Christian Hicks

14 December 2021

PH 682

GIS Final Project Process Log

Downloading and import business location data

* Access Community Analyst from ArcGIS Online
* Select San Diego County by clicking Define Area and Select by Geography
* Use Business and Facilities Search tool to show businesses labeled as grocers within the San Diego County borders
* Download as Excel file
* Use Table to Excel tool to import Grocer data
* Use XY Table to points to match Longitude and Latitude variables with points on the map
* Change symbology to yellow circles

Downloading county, tract, and cholesterol data

* In ArcGIS Pro Desktop select insert map
* Choose ArcGIS online
* Search “CDC PLACES Cholesterol”
* Select “PLACES: High Cholesterol” map
* Remove unnecessary columns
* Export Counties and Tracts layers as feature class to project geodatabase with the expression “County name = San Diego”

Map 1: High Chol

* Change Tracts symbology to graduated colors of high cholesterol prevalence
* Change symbology coloring method to standard deviation
* Change labels to show numbers rather than units of standard deviation

Map 2: Grocer Density

* Use Kernal Density tool on Grocer data points
* Set symbology boundaries as San Diego County

Map 3: Nearby Grocer Count

* Use Buffer tool to create 1-mile circular buffer around each Grocer
* Use Summarize Within to count intersecting Grocer Buffers, representing the number of grocers within each Tract or within 1 mile of Tract border
* Change symbology method to geometric intervals

Map 4: Prevalence per Grocer

* Change symbology colors based on high cholesterol prevalence normalized by Grocer count
* Use quantile method of symbology

Map 5: GLR Residuals

* Use Generalized Linear Regression tool and define Tract high cholesterol prevalence as the dependent variable and Tract Grocer count as the independent variable
* Change symbology to show Residuals colored by standard deviation
* This is to show outliers in the equation