

To: Van Sullivan, Executive Director, Faculty Student Association

From: NutrAllFit

Date: April 4, 2020

Subject: Proposal for Improving the Health of Stony Brook with NutrAllFit's Fitness Application

Dear Mr. Sullivan,

NutrAllFit is a lifestyle mobile application that can help Stony Brook students prevent allergy and sustain a healthy lifestyle. As students who have graduated from Stony Brook University, we would like to start our company at the place where our dreams had started.

Our app has two main features that will tackle issues many people may face in their day-to-day routine:

- ***Nutrition:*** Our users can track their health progression with the food that they consume using our innovative technology. The software implementation that we've integrated is able to break down the components of their meal and produce a precise calorie count as well as construct a diagram of the macronutrients consumed. We also provide food suggestions for the users based on their previous input information from that day.
- ***Allergy Prevention:*** We label allergens based on one-time user input and photo of ingredients scanned by the users. Our database from foods spanning across several nations will be able to identify allergen contaminants with high accuracy from our users' individual profiles.

The Problem We Wish to Tackle

We wish to make our application easily accessible and quick to use for our users by utilizing computer vision so that users can swiftly take a picture of their meal and track their nutrition on the go. This is the aspect that vastly separates us from similar apps that are on the market today. Many companies like MyFitnessPal and Fitbit have the capability of adding nutritional logs as their core functionality. However, this tends to be tedious and turns away many new users. Although respective companies have implemented an autofill design that remembers the food you've previously consumed, it is a manual process of typing and searching, making the product inefficient.

Our Company and How it Relates to You

Combatting health issues has slowly crept up to the forefront of many nations' agendas. Here at NutrAllFit, we strongly promote the values of fitness and weave those ideas into our company culture. We believe that our principles of wellbeing should be applied to the lives of many. In order to accomplish this, we need your help.

Throughout Stony Brook University's history, there have been attempts in providing students healthier choices and expanding menu options. One such example was in 2013 where your university hired a nutritionist, Kristina (Tina) Tiernan. Her main role is to work closely with campus dining chefs as well as to provide free nutritional counseling for students. As years pass, Stony Brook University has tried a combination of ways to diversify the meals on campus. There

have been openings of new locations and include different items on several menus. For instance, the SAC Market has recently opened as an extension to the SAC food court. Tea Café, Craft Salads and Bowls, soups, and other such options have been added to the arsenal of choices that students can choose from.

Given this history, our team at NutrAllFit believes both of our goals align and will be able to fully integrate our application into your campus dining environment with ease. When the NutrAllFit application is implemented on campus, QR codes will be placed in front of all the foods served in campus dining areas for the users to scan. Doing so would automatically update the nutrient status of the user as well as alerting the users about the allergens related to their allergies. This prevents users from accidentally eating what they shouldn't be eating. Moreover, we can keep track of the users' health goals and suggest meals to users.

Technical Challenges

One of the major weaknesses of our application is that we cannot scan the nutrients of foods with no labels (Ex. home-cooked foods). When it comes to that, the users have to manually input nutrition information into the application in order for our application to function to the best of its abilities. There is currently a prototype of a technology that can identify nutrients in this situation. However, there is no guarantee that it will function properly and it can be relatively expensive to implement.

Budget Constraints

Considering how we will need to develop the app using computer vision with the aid of machine learning, this will be a fairly complicated project. Given the complexity of the application, we expect the budget to be \$215,000. For administrative use, we will provide a custom database to the administrative users, where they will be able to manipulate the database any time they want. However, this custom database will contain a huge library of food menu and the nutritional value of it. This budget will also include the marketing of the applications.

Implementation Schedule

After we receive our payment, we believe that we will still need some time to implement computer vision and machine learning functions to our application. We estimate that after 3 months, we can put the beta version of the application into use and we will gradually update and improve our application based on our feedback from the customers.

To Summarize

NutrAllFit is a company that values the health of its users. We use computer vision and machine learning to enhance and quicken user experiences. We believe that it is in your best interest to consider the opportunity of including our app as a facet of your health endeavors. Our app will synergize well with the decisions you've made so far and will translate well into future projects to improve the health of students.

Sincerely,



Francisco Hu, Qiting Wu, Shadman Ur Rabbi, Qibing Chen

References

Chew, Debbie. “How Much Does It Cost to Make An App in 2019? [Infographic].” *Codementor*, www.codementor.io/blog/app-development-costs-6gdnah10b7.

“Campus Dining Services Hires Nutritionist.” *SBU News*, 21 Aug. 2018, news.stonybrook.edu/homespotlight/campus-dining-services-hires-nutritionist-2/.

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