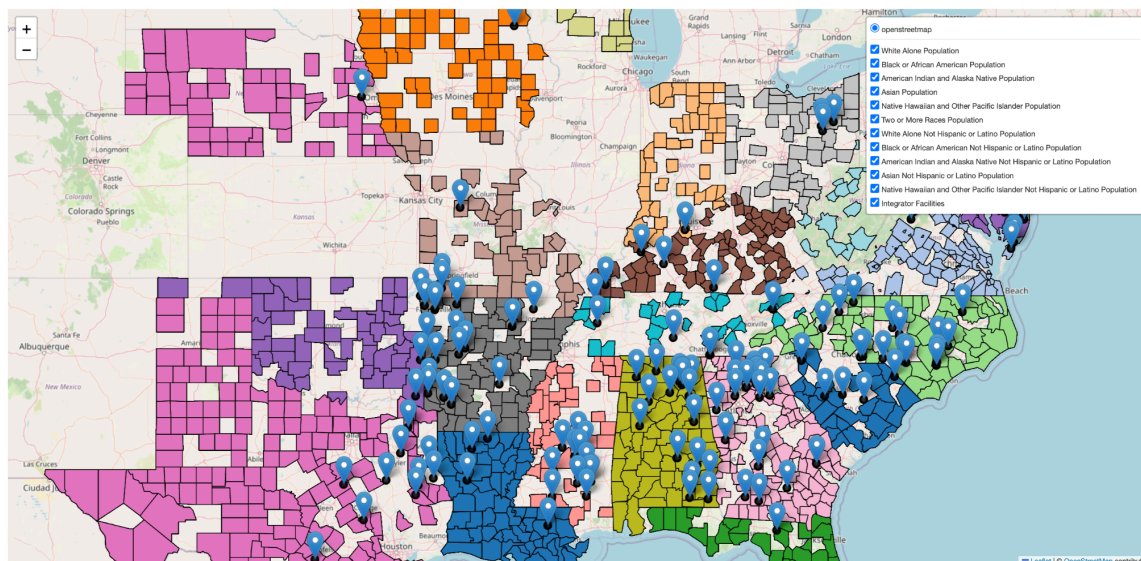


## RAFI Poultry - Demographic Data Analysis

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### All States Race Demographics by County



**Fig. 1:** The figure shows one of the maps in the dashboard. It displays race demographics by county in states with integrators. Each state is color-coded for differentiation, and users can filter by race using the legend. Tooltips provide county and state names, population statistics, and the number of integrators within a 60-mile radius, calculated from county centroids. Integrators are marked with pins, showing company name, facility details, and size. Population data is sourced from the U.S. Census Bureau (2022-2023).

The U.S. poultry industry depends on integrator processing plants, but farmers face challenges due to limited access within a 60-mile radius ([MacDonald, 2014](#)). Since chickens can only travel 60-miles, farmers have few processor options, weakening their negotiating power and leading to unfair contracts. Consolidation of integrators by large companies can lead to exploitation of farmers.

The Data Science Institute Clinic team conducted statistical analyses and visualized demographic and agricultural data to identify factors contributing to reduced access to integrators. A key component of the project was developing a Streamlit dashboard that integrates interactive maps and boxplots to provide key regression insights into various demographic variables, enhancing accessibility for policymakers advocating for farmers.

Demographic data from the U.S. Census Bureau and agricultural data from the U.S. Department of Agriculture was used to create interactive visualizations illustrating patterns of access and their relationships with factors such as race, household income, education, and age (Fig. 1). Future work includes publishing the dashboard on the RAFI website, including time-series analysis of integrator companies, and working more with NSDA data.

North Carolina and Arkansas, with a high number of integrators, showed strong correlations between age/race demographics and integrator access.