



Food Desert Predictions

Presentation by Kyera Francis

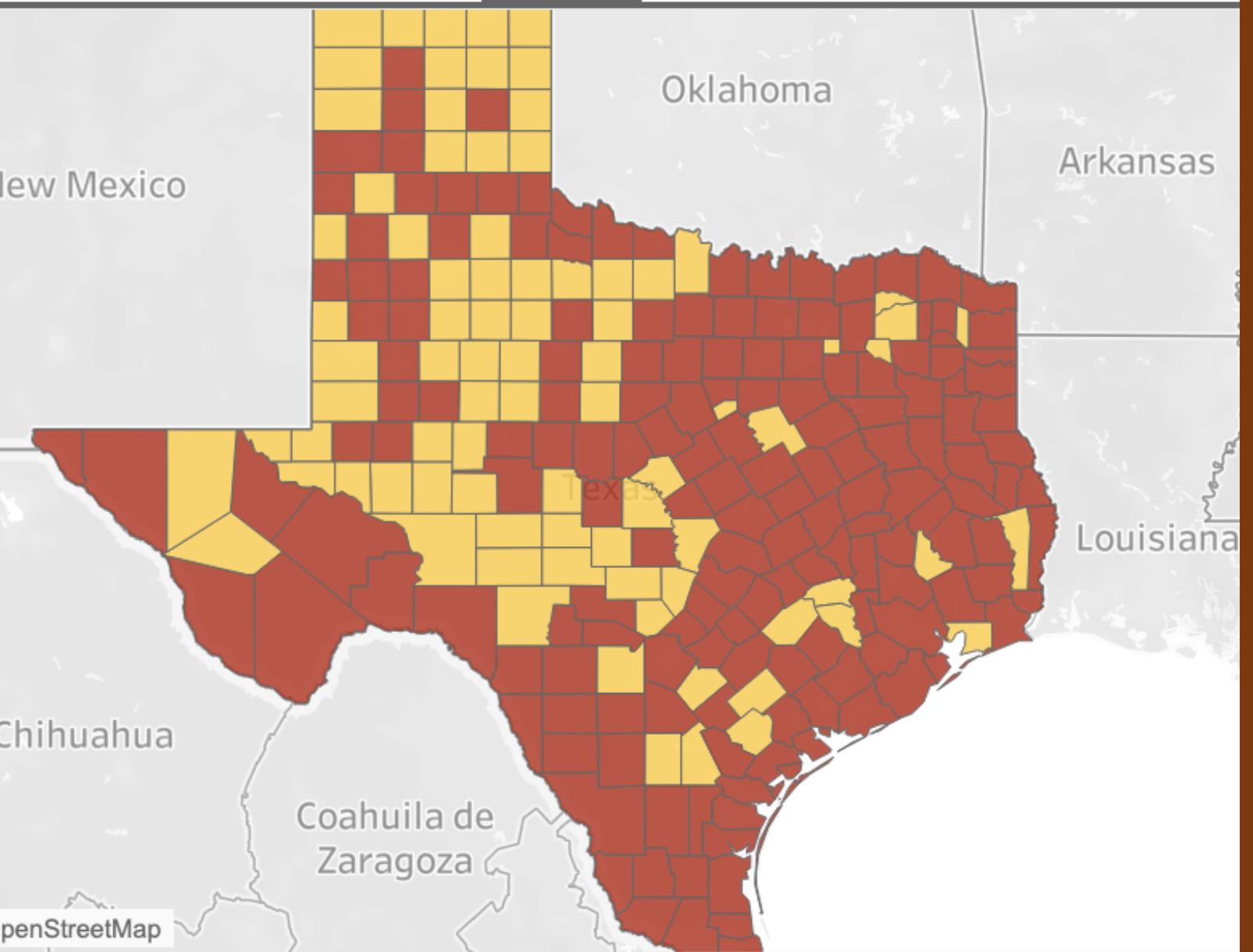




Introduction to Food Deserts

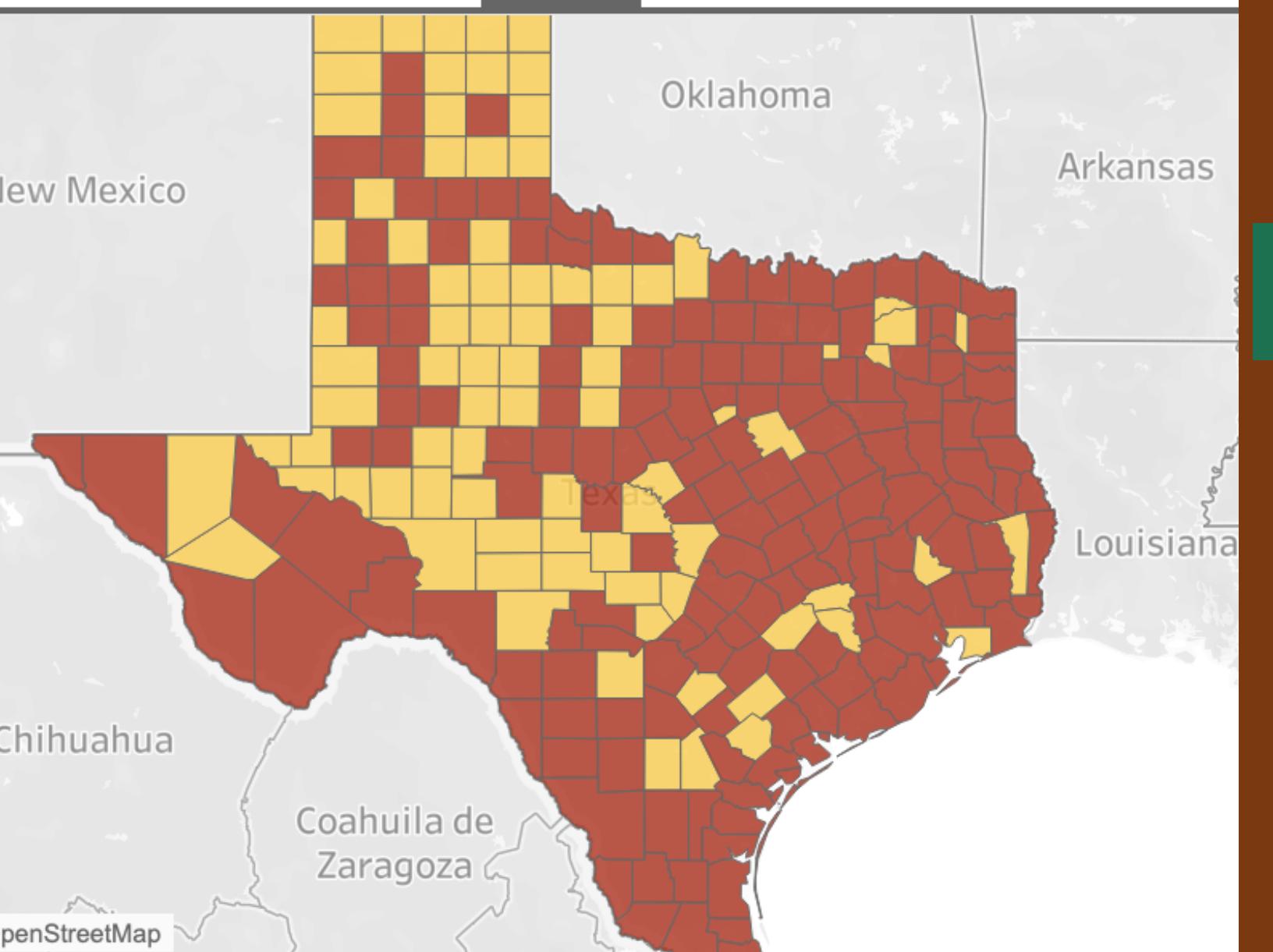
This system predicts food deserts to lessen
food scarcity

What Defines a Food Desert?



What Defines a Food Desert?

