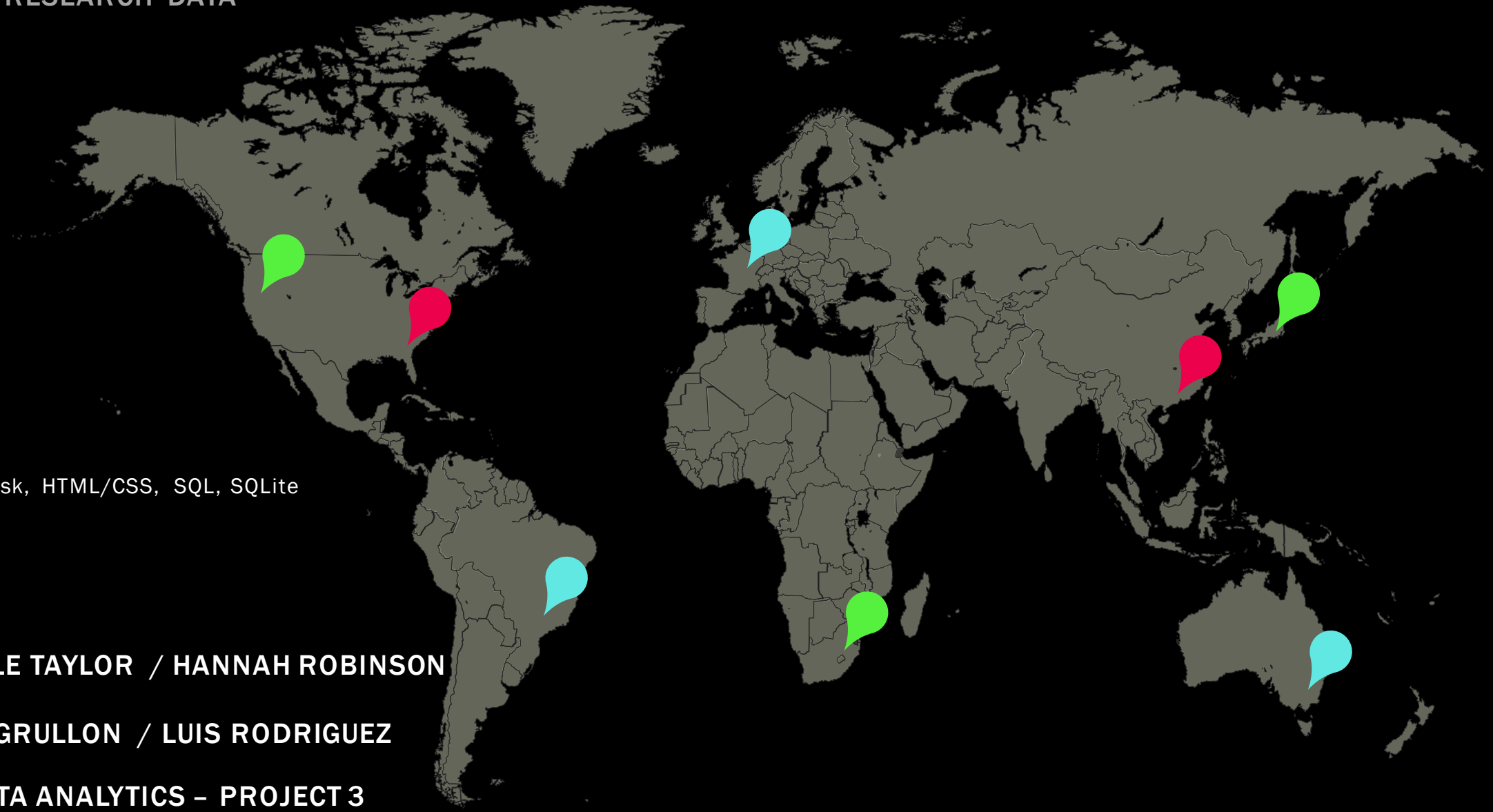
ICP COUNTY RESEARCH DATA



Python, Flask, HTML/CSS, SQL, SQLite

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- UNC DATA ANALYTICS – PROJECT 3

Inspiration

About our Data sets..

Link to our datasets: https://www.ers.usda.gov/data-products/county-level-data-sets/county-level-data-sets-download-data/

