



APPLIED DATA SCIENCE CAPSTONE

The Battle of the Neighborhoods

Gabriel Allen

Denver, CO



Table of Contents

| | |
|---|----------|
| Big yEAST Exploratory Market Research..... | 3 |
| Introduction/Business Objective | 3 |
| Data Requirements | 3 |

Big yEAST Exploratory Market Research

Introduction

One of the most favored consumables the world over is beer, and that is no different in the United States. According to usatoday.com, the average American consumes 26.2 gallons of beer per year. Consumption across the US varies however, and that presents dynamic challenges to many individuals and companies looking to break into or strengthen a strong foothold in the market.

BUSINESS OBJECTIVE

Our fictitious brewing company “Big yEAST” has been a staple on the eastern seaboard for several decades. A recent evaluation of regional market trends has shown a decline in total consumption of beer, especially with the key demographic of (25-34-year-old individuals). Bill Barley, the President & CEO of Big yEAST, has commissioned a high-level exploratory market review of several locations in the western United States in the hope that Big yEAST can establish a position in either a developed or emerging market with the presence of a local brewery. The focus of this report will be Denver, CO. Colorado as a state ranks among the top 20 states in average consumption and makes the top 10 in terms of excessive consumption according to usatoday.com.

Data Requirements

For such a high-level analysis we will be focused on two fields, basic socioeconomic data, and competition. Our socioeconomic dataset, will be mined from denvermetrodata.org. This site contains minable 2010 census data for the Denver Metro area, and in several instances has been extrapolated forward close to present day. For this analysis, we will be using a projected 2017 dataset containing the following:

- Population 25-34 years-old
- Number of Low-Income Households (<\$60k/year annual income)
- Number of Middle-Income Households (between \$60k and \$125k)
- Number of High-Income Households (>\$125k/year annual income)

In addition to the socioeconomic dataset, we will need to acquire some baseline information on our competition relative to the subject geography and demography. This analysis will be using the [Places API](#) offered by [FOURSQUARE](#). We will submit a search query through to the Places API endpoint to produce a list of established breweries by latitude and longitude which we will then tie back into our neighborhood data.

Figure 1: Socioeconomic Data

| | Neighborhood | Population | Low Income | Medium Income | High Income | Latitude | Longitude |
|---|---|------------|------------|---------------|-------------|-----------|-------------|
| 0 | Alder-Three Sisters Park | 381 | 544 | 614 | 452 | 39.740010 | -104.992020 |
| 1 | Allendale | 1718 | 1672 | 1158 | 457 | 39.693065 | -104.940542 |
| 2 | Alta Vista and Memorial Park | 1417 | 1393 | 1015 | 404 | 37.171692 | -104.520280 |
| 3 | Apel Bacher Park, Koch Sub and Coulehan Grange | 467 | 600 | 359 | 65 | 39.740010 | -104.992020 |
| 4 | Applewood, Echo Hill, Rolling Hills and Meadows | 433 | 456 | 549 | 531 | 39.740010 | -104.992020 |

Figure 2: Brewery Data

| | Neighborhood | Neighborhood Latitude | Neighborhood Longitude | Venue | Venue Latitude | Venue Longitude |
|---|---|-----------------------|------------------------|-------------------------------------|----------------|-----------------|
| 0 | Alder-Three Sisters Park | 39.74001 | -104.99202 | Iron Hill Brewery Nation | 39.741615 | -104.997566 |
| 1 | Apel Bacher Park, Koch Sub and Coulehan Grange | 39.74001 | -104.99202 | Iron Hill Brewery Nation | 39.741615 | -104.997566 |
| 2 | Applewood, Echo Hill, Rolling Hills and Meadows | 39.74001 | -104.99202 | Iron Hill Brewery Nation | 39.741615 | -104.997566 |
| 3 | Athmar Park | 39.70396 | -105.01039 | Chain Reaction Brewery | 39.699577 | -105.001335 |
| 4 | Auraria | 39.74575 | -105.00997 | Breckenridge Brewery Mountain House | 39.748078 | -105.006897 |