Income vs Distance

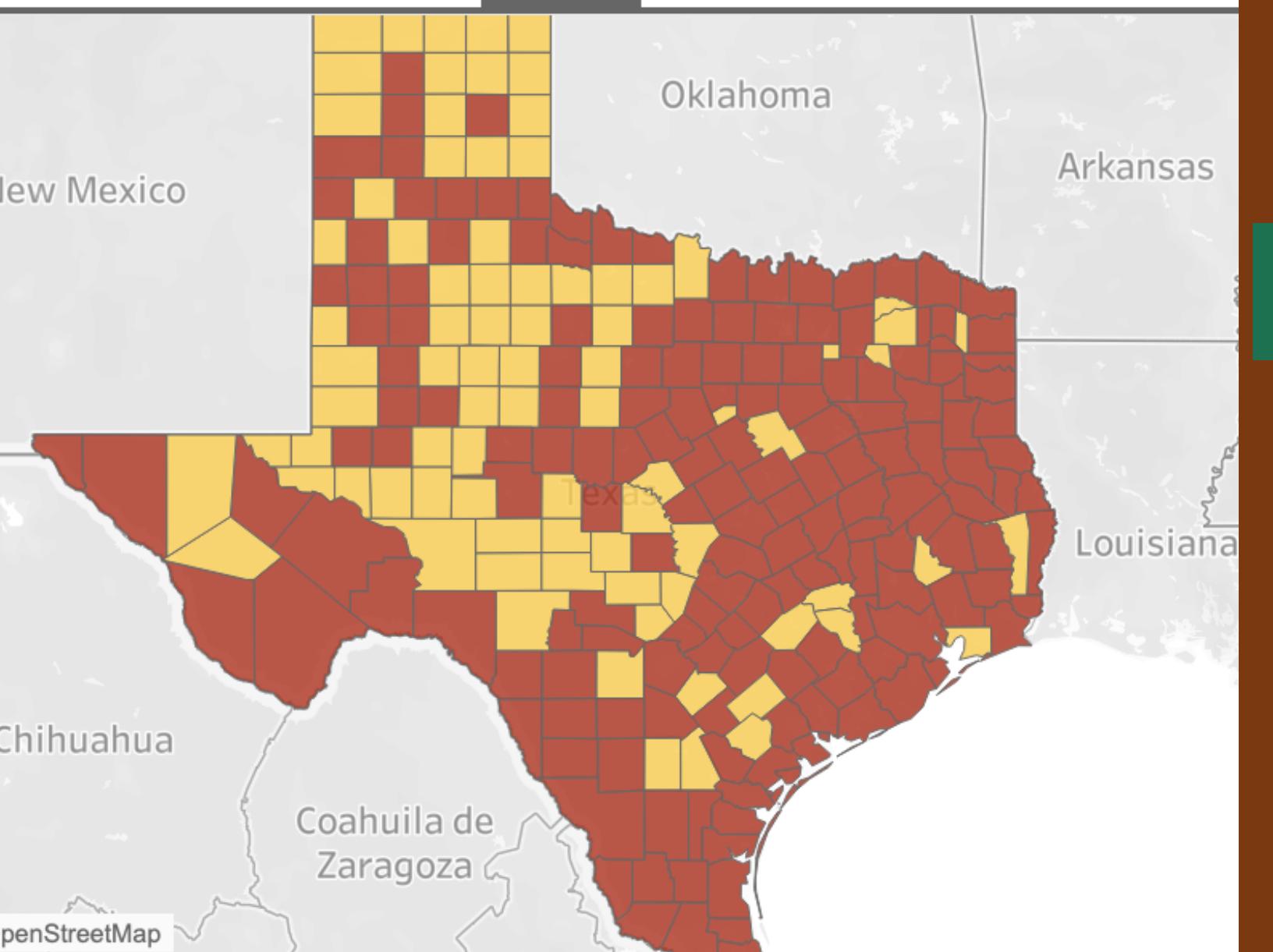


What Defines a Food Desert?