ETL & SQLITE Process

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
Int64Index: 3185 entries, 0 to 3192
Data columns (total 28 columns):
 #   Column                                     Non-Null Count  Dtype  
---  ------                                     --------------  -----  
 0   FIPS_Code                                  3185 non-null   int64  
 1   State                                      3185 non-null   object 
 2   Area_Name                                  3185 non-null   object 
 3   Civilian_labor_force_2020                  3185 non-null   float64
 4   Employed_2020                              3185 non-null   float64
 5   Unemployed_2020                            3185 non-null   float64
 6   Unemployment_rate_2020                     3185 non-null   float64
 7   Civilian_labor_force_2021                  3185 non-null   float64
 8   Employed_2021                              3185 non-null   float64
 9   Unemployed_2021                            3185 non-null   float64
 10  Unemployment_rate_2021                     3185 non-null   float64
 11  Civilian_labor_force_2022                  3185 non-null   float64
 12  Employed_2022                              3185 non-null   float64
 13  Unemployed_2022                            3185 non-null   float64
 14  Unemployment_rate_2022                     3185 non-null   float64
 15  POP_ESTIMATE_2020                          3185 non-null   float64
 16  POP_ESTIMATE_2021                          3185 non-null   float64
 17  POP_ESTIMATE_2022                          3185 non-null   float64
 18  BIRTHS_2020                                3185 non-null   float64
 19  BIRTHS_2021                                3185 non-null   float64
 20  BIRTHS_2022                                3185 non-null   float64
 21  DEATHS_2020                                3185 non-null   float64
 22  DEATHS_2021                                3185 non-null   float64
 23  DEATHS_2022                                3185 non-null   float64
 24  Less than a high school diploma, 2017-21   3185 non-null   float64
 25  High school diploma only, 2017-21          3185 non-null   float64
 26  Some college or associate's degree, 2017-21  3185 non-null   float64
 27  Bachelor's degree or higher, 2017-21       3185 non-null   float64
dtypes: float64(25), int64(1), object(2)
```

```python
import pandas as pd
import sqlite3

# Read the CSV file into a DataFrame
df = pd.read_csv('C:\\Users\\kingl\\Downloads\\ipc-county\\data\\Project_Data.csv')

# Create a SQLite database and a connection to it
conn = sqlite3.connect('projdata3.sqlite')

# Write the DataFrame to a new table in the SQLite database
df.to_sql('mytable', conn, index=False)

# Close the database connection
conn.close()
```

Flask

- Directory Structure flask requirements
- System path appending for Data Function imports
- CORS import for accessibility
- Flask Use_For method for HTML temples

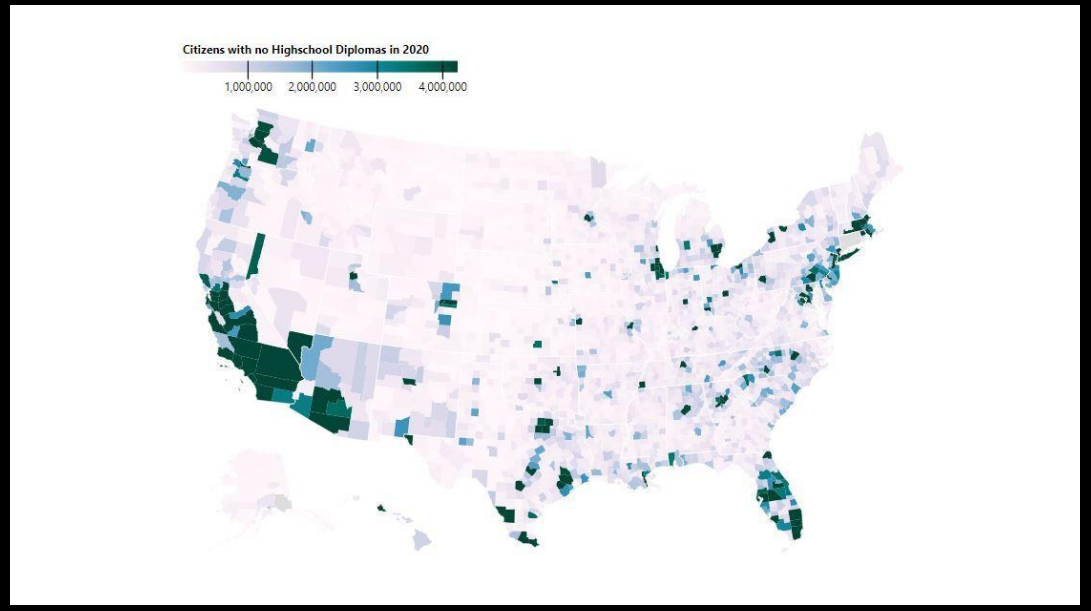
```python
# Render Homepage
@app.route("/")
def home():
    print("Server received request for 'Home' page...")
    return render_template('index.html')

