

Food Availability in Indianapolis

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1. Introduction

Problem

The city of Indianapolis, like many large cities in the United States, has experienced a trend in recent years in which many communities have seen supermarkets and grocery stores disappear due to business challenges in sustaining profitability in an industry notorious for low profit margins and high overhead costs. In what has become known as the “food desert” problem, many communities have fewer and fewer options for fresh, affordable and healthy food. The communities that are typically affected by this issue have tended to be more economically challenged and it is often theorized that the lack of affordable healthy food (the type available at a grocery or health food store) combined with prevalent and cheap fast food can compound economic challenges with health challenges in these communities. This is a large and multi-faceted issue but before we can really understand the implications of the issue we need to understand the nature of it and how it manifests itself in reality. I hope to use foursquare data to get a better understanding of first that there is a clear issue, and second how the issue manifests itself in terms of the types of venues that are available in different areas of the city.

Interest

There are many groups that have a business interest in solving this problem. The government has an obvious interest in solving problems for the voters in these areas. In addition to simply keeping voters happy there is the question of government healthcare spending. In the United States we have a high cost health system and for many lower income or older Americans the government

pays for a substantial portion of the healthcare cost so understanding the food availability for a population could certainly have an impact on health costs and therefore a large piece of the government budget. If my project is successful and we are able to better understand food availability I could follow this up with a data project to try to connect this data with government health data to see what correlations exist between food availability and health outcomes. Another possible business interest would be food retailers, since this project should offer insights into potential opportunities for grocery business. I would especially be interested in a follow up project bringing in data on transportation to see what opportunities might exist for grocery delivery services to those who might not have a car or access to public transit.

Data

I've identified several publicly available data sources to be able to segment the city of Indianapolis by zip code. My first source is the Us Postal service website (<https://www.unitedstateszipcodes.org>) which has a great deal of info on each zip code in the US. I was able to download a CSV file with info on all the zipcodes and I manually sorted it based on counties and saved a copy with just the zipcodes for Marion County which geographically coincides with the city of Indianapolis. Next I used my list of zip codes to pull an even larger pool of data from the python database called uszipcodes (<https://pypi.org/project/uszipcode/>). This database included north, south, east and west latitude and longitude boundaries for each zip code as well as the central coordinates. It also offered median income info, population, square mileage, and many other demographic statistics. The main source of data on the actual food venues was Foursquare which allowed for searching based on each zipcode's rough boundaries and using their venue categories to pull relevant data for the project.