

## THE 7-STEP PROCESS

Our feature allows BRI's customers to get the data they need and add relevant market information, in 7 steps:

### 1. Selecting a Data Source

### 2. Selecting a Dataset

### 3. Selecting Segmentation Methods

In this step, the desired columns from the selected dataset can be selected. For example, age, state, etc.

### 4. Filtering Data

The user may want a specific subset of data from a dataset (For example, data from a specific state), so they can specify filters in this step.

### 5. Selecting Segmentation Order

This step allows the user to change the order of the columns for their data. Changes here reflect the hierarchical format that the user prefers the data to be in for effective market segmentation.

### 6. Editing the Resulting Data

After the user gets their data from the dataset selected, the resulting data is displayed in this step. The user can make changes to certain market related data to increase the data's usefulness to their analysis.

### 7. Finalize and Download



# 3rd Party Data Ingestion & Mapping Interface for Growth Forge Business Modeling Software

Adding the ability for users to select & import external data to use for market segmentation in Growth Forge directly in application, increasing convenience to BRI's customers.



## WORKING WITH U.S. CENSUS

We mainly worked with public datasets from the U.S. Census, as they presented many benefits to BRI's customers.

As the U.S. Census provides a large amount of data, complex logic, and varying options, our team spent much of our time getting immersed in the inner workings of each dataset that we worked with. This allowed us to cater our implementation to work for not just one dataset within the U.S. Census, but to generalize our approach for multiple datasets and new data sources in the future.

## DATA MANIPULATION PROCESS

One of the main technically difficult tasks in our project was data manipulation. We separated different aspects of the data manipulation work, allowing for easier collaboration and an overall cleaner codebase.

Main data related areas of work, in order of usage:

- 1. Query Builder:** Creates a request for data based on the user's selections.
- 2. API to JSON:** Takes the raw response from the dataset and converts it into a format needed for display in our application.
- 3. Data Modifier:** Applies user edits for market related data globally and by various filters.
- 4. Excel Output:** Converts the finalized data into an Excel Spreadsheet, ready for usage in Growth Forge.

## HOW DOES OUR FEATURE HELP BRI'S CUSTOMERS?

### • It saves them time...

- When searching for data to use online. Our application presents the datasets that will be most useful for market segmentation purposes, so users can view/use them without leaving Growth Forge.
- When deciding what data they want to include and how to retrieve it. Our user interface clearly shows what options a dataset has and allows column selection and filtering, avoiding the need to figure out how to get and filter data from the 3rd-party data source itself.
- When editing their data to match Growth Forge's formatting requirements. In the current process, users need to have an Excel spreadsheet with a specific template and place their data in a certain hierarchical format. This conversion is done automatically by our application. In addition, other relevant market information can also be easily edited by the user in bulk and by a specified subset of data, to save even more time.

## TOOLS/TECHNOLOGIES

