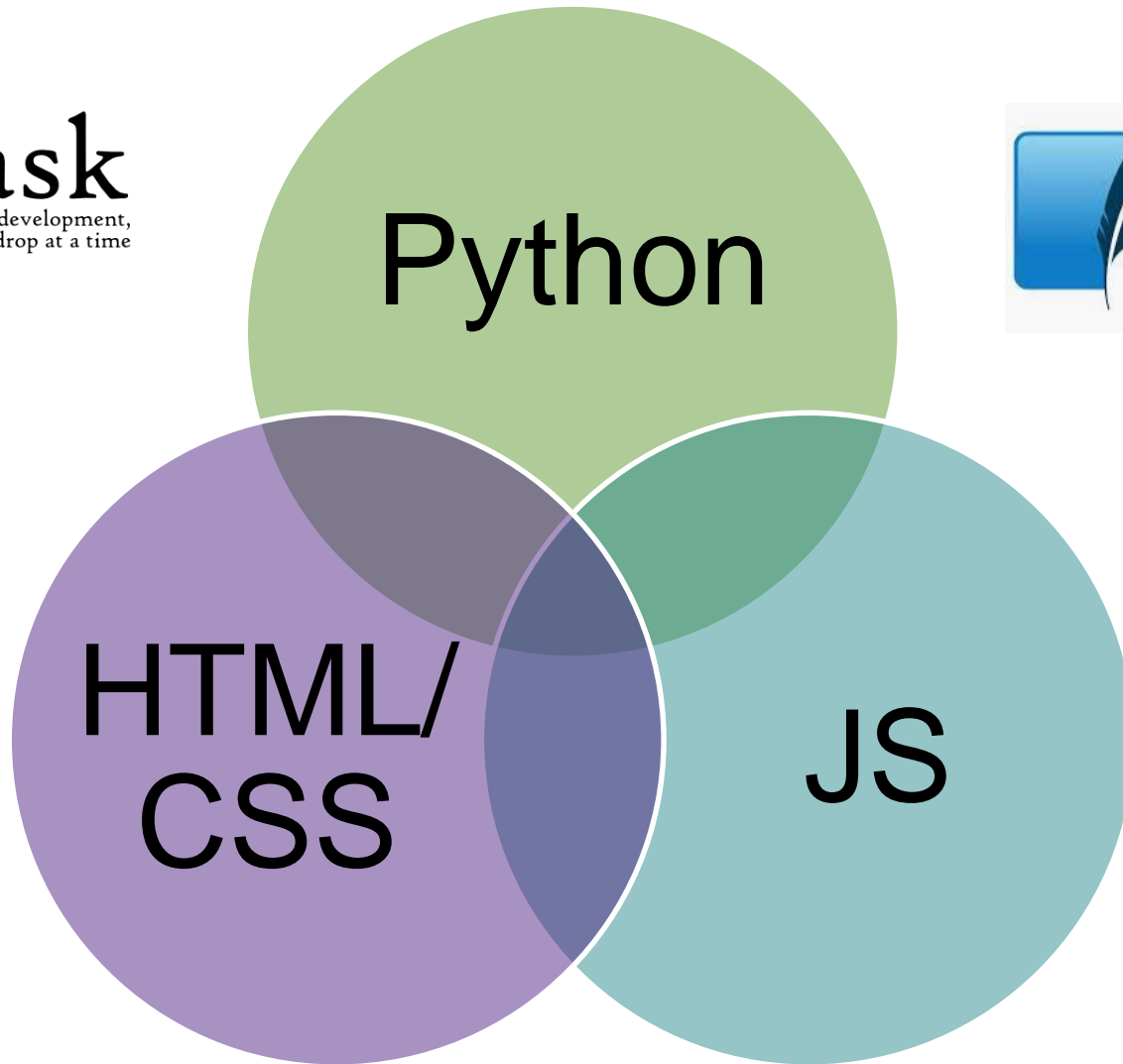
**Analyze** the history of brewing in North Carolina and create an **interactive** resource so viewers can see how local breweries in the Tar Heel State have grown over thirty years.



# Why Look at NC Breweries?

- Craft beer a growing hobby
- # of breweries growing locally
- ETL project as starting point
- Want to identify when this trend picked up
- Create something interactive and actionable for decision makers





# Data, Munging, and Coding Process

- 260+ brewery records due to the following sources:
  - NC Department of Commerce Business Data
  - Google Places API
  - Yelp API and Open Brewery DB (didn't use)
- Munging techniques and coding process
  - SQLite server to store data
  - Flask server to create API
  - HTML/CSS for webpages
  - D3 for visualizations
  - Leaflet for mapping
  - Data table to summarize

# Brew-venturing app story...

# Results Summary, Why this Matters, and Next Steps

- Breweries slowly grew from 1990 – 2010, took off after 2010, rapidly increased around 2014
- Growth in key areas such as Asheville, Charlotte, and the Triangle
- Can help new brewers identify where to set-up shop and consumers where to go
- Things we would like to try next:
  - See how employment changed
  - Add complementary businesses
  - Identify why the sharp increase in 2014

# Thank you! Questions?



# Appendix

# Start to Finish – Scope and Structure

- Used ETL project as a starting point, developed different structure/emphasis for history and trip planning
- Refocused after data munging began to just analyzing history
- Resulted with the following structure:

HTML Pages	Data Sources/APIs	Brewery Data Used				
		Est. Date	Location	Revenue	# of Employees	Ratings
Home Page	N/A					
History	NC Department of Commerce Business Search		x			
Brewery Map	NC Department of Commerce Business Search, Google Places API	x	x			x
Data Table	NC Department of Commerce Business Search, Google Places	x	x	x	x	x

# Original Data Munging Plan

## Gather Data

- Gathered data/sources: Google Places API, Yelp API, Open Brewery DB, Bureau of Labor Statistics, Four Square

## Identify Data

- We wanted to include brewery types, top beers/beer types, employment stats, ratings, etc.

## Transform Data

- Clean data across sources, using brewery name as the point to merge on

# Revised Munging Plan

## Final Sources

- Re-focused sources: Google Places API, Yelp API, and NC Department of Commerce

## Final Data

- Ended up with data for current revenue, employees, ratings, established data, etc. for 260+ breweries

## Transform Data

- Merged data on street addresses due to continuity issues