

IBM Data Science Capstone Project

Detecting Food Deserts in Los Angeles County

Introduction

Food deserts are areas where access to affordable, nutritious food is limited. Access can be defined as inadequate transportation, inadequate income, or even as simple as not having a farmer's market or grocery store within a certain radius.

Food deserts can also be associated with multiple health problems such as diabetes, high blood pressure, and other components of metabolic syndrome. Local governments are now trying to implement programs that mitigate food deserts.

Business Problem

Los Angeles County has a high unemployment rate and a high disparity in incomes among zip codes. Given these characteristics, it may become prone to food deserts. As most city and county budgets are already strained, proliferation of food deserts could also lead to increased public health problems, thus creating a cascade effect of strained public health and social resources.

Identification of food deserts could assist city and county governments during permitting and development processes, helping to direct new investment from grocery chains and farmers markets to areas where these resources are needed most. Local governments could also offer incentives to appropriate vendors in the forms of tax benefits, tax credits for employment, or other expenditure offsets.

Data

Data for this project will be aggregated from several sources:

1. Foursquare API – Location data for grocery stores and farmers markets to identify current status for access to nutritious foods
2. LA Almanac – Median income data by zip code in Los Angeles County and all zip codes in LA County; identify areas at or below the poverty line or below the overall median income in LA County and/or California
3. LA Times – Zip code boundary data for use in choropleth mapping of median income in LA County