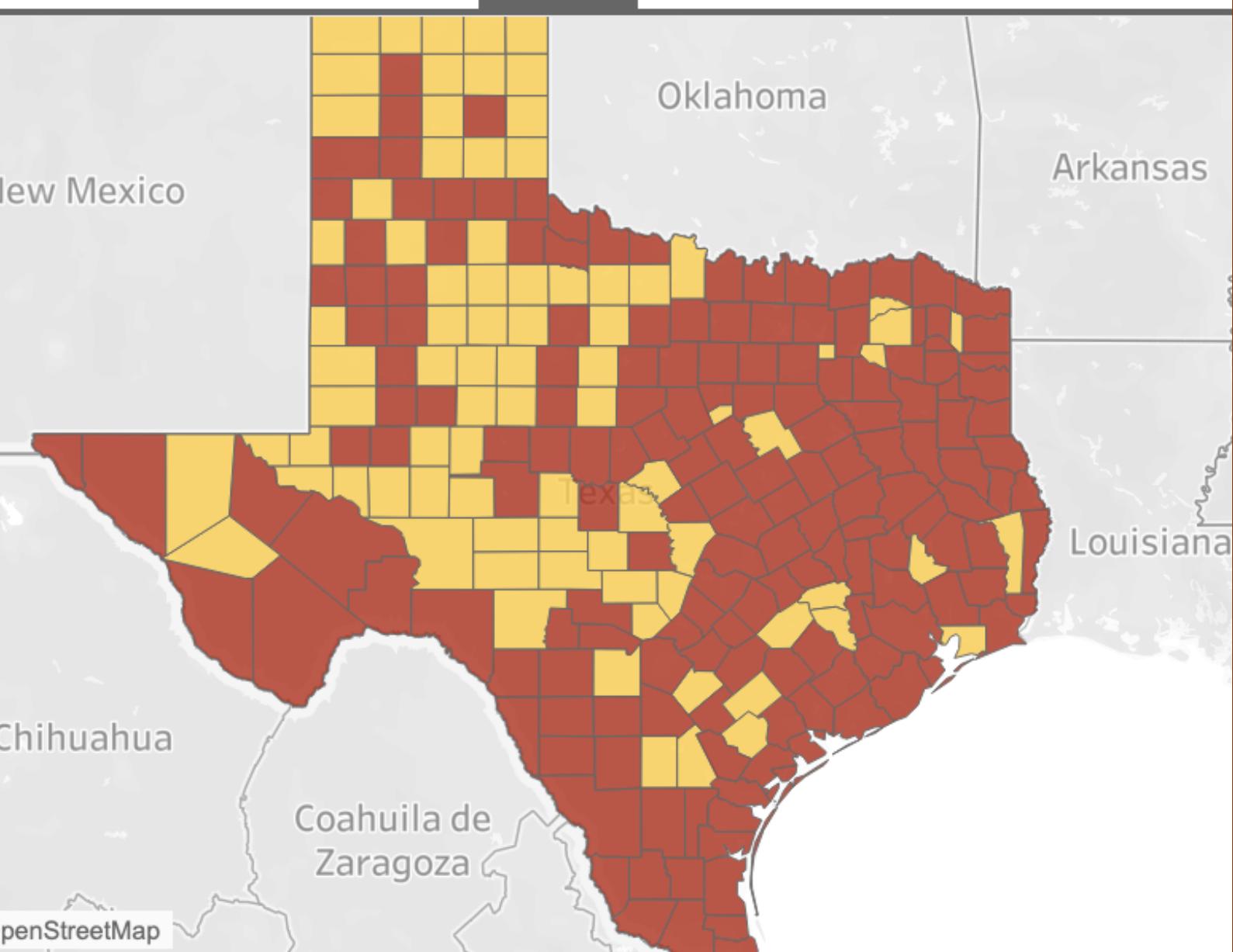
Income vs Distance

Low-Income
Households

More than 1 - 10
miles from
Affordable
Healthy Food
Options

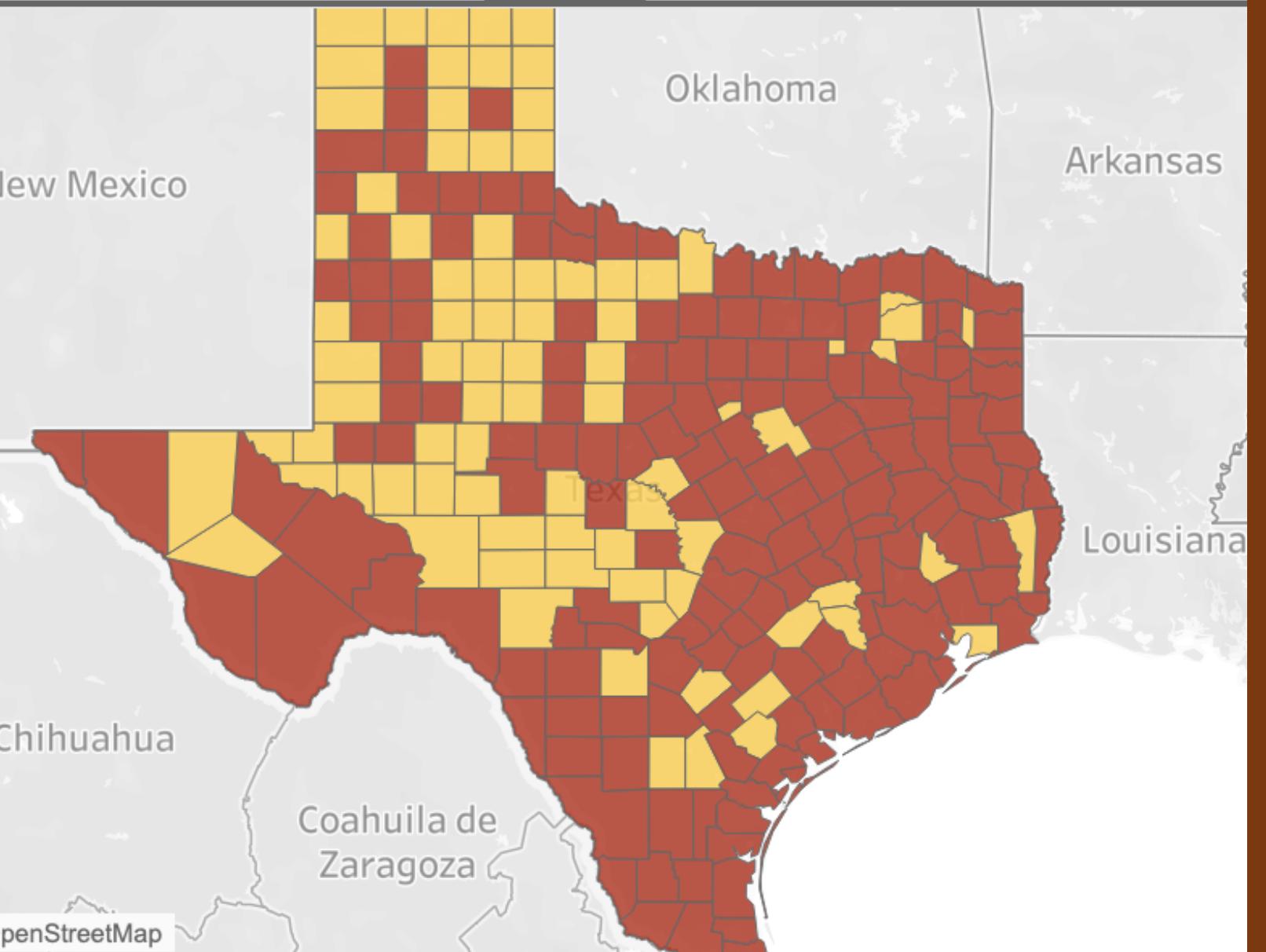


What Defines a Food Desert?

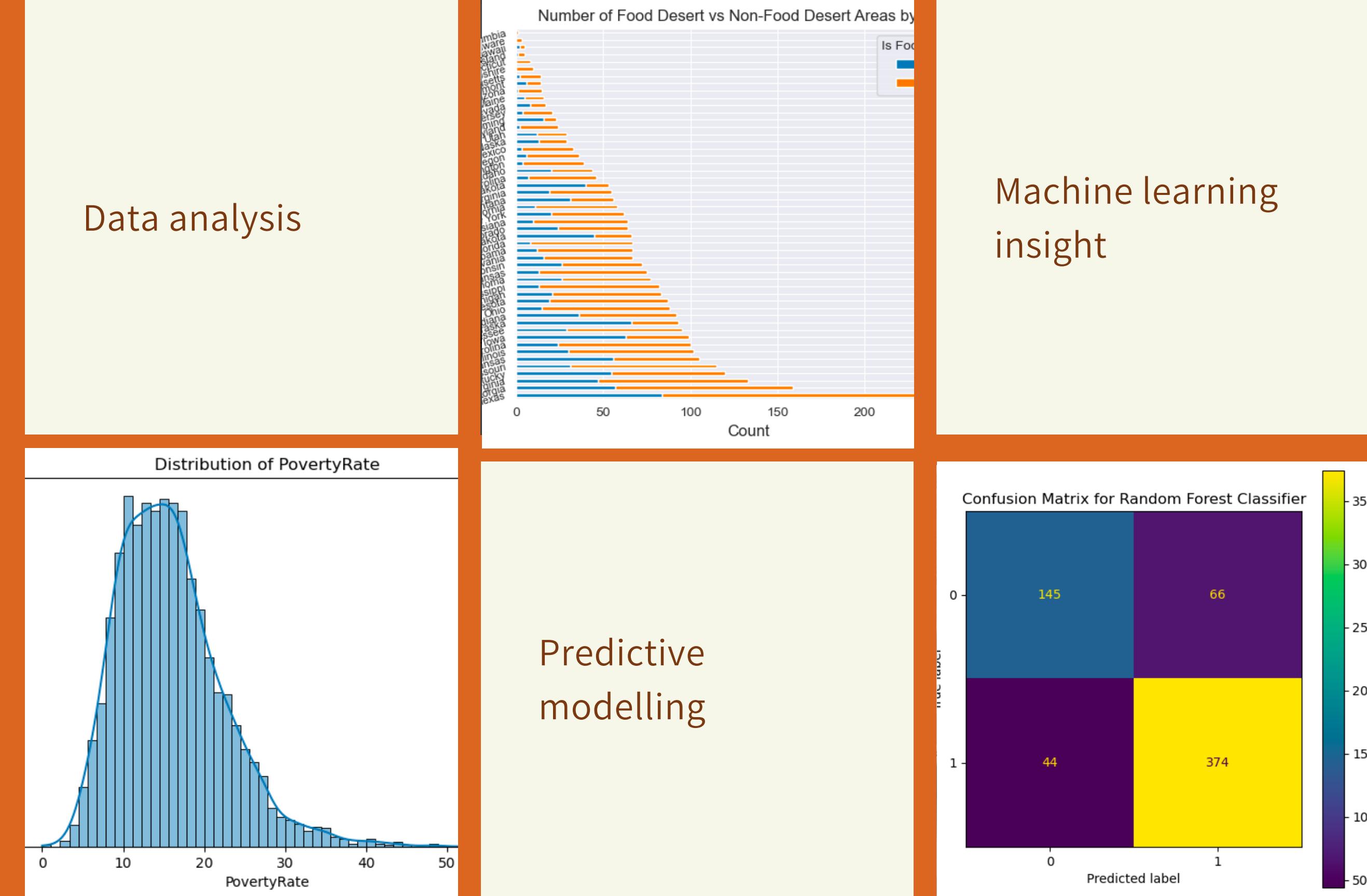


What Defines a Food Desert?

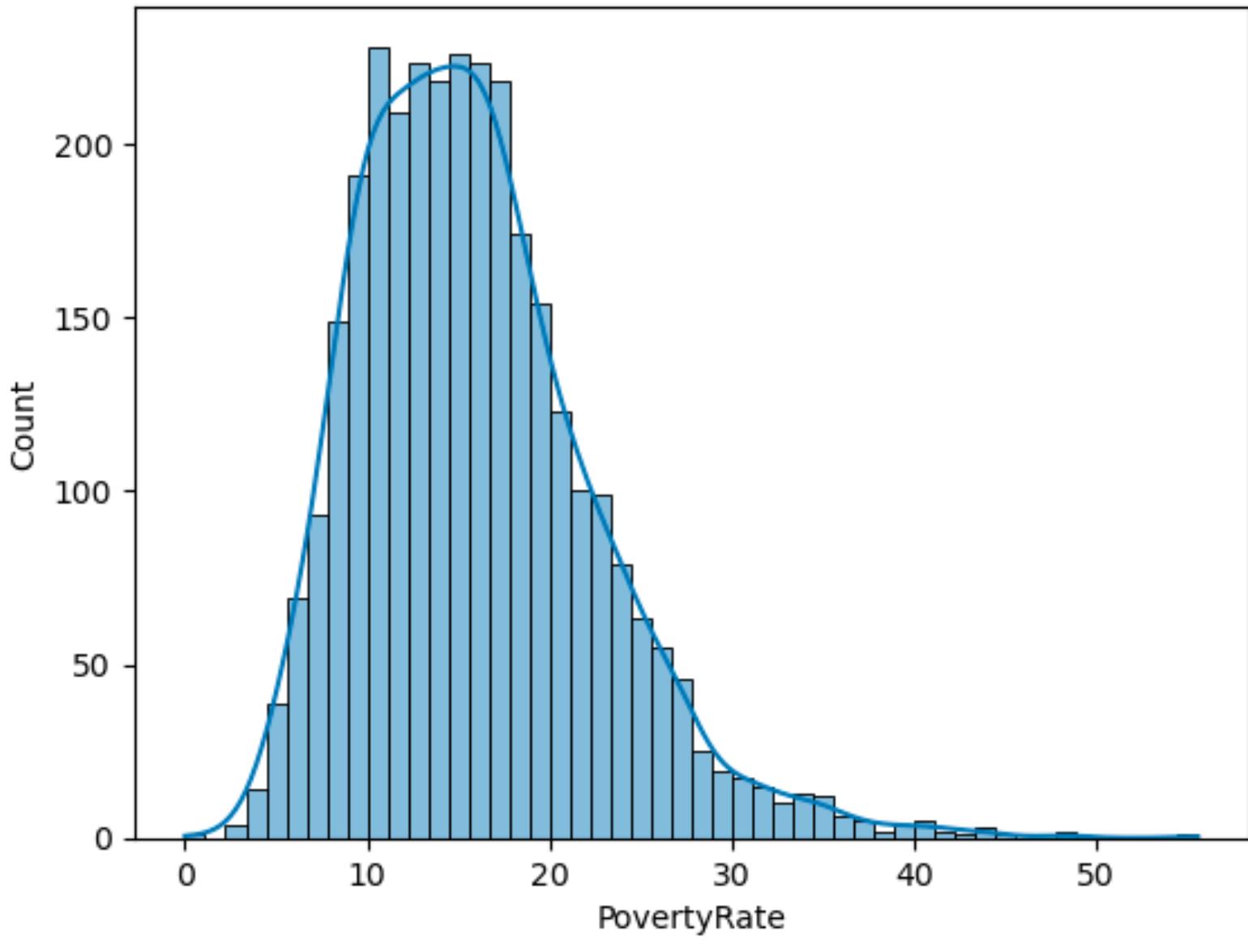
Now that you are familiar with what a food desert is, please provide your state, and county (in the chat) as well as if you believe you live in a food desert (yes, no). Lets see if the model predicted the same as you.



