Capstone Project Group 3:

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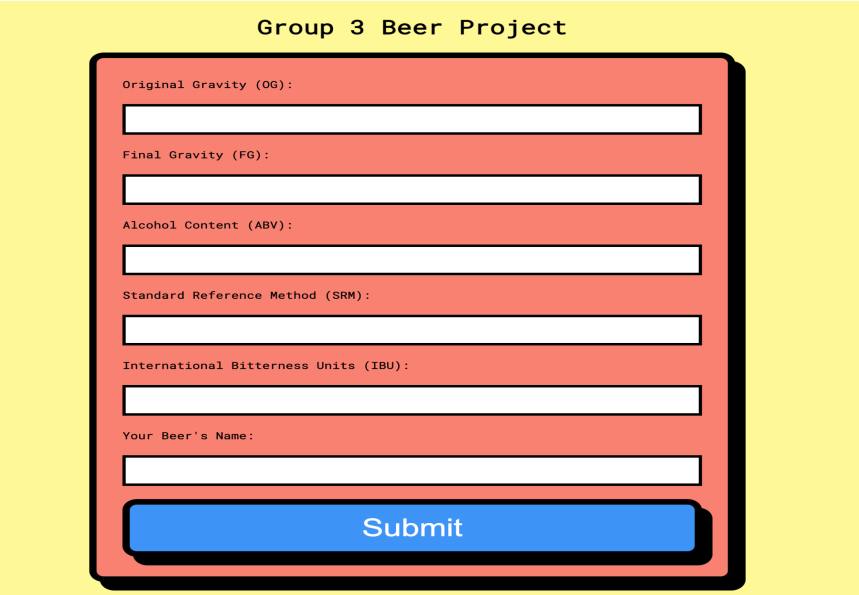
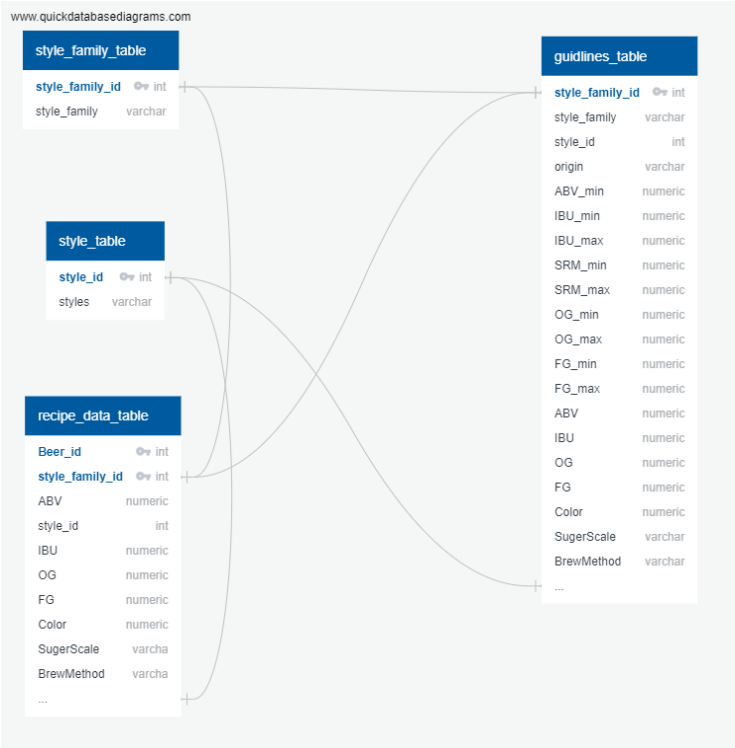
Executive Summary

Our project is a Craft Beer Style Classifier for Homebrewers. When a homebrewer doesn't know how to classify the beer style of a beer they brewed, they can use our app to find out what it is. Our application will tell them the beer style and give them additional information about said style. The information we give users is about the overall impression, aroma, flavor, and appearance of the beer style. The application uses five parameters to figure out what style a beer is. These parameters are original gravity (OG), final gravity (FG), alcohol content (ABV), standard reference method (SRM), and international bitterness units (IBU). All of these numerical parameters are directly correlated to recipe development for beer. Our web application is designed in a new and upcoming style called Neobrutalism. It gives the website a candy-like color with big popping features. This fun design will surely draw the attention of users.



This project was made possible with two main datasets that we found on Kaggle.com. Our first dataset is guidelines.csv which contains all of the preferred parameters for all beer styles and originated for the Beer Judge Certification Program (BJCP). Our second dataset is recipeData.csv which contains over 50,000 recipes made by homebrewers from Brewer's Friend (a recipe building website). This dataset gaves us the ability to train our machine learning model, which was Light Gradient Boosting Machine. Once we had all of our data collected and cleaned, we stored the data on a database through SQLite. We chose this database method because it is serverless, lightweight, and requires zero-configuration. With SQLite, we were able to store the data in the form of tables, which makes visualizing the data easy.



On our website, users can find a total of six visualizations! These visuals are all related to our datasets and helps break down our recipe data by Style Family. This gives insight into the popularity of styles for homebrewers and the methods they used to make their beer. It also gives insight into the origins of popular beer styles. Check out our website on Heroku!