**Fueldup Consumer Behavior**

MSBA 5303 - Programming for Analytics

Project Proposal

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**Introduction**

In today’s fast-paced world, with very little spare time in hand, where everyone is busy in their life whether that is going to work, attending meetings, taking kids to their activities or family outings, things like Fueldup is what everyone needs to take some load off your back. Fueldup is a fuel delivery service that brings fuel directly to you whether that is at your workplace, home or anywhere else.

We will be analyzing the potential target customers who will be willing to use this service. People with busy schedules not able to give extra time to fuel their vehicles are more likely to pay for such service which will save their time.

To recognize customer behavior and to identify potential customers who will be willing to use the fuel delivery service, we are going to collect the demographics information of Oklahoma residents such as household income, marital status, age, disability, etc. We will also be using the Oklahoma Gas Excise tax information to find target customers who will be inclined to use the service.

Fueldup which is a startup company has an innovative idea of delivering gas to the people rather than having to wait in a long line just to fill up your car. They provide gas at the same or even lower rate in comparison to gas stations in your neighborhood. [[1]](#kqwnw0pp2p0) The company needs a hand to analyze their target customers, so, through customer demographics information like income, age, marital status and more, we will be providing the company with some valuable customer information which will aid them in targeting their customers. We will not only provide customer statistics but also the populated areas that they should target where people usually tend to fill up their cars.

**Motivation**

Fueldup is a fuel delivery service that brings fuel directly to you whether that is at your workplace, home or anywhere else. They serve an area once to twice a week. They currently have three gas trucks that fill up gas from their storage facility (which can hold up to 10,000 gallons of gas) and deliver to their customers. [[2]](#2zkyh19tljfb)

With the advancement in technology, delivering goods to customers' home started a while ago. The trend then moved to the food industry, and apps like Grubhub, Doordash and Uber Eats came into existence. These apps deliver food from restaurants right at the customer’s doorstep for a little convenience fee. [[3]](#ocnjjh1q0rk) The success of these apps influenced the idea to deliver fuel to customers' cars, so customers don’t have to go to gas stations to fill up gas. Fueldup will provide such service in the Oklahoma area, but the problem is that the idea is very new in this market and they currently don’t know who are their target customers? Since the food delivery industry is booming and the idea of delivering gas is very new, it is very interesting for our team to see how well does Fueldup performs in the Oklahoma market.

There are few other companies that provide the same services as Fueldup, but their market is limited to California, Washington D.C. and Florida. [[4]](#cffxfwe16vhb) These states have many big companies that increase the potential customer base. Fueldup is first of its kind in Oklahoma, so finding their potential customers can be both very challenging and exciting. We will gather data related to taxes paid by gas stations and combine it with demographics data to provide a solution to this problem.

Our team is focusing on making people’s lives better which are not limited to the corporate world. We want to provide this service to each household, students, communities and more. From reducing their time to stand in the queue to support disabled people’s life. This startup has the power to change the game in the fueling industry. [[5]](#9pkknrvxogvr)

**Project Details:**

To accomplish the mission of finding the potential customers of the Fueldup company, we have managed to scrape several different datasets from government websites such as Oklahoma Tax Commission website through which we obtained YTD (Year-to-date) gas excise data, Oklahoma Tag Agency through which we obtained data about car registration and other demographic information. Through these datasets, we plan to merge all the datasets into one dataset by merging them through a specific key available in each dataset. Additionally, with the help of Python, we will first perform data cleaning by utilizing different Python libraries such as Pandas and NumPy and then conduct numerous analyses on the clean data which will help the Fueldup company in targeting customers.

The gas excise dataset [[6]](#djogy09u95m4) contains information about gas taxes collected from different cities of Oklahoma. It contains 7008 rows and 4 columns including the name of the city, date of tax submission, and total tax paid. The Oklahoma Tag Agency dataset [[7]](#j4s4hf1hqgjx) contains records about the number of registered vehicles by the city in Oklahoma, while the census dataset [[8]](#neb92llhrv1r) contains population information of the counties in Oklahoma. It contains 1046 rows and 20 columns including total population, race, employment, unemployment, income, poverty, offices, etc. All these datasets are in .csv spreadsheet file format making them easy to merge using the key.

By performing an analysis by combining tax data with demographics data, we will provide Fueldup with their target customers. We will provide them with areas that are highly populated, high-income populations and have busy gas stations so that they know which areas to target. We will also provide the potential customer information such as gender classification (who is filling more gas), what age group is filling more gas and employment factor on filling gas.

This first phase of the project is expected to be carried for the next three months until mid-December, which will consist of data cleaning and general data exploration. The next phase of the project which will consist of more in-depth analysis and predicting models will continue from Spring 2020.

With technological advancement in every industry, sparked an idea of service to bring fuel to the customers so they don’t have to take out time from their busy schedules just to go to gas stations to fill up their vehicle. Fueldup which provides such service in Oklahoma is relatively new in the market and doesn’t have much information regarding target customers. Therefore, by gathering data related to taxes paid by the counties of Oklahoma on gas and combine that data with demographics data, we will perform rigorous analysis to provide a solution to this problem.

**References:**

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