WORK FLOW



Distribution of PovertyRate

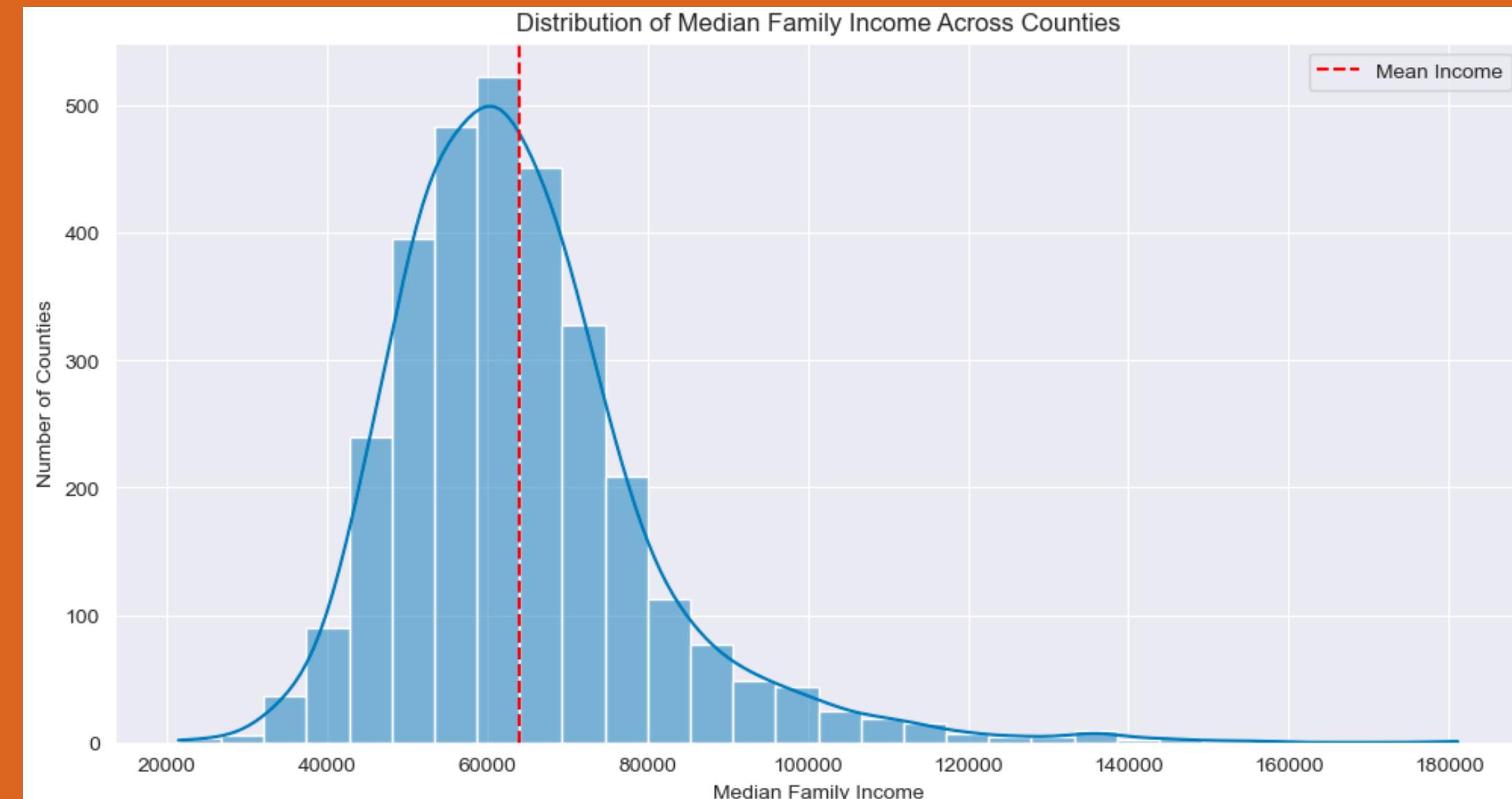


Insights:

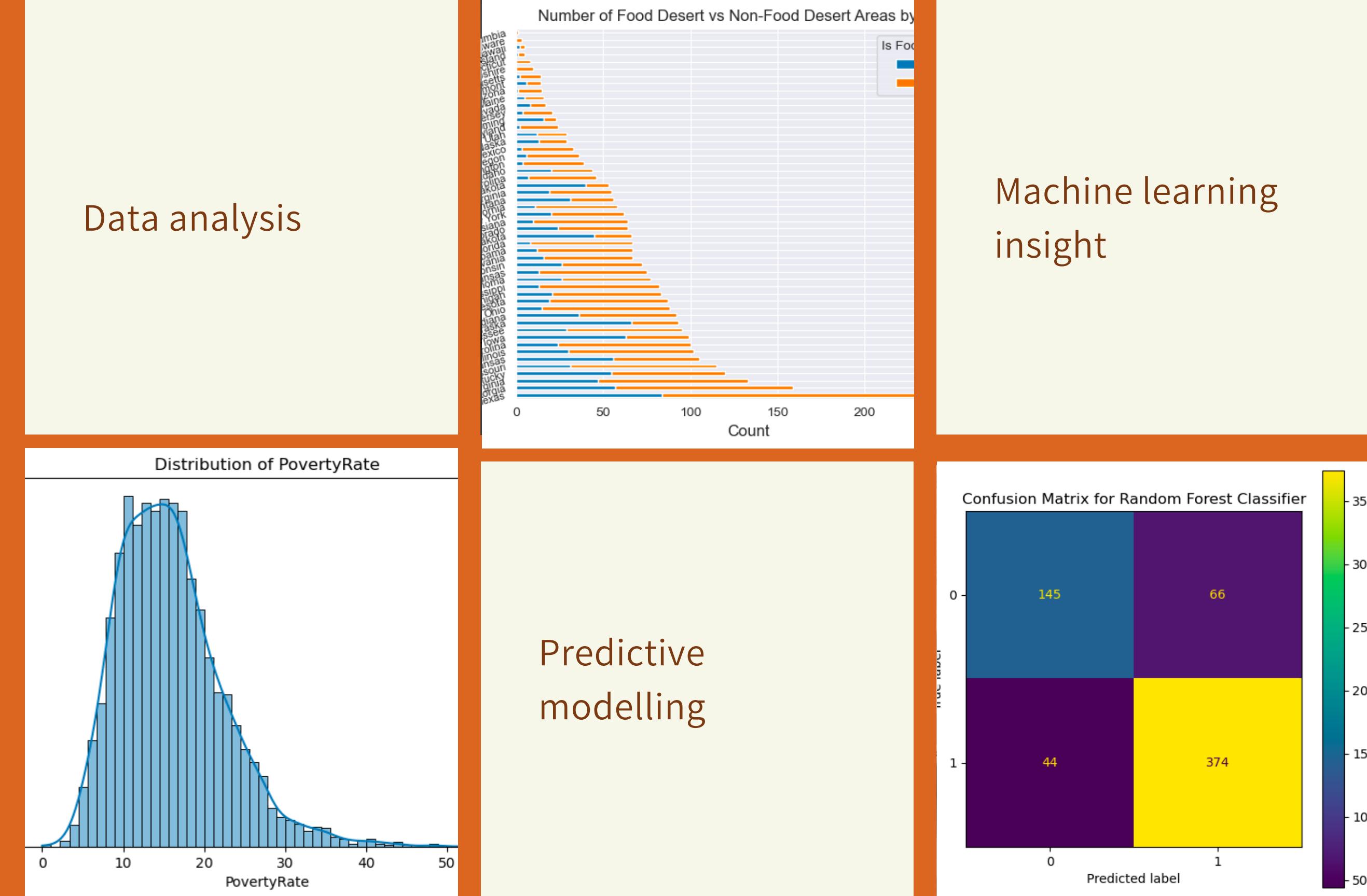
The strongest influence of food deserts may be the proximity to healthy options, not the inability to afford it.

