

Keego Harbor, MI | Data

Organic
Cannabis
Farms

Population
3,022
0.2%
Growth

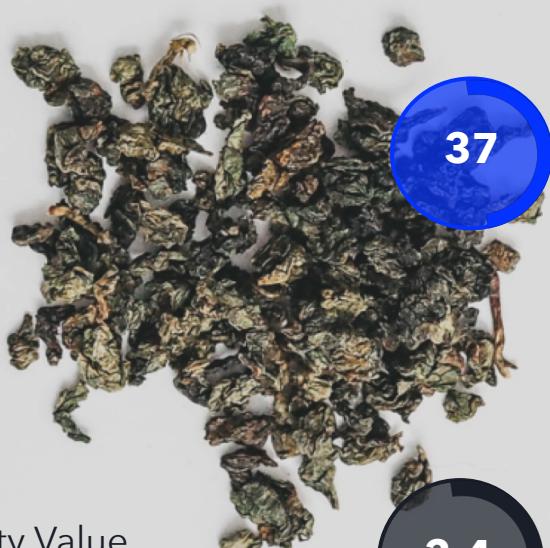
Median
Household Income
\$43,281
1.56% Growth



Medium Property Value
\$111,100
6.32% Growth



Number of
Employees
1,699
8.77% Growth



Created by Gregory Gray Jr.

ECONOMY

Retail and Food & Accommodations are the highest industrial skill set for residents of Keego Harbor, MI.

DIVERSITY

US and Foreign-born workers meet or exceed the most productive working age for agriculture farm employees

HEALTH & SAFETY

Consistent drop in the homicide rate linked to the largest county near Keego Harbor, MI between 2015 - 2017.

LIVING

Residents have two or more modes of transportation.

On average, commuters travel time to Detroit, MI

Cars are the preferred motor vehicle.

Discussion of the business problem and external stakeholders

What is the specific business problem?

The executives at Nila Bean Inc. and Cannabis farmers Black & Gold Leaf are not clear on the Economics, Diversity, Health & Safety, Education or leadership's investment concerns. Living status in the city Keego Harbor, MI.

The primary goal of building an Organic Cannabis farm in and transitioning to retails shops in both Keego Harbor & Detroit is totally contingent on understanding the five key factors listed above.

Dr. Luther Jr. has decided that the problem is not an investment problem per-say but one of inadequate human capital. Or a better way of stating it is not "what" is in the city of Keego or Detroit but "who" is located in these areas. To address this problem Dr. Luther Jr. plans to capture data that aligns with both organization's strategies.

Description of the data to solve the problem and its the source.

What data is available?

Per Data USA, a website created in 2014, by Deloitte, Datawheel, and Cesar Hidalgo, Professor at the MIT Media Lab and Director of Collective Learning, has a wealth of public US Government statistical data that's

perfect for this data analysis.

Compared to other US cities, Keego Harbor, MI has a very small population and the historical data is scarce. To ensure the "right data" is collected DataUSA.io was utilized to provide a database of unstructured and structured data which is key to solving orleadership's investment concerns.

Dr. Luther Jr. will also utilize a few API features provided by Foursquare to recommend if building retails shops in both cities are ideal. Some of the features are ratings, lists, local searches, and other options that provides the best fit for adequate statistical analysis.

How should the data be extracted?

The data was download from <https://datausa.io/profile/geo/keego-harbor-mi/> and transformed using Microsoft Excel and exported in CSV format.

Main component of the report, exploratory data analysis, inferential statistical testing performed, machine learnings and the utilization.

Exploratory Data Analysis

Basic Visualization: tools utilized were Box Plot, Pie, Line and Bar Charts.

Advanced Visualization: tools deployed were Geospatial Data to create a map of Michigan (Keego Harbor and Detroit) using Folium a marker was added to display the locations.

Inferential Statistical Testing Performed

Raw data from DataUSA.io allows for a generalized conclusion of the growth and human resource potential in Keego Harbor and Detroit, MI.

Applying Excel's Data Analysis tools generates the mean, median, mode, range, standard deviation, variance etc. which can be easily communicated in the data story.

Machine Learning and Utilization

Skilled Data Scientists understand that not all business decisions require advanced techniques. Applying Machine Learning to this particular business problem would be counterintuitive and would fail to address the concerns identified during the Data Section phase.

In retrospect, Dr Luther Jr. came to the conclusion that fitting Machine Learning methods would not be the best approach.

Observations

Citizens of Keego Harbor, MI have the demographics to fully staff an Organic

Cannabis farm.

- Population, as of 2016, is 3,022 with a 0.2% growth rate.
- Medium Age is 37 for Foreign and US born citizens.
- Total number of employees is 1,699 with a growth rate of 8.77 %.
- Largest industries are Retail at 288 per capita and Accommodation & Food Service at 214 per capita.
- Education was not a considered factor.

Recommendations

- A. Entrepreneurs at Black & Gold Leaf should consider relocating to Keego Harbor, MI and building an Organic Cannabis Farm with the expectation that their staffing needs.
- B. Entrepreneurs at Black & Gold Leaf should consider the wage of retail and agricultural industries as a mode for hiring.
- C. Nila Bean Investment is well intended in building Cannabis retail shops near "Top Rated" businesses based on Foursquare's API research feature.
- D. Nila Bean Investment would benefit from the workforce growth potential provided by Keego Harbor, MI.

Reported Findings

- A. The business problem was an Exploratory endeavor primarily geared on presenting facts as they are.
- B. Before the initial investment is made more effort should be taken into understanding the psychological or attitudes towards the use, manufacturing, and distribution of Cannabis in Keego Harbor and Detroit, MI.
- C. After careful investigation it was determined that Machine Learning should not be used before the initial investment but it would be a worthy application during manufacturing and distribution.
- D. As technology grows so will the skills needed to drive down cost and both organization should consider improving their training and development strategies.

Link to Code

Notebook on GitHub labeled (Battle of Neigh.ipynb):

<https://github.com/DailyDataSci/Battle-of-Neighborhoods.git>

Notebook on IBM Watson Cloud Direct Link (showing map and markers):

https://dataplatform.cloud.ibm.com/analytics/notebooks/v2/23dc4eb6-95e8-4d50-9814-369191f3b98c/view?access_token=20a8a6b6576df012a8c9b1d8b9e77e6081c366a72f064f25f30564fe79c4d35

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