# Render About Page
@app.route("/about")
def about():
    print("Server received request for 'About' page...")
    return render_template('about.html')
```

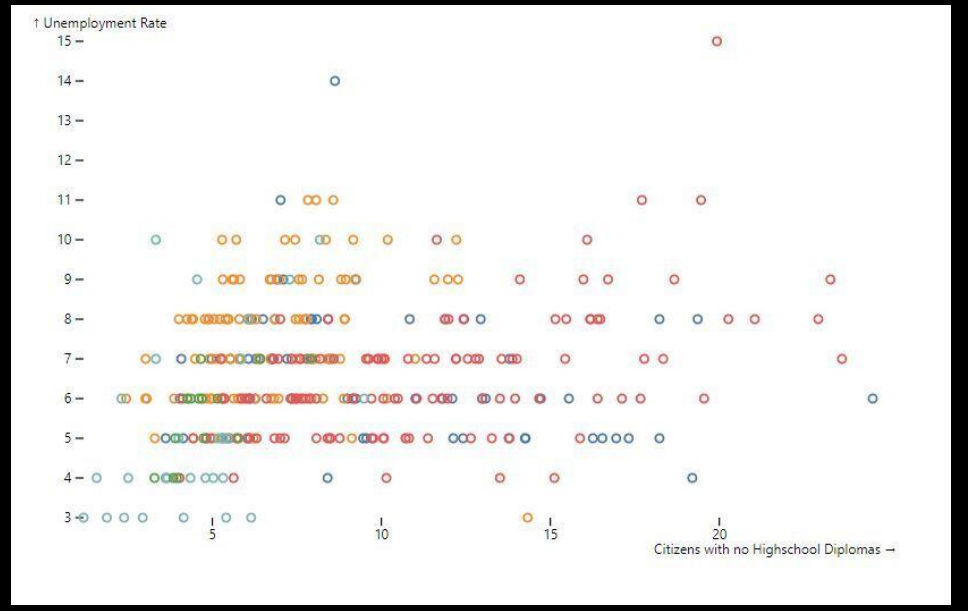
Creating the Dashboard using HTML/CSS

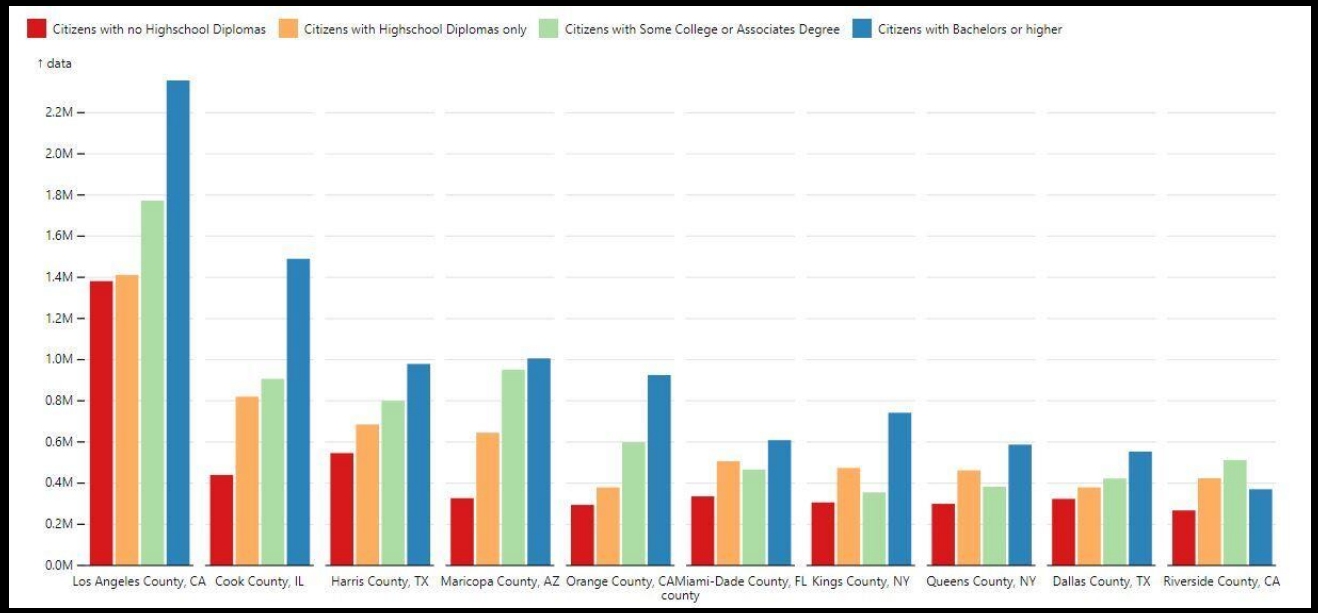
```
<!-- dropdown section -->
<div class="container">
    <div class="dropdown">
        <select id="selCategory">
            <option value="Unemployed">Unemployed</option>
            <option value="laborforce">Labor Force</option>
            <option value="Employed">Employed</option>
            <option value="POP">Population</option>
            <option value="BIRTHS">Births</option>
            <option value="DEATHS">Deaths</option>
            <option value="NoHSB">No HS Diploma</option>
            <option value="HSB">Only Highschool</option>
            <option value="CAD">Some College or Associates</option>
            <option value="BD">Bachelors or Higher</option>
        </select>
        <select id="selYear">
            <option value="_2020">2020</option>
            <option value="_2021">2021</option>
            <option value="_2022">2022</option>
        </select>
    </div>
```

- Visualization questions we asked:
  - What visualizations will we have?
  - How do we want to display those on the Dashboard?
  - How will they be interactive or dynamic?
- Created the Home and About pages
- Determined layout of the pages
- Received information to input into the HTML
- Made styling and formatting code in CSS

Visualization Examples







Now on to the Demo...