RIGHT SKEWED POVERTY RATE AND MEDIAN FAMILY INCOME

Distribution of Median Family Income Across Counties

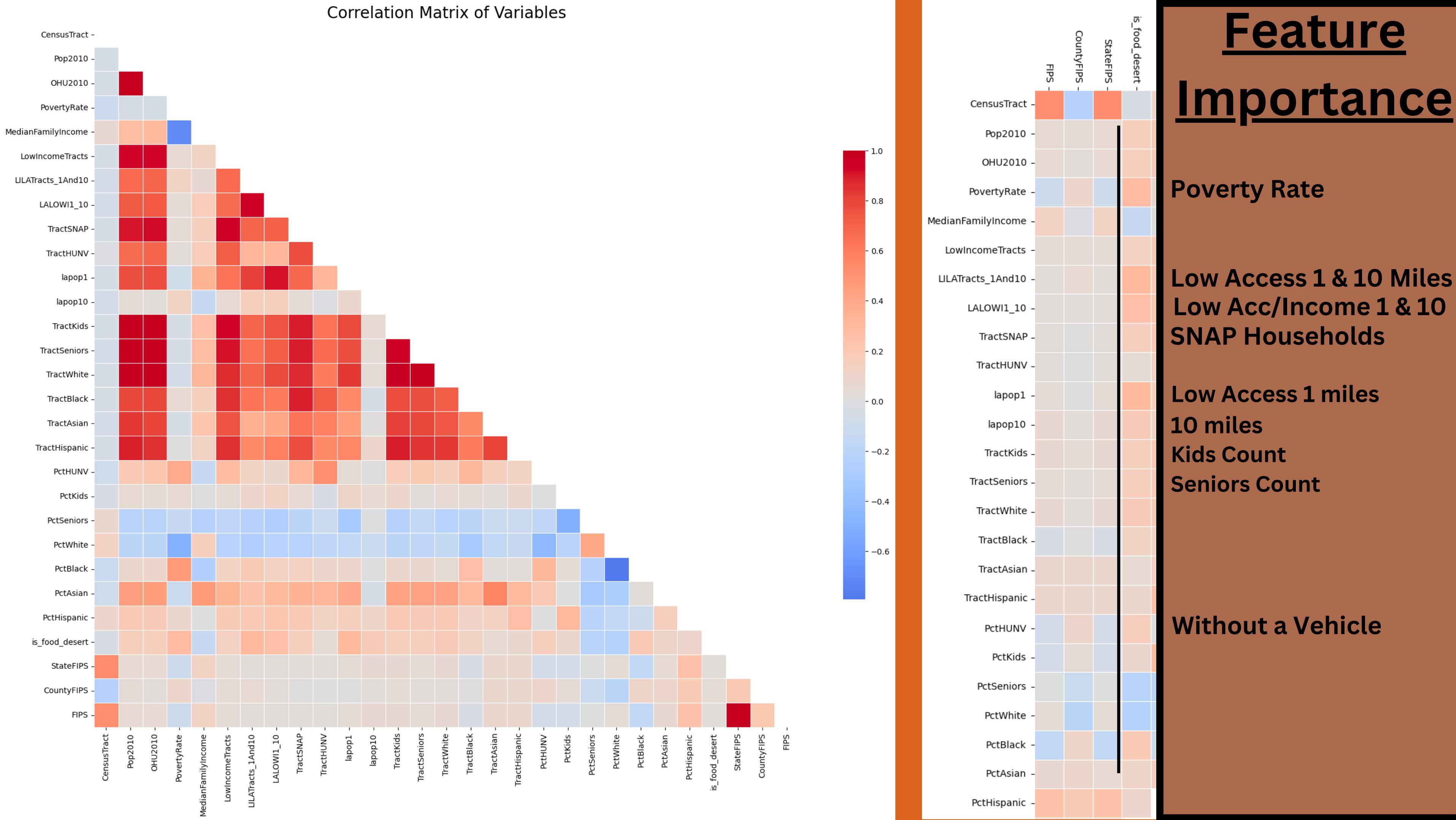


WORK FLOW

