**Restaurant Budget Calculator**

1. *What tech stack will you use for your final project? We recommend that you use React and Node for this project, however if you are extremely interested in becoming a Python developer you are welcome to use Python/Flask for this project.*

I will use React for the frontend and Node for the backend. The backend API will be a custom API that stores the entered user data and restaurant information.

1. *Is the front-end UI or the back-end going to be the focus of your project? Or are you going to make an evenly focused full-stack application?*

The information will be stored in the backend, so a lot of work will go into creating a functional backend API. It is a business tool with several input screens and at least one report screen. It will appear clean and sleek.

1. *Will this be a website? A mobile app? Something else?*

It will be a website that is mobile compatible (which React makes pretty easy to do).

1. *What goal will your project be designed to achieve?*

The webapp will help restaurant owners and managers stick to their food, n/a beverage, wine, beer, and liquor budgets in real-time based on their expected sales, desired cost of goods sold percentages, actual food and beverage bills, and actual sales. As soon as a user enters bills or their sales for the meal period, they will be able to see a new budget for the rest of the week based on their expected and actual performance.

1. *What kind of users will visit your app? In other words, what is the demographic of your users?*

Mostly restaurant owners and operators. But if I build it more flexibly to allow for additional variable cost categories or add in other fixed cost functionality, it could be used by owners and operators of other business as wells.

1. *What data do you plan on using? How are you planning on collecting your data? You may have not picked your actual API yet, which is fine, just outline what kind of data you would like it to contain. You are welcome to create your own API and populate it with data. If you are using a Python/Flask stack are required to create your own API.*

I will be creating an API to store user data as it is entered. If I need to incorporate an additional API, I would likely add something in that can get the weather for a given meal period which would be useful to incorporate into reports and other trend analysis.

1. *In brief, outline your approach to creating your project (knowing that you may not know everything in advance and that these details might change later). Answer questions like the ones below, but feel free to add more information:*
   1. *What does your database schema look like?*

Users table

Restaurant table

RestaurantsUsers table

Categories table: category names, default COGS percentages

MealPeriods table

CategoriesMealPeriods table: allows different allocations of sales percentages by meal period

ActualSales table: enter actual sales

ExpectedSales table: enter/predict expected sales

Expenses table

Vendors table

* 1. *What kinds of issues might you run into with your API? This is especially important if you are creating your own API, web scraping produces notoriously messy data.*

Users are going to need to be able to store a lot of information. The entry screens and reports are going to draw on information from many tables, and I anticipate it will be difficult getting and saving all of the information unless I make the application much less flexible.

* 1. *Is there any sensitive information you need to secure?*

The user’s password will be sensitive. Only authorized users will be permitted to access a given restaurant’s information.

* 1. *What functionality will your app include?*

A tool for restaurant owners and operators to manage their food and beverage costs.

At any time, a user would see a calculation of how much they have left to spend on each category, taking into account how much they expect to make the rest of the week and how much they have already made and spent during the week.

* 1. *What will the user flow look like?*

A user will sign up, create a restaurant, and set up the default settings (COGS %, additional expense food categories, etc.). On a weekly basis they would update the overall sales expectations; on a daily basis they would enter expenses and actual sales results. Users would then be able to view results in real time.

* 1. *What features make your site more than a CRUD app? What are your stretch goals?*

It is tool for budget management. It will make calculations to help users make business decisions about how they should spend their money in order to achieve their budgetary goals.

Stretch goals:

* Ability to carry over budget deficits/surpluses week-to-week
* Additional sales/cost categories or ability to edit them (this would be helpful for working with other industries as well)
* Allow users to base next week’s expectations off of previous week or previous year’s actual performance.