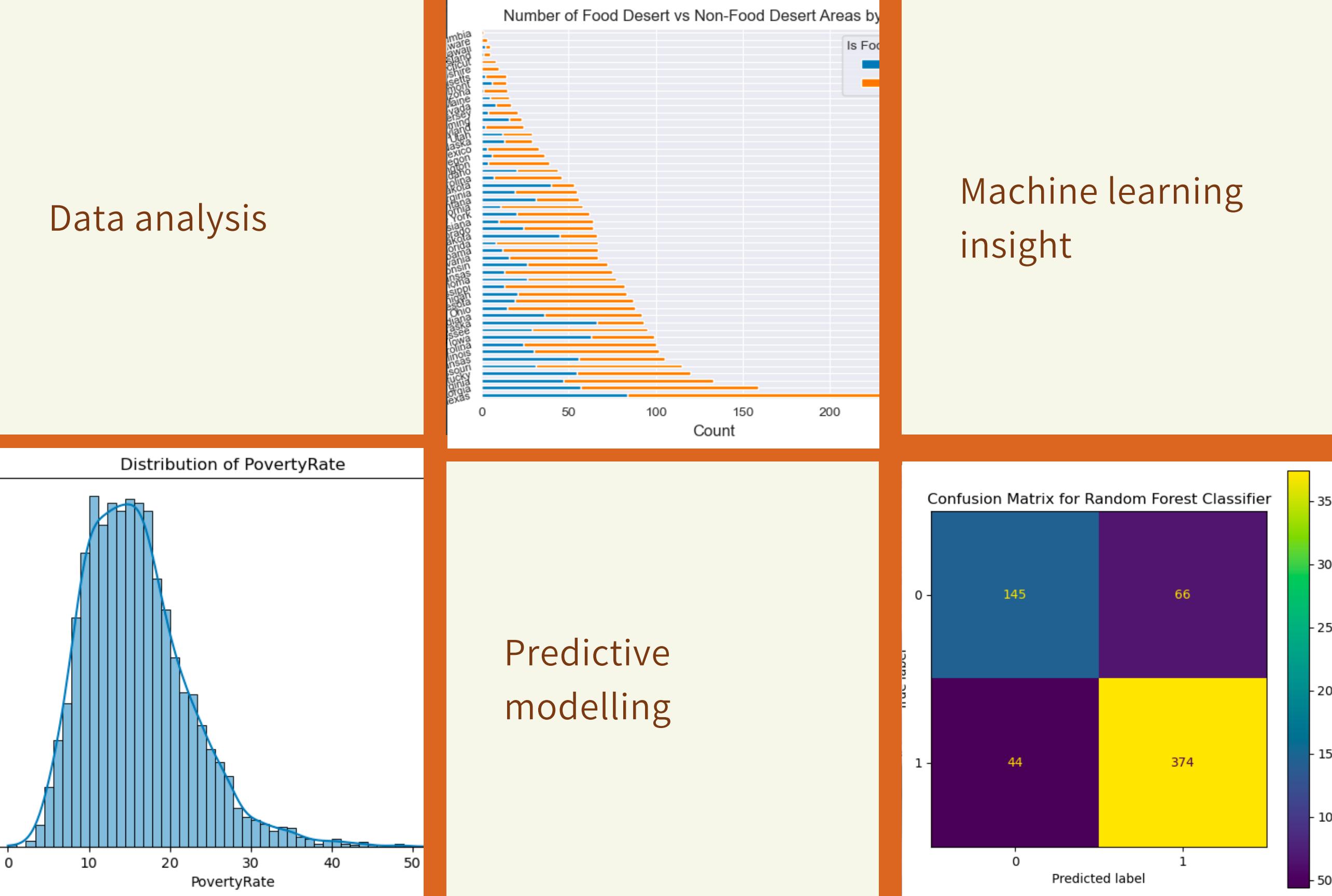


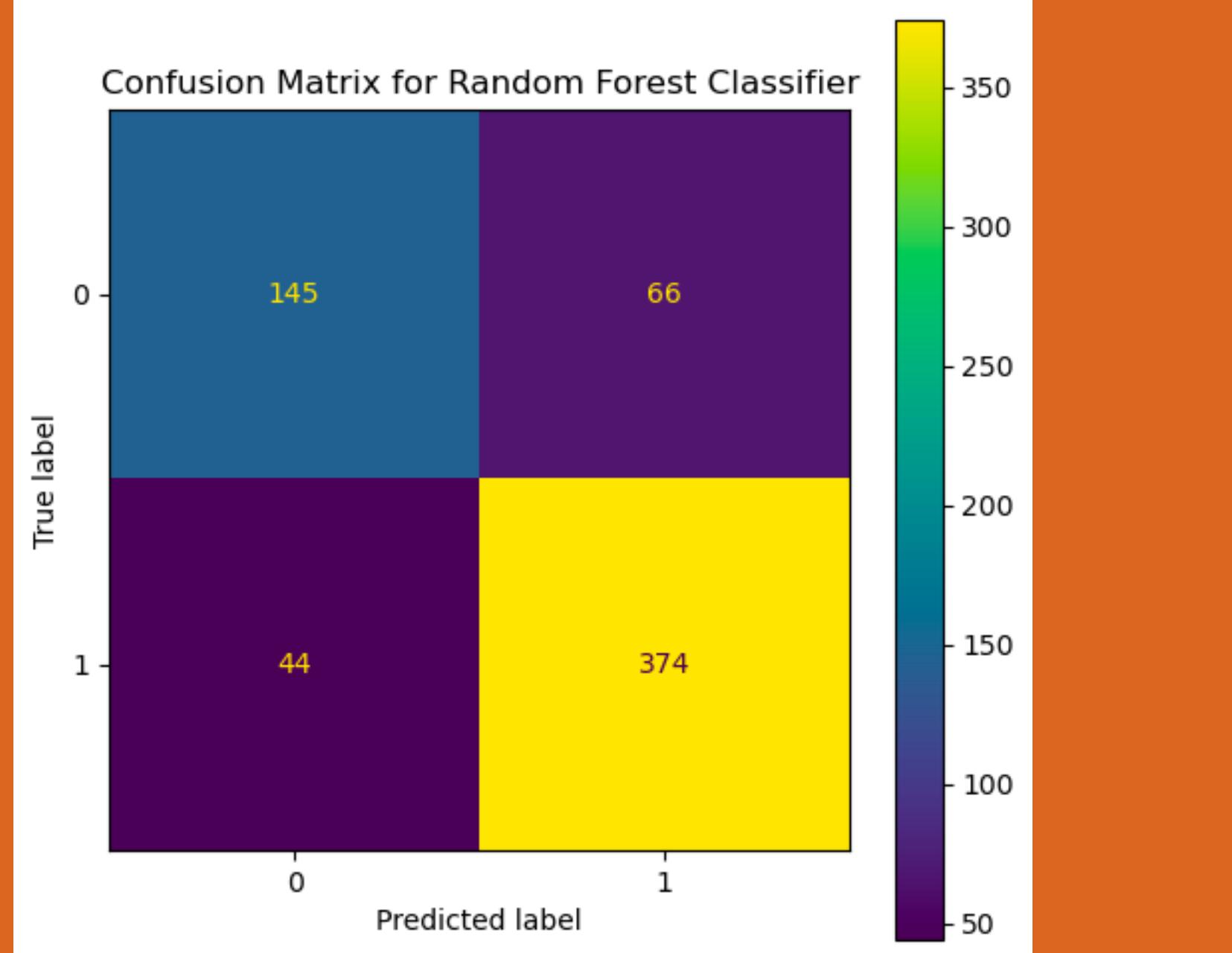
Feature

Importance

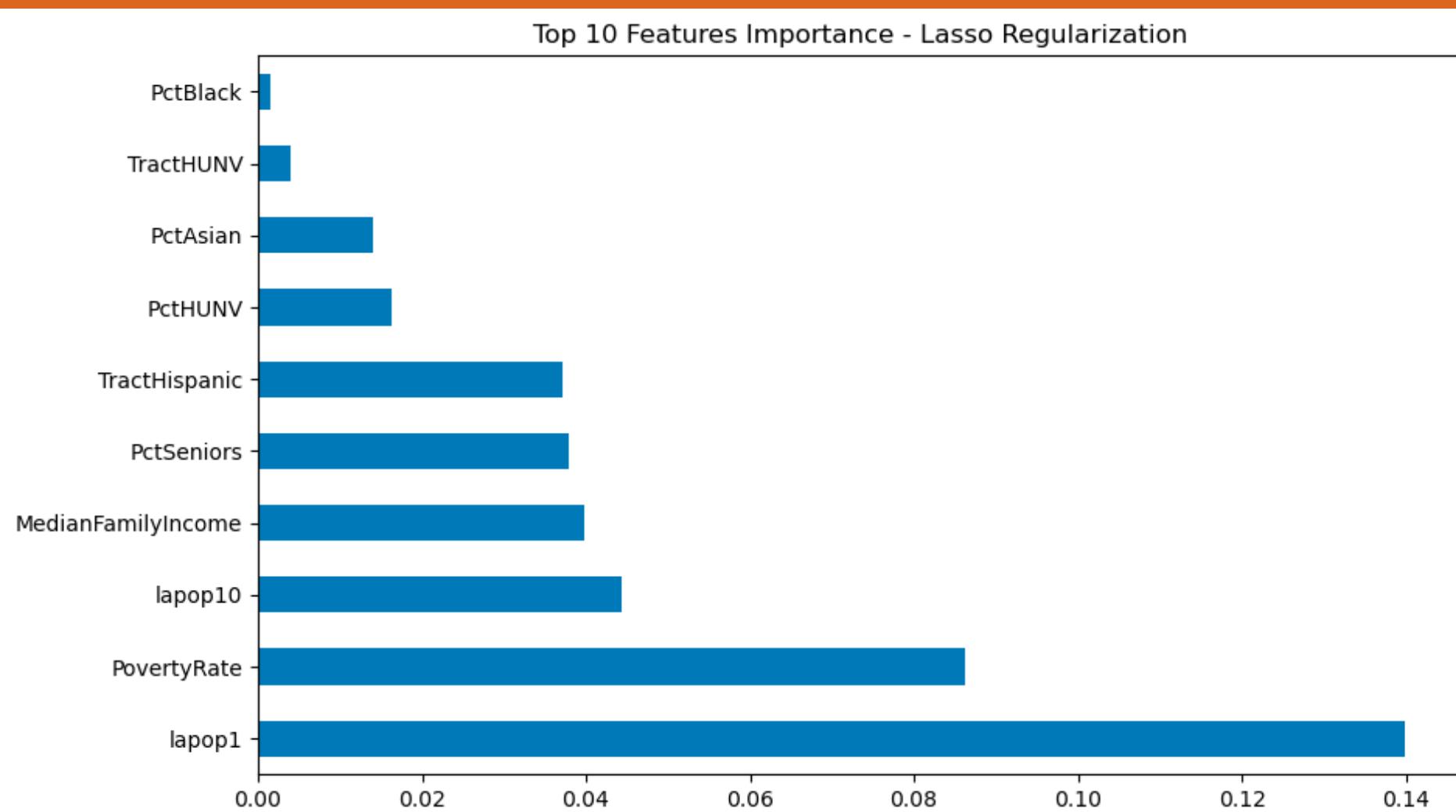
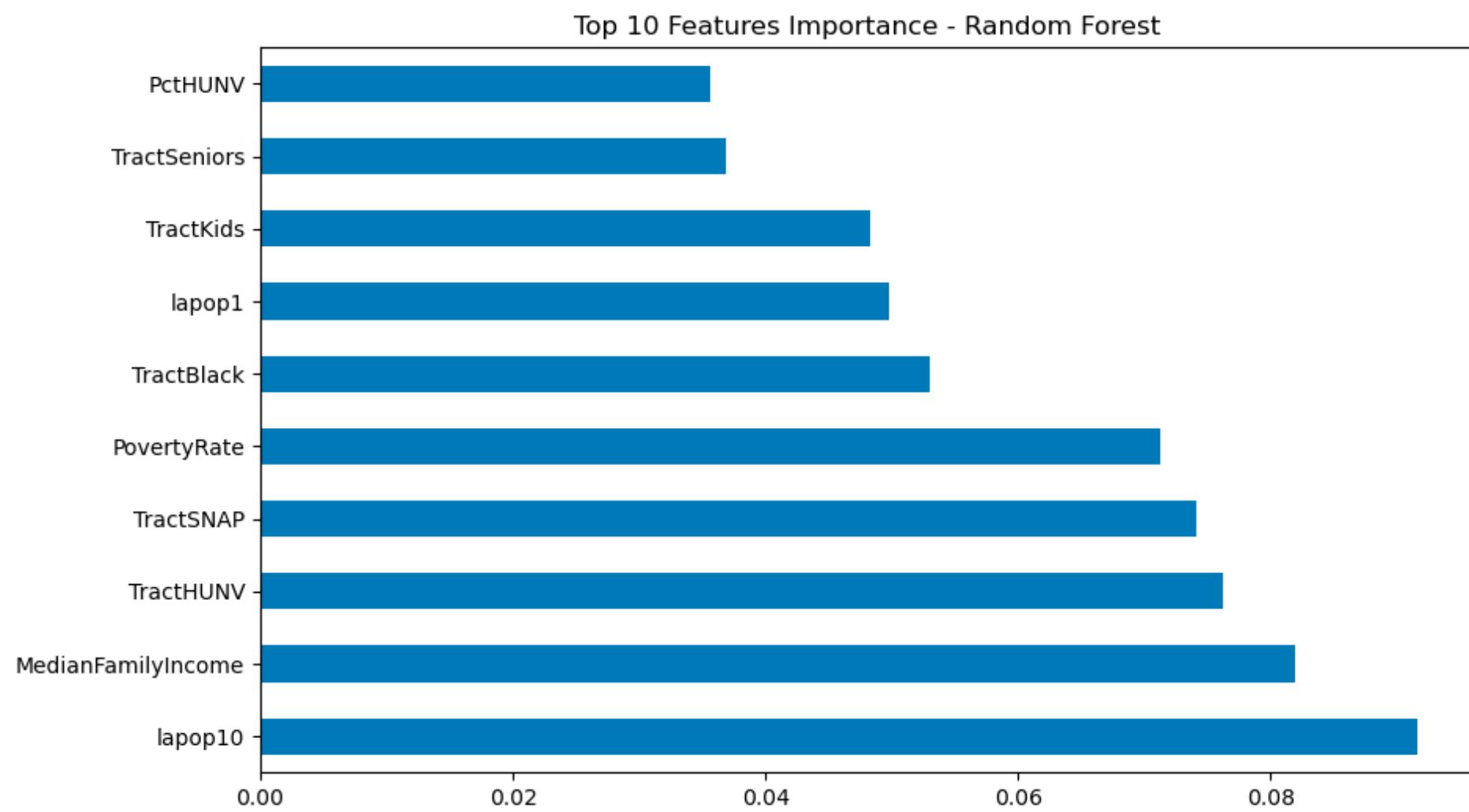


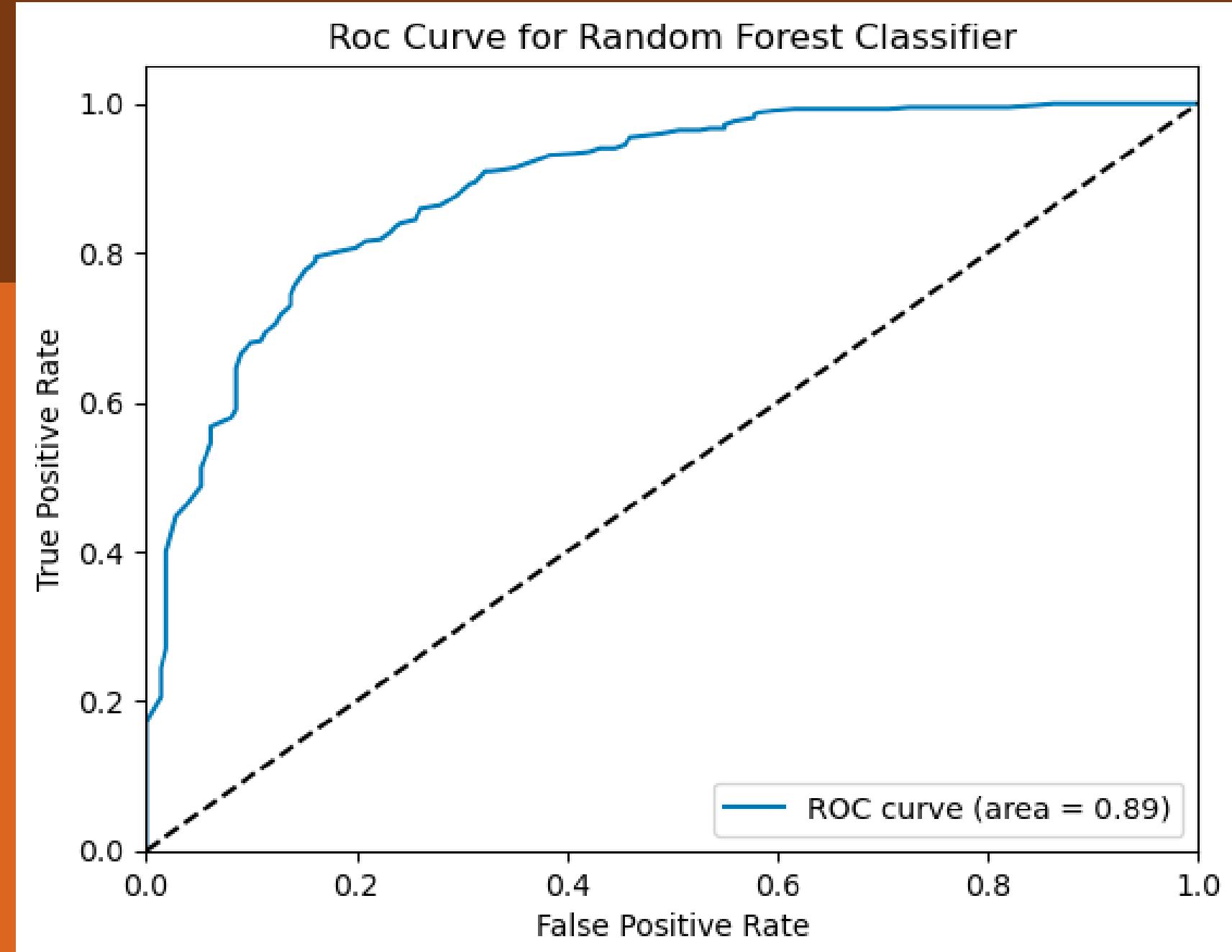
WORK FLOW





	Precision	Recall	F1-Score	Support
0	77	77	73	211
1	85	89	87	418
Accuracy			83	629
Weighted AVG	82	83	82	629





FOOD DESERT PREDICTION THROUGH MACHINE LEARNING

Steps Forward

GIS Data Utilization Plan

Neural Network Integration
Proposal

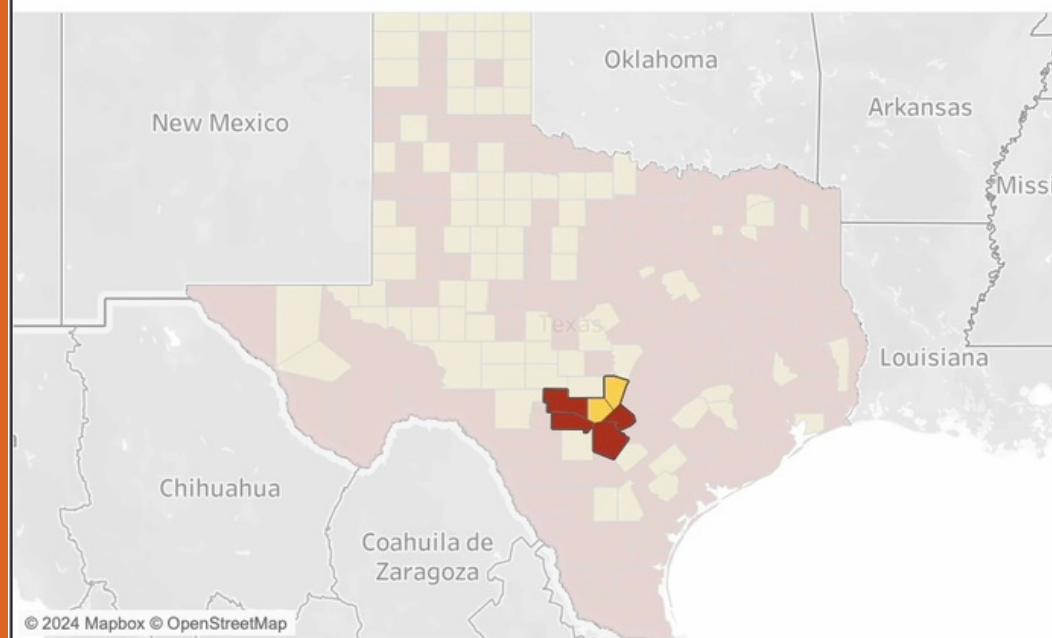
Farmers Market Initiative

Food Desert Classification Dashboard

The "Food Desert Classification" is based on a Logistic Regression model and is not 100% 'precise'. These are prediction based on a Machine Learning Algorithm.

State

(Multiple values) ▾



State

Texas

FoodDesert

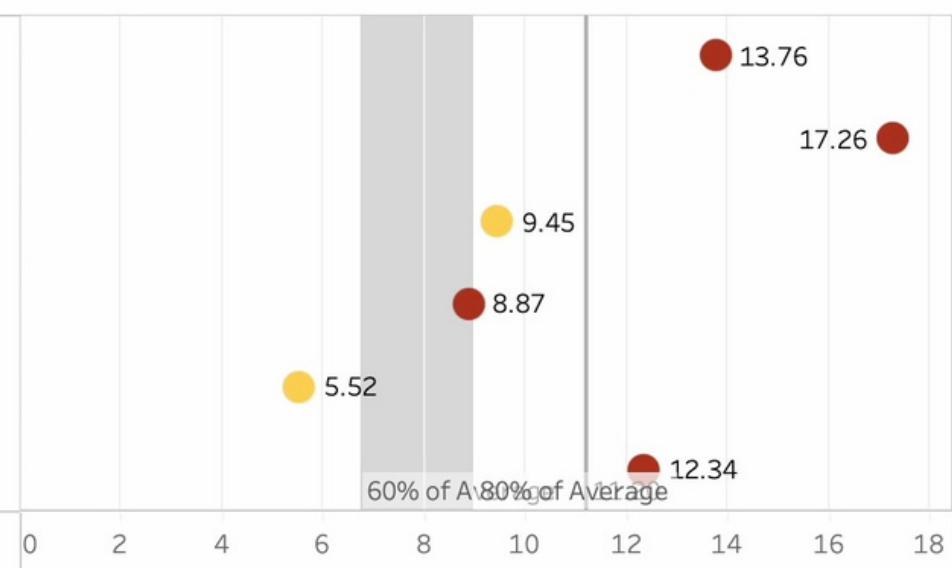
False True

Texas	Bandera County	■
	Bexar County	■
	Blanco County	■
	Comal County	■
	Kendall County	■
	Kerr County	■

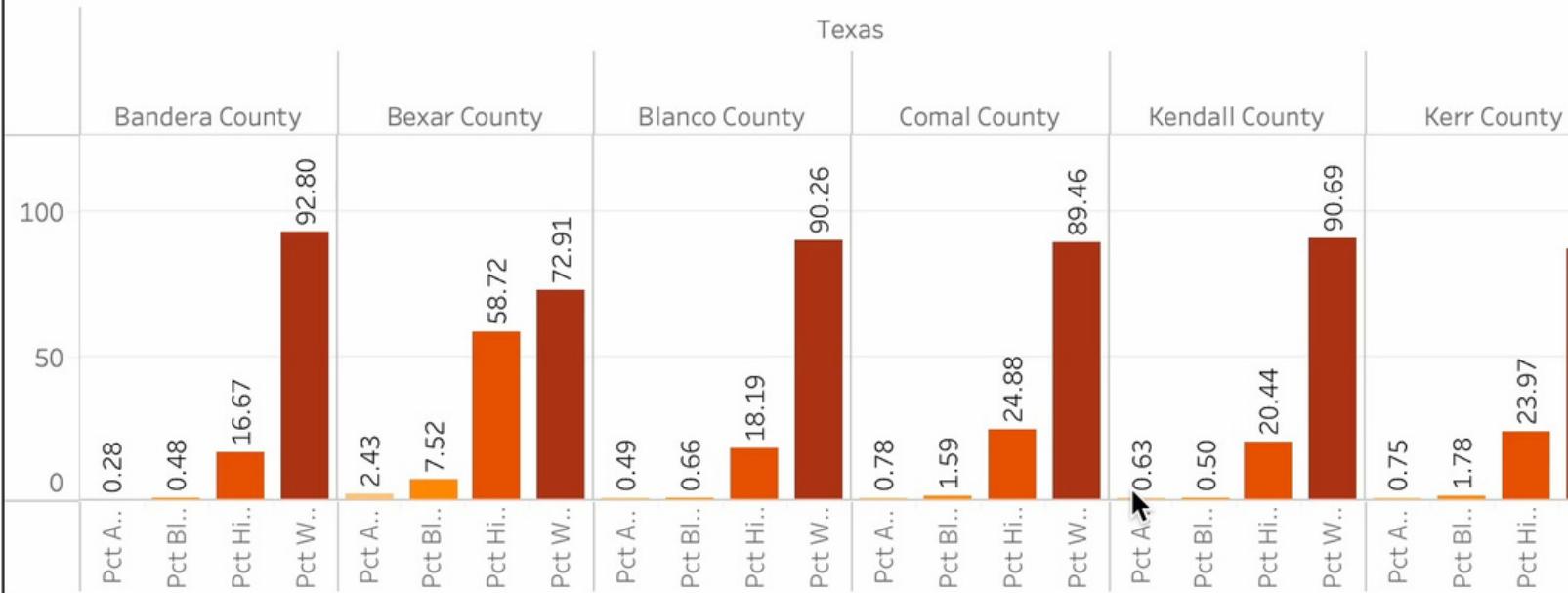
Poverty Rate by State/County

Texas

(All) ▾



County Population by Race/Ethnicity



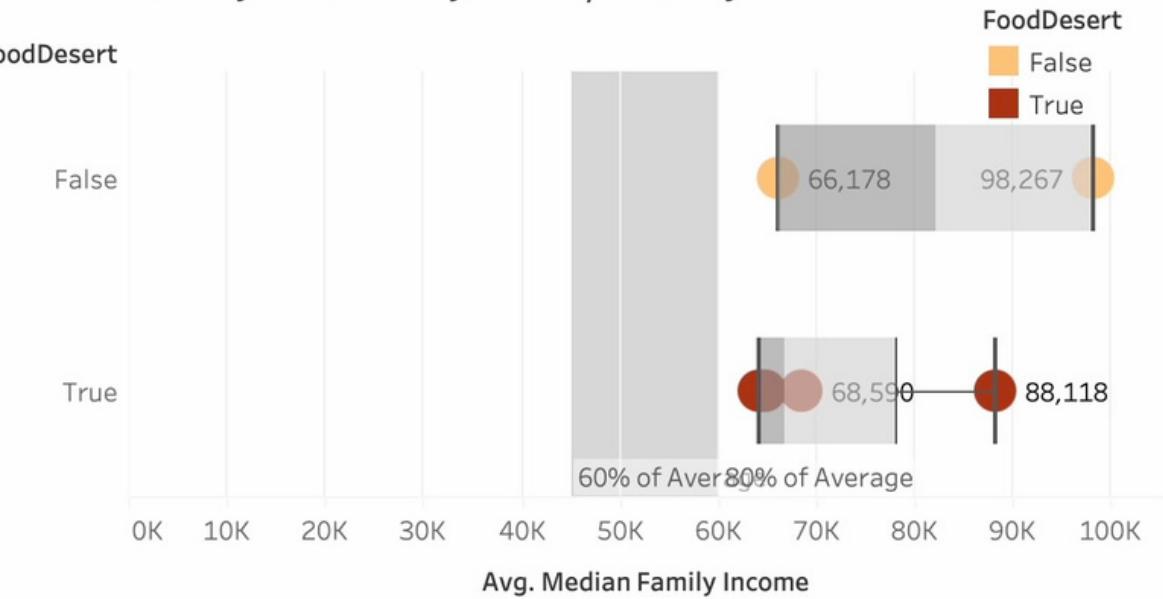
Please note: Hispanic can be used independently or in tandem with another race

Median Family Income by State/County

FoodDesert

False

True



Visualizing Insights

Thank you!