

# CS 411 Project Proposal

1. **Project Title** - SwoleStats
  
2. **Project Summary:** It should be a 1-2 paragraph description of what your project is.
  - a. We want to build a workout web-app that allows fitness enthusiasts and beginners to easily organize their training, track their progress and develop a discipline towards better health. The website we build aims to be a no-frills, fast, and simple platform for you to record your workout details, along with having your preferred schedule and information saved in your account so that it is accessible from any device. A lot of workout apps today do not cover all the features needed for a user to have a complete overview of their training - not only do we want to log a user's data, but also visualize their progress, motivate them, and give them guidance on bettering their technique.
  
3. **Description** of an application of your choice. State as clearly as possible what you want to do. What problem do you want to solve, etc.?
  - a. The goal of SwoleStats is to provide a way for someone to easily record their workouts. A workout routine consists of multiple types of exercises, the number of sets for each exercise, and the number of repetitions for each exercise. Our application will allow the user to record this data for every workout that they do. Therefore, they will be able to reference this data to know how much progress they made at the gym, and to plan future workout routines.
  - b. The problem we are trying to solve is that many people don't record their workouts. As a result, when they go to the gym, they are just making up a routine and guessing from memory how much weight they should be using for each exercise. This is a problem, as not having a routine and not knowing how much to lift will result in far less fitness gains. And while some fitness apps do exist, in our experiences they are usually bare bones and often lack features like data visualization, calorie tracking, weight tracking, and saving favorite exercises. As a result, sometimes a user has to use separate apps to keep track of all the data they want to use. Our website seeks to be a comprehensive fitness tracker that will have all the necessary features that a gym user needs.

4. **Usefulness.** Explain as clearly as possible why your chosen application is useful. Make sure to answer the following questions: Are there any similar websites/applications out there? If so, what are they, and how is yours different?
  - a. Our application is useful because keeping track of your workouts is a very important part to seeing success at the gym. Whether one wants to gain weight, lose weight, or just stay healthy, it's very important to track progress. Our application will be a one-stop-shop for recording your every workout. Users can then track how they did at each gym session and know how to improve.
  - b. There are some similar applications out there. For instance, I use an app called Full Fitness, which also contains a database of workouts. However, this app is rather clunky, provides no data visualization for the user, and provides no information on how to do a specific exercise. There's also features like weight tracking, favoriting specific workouts, and saving routines that would be extremely useful but don't exist on this app.
5. **Realness.** Describe what your data is and where you will get it.
  - a. We are going to use the dataset called "Fitness Exercises" from Kaggle.com <https://www.kaggle.com/edoardoba/fitness-exercises-with-animations>, this dataset includes the exercises name, equipment needed for the exercise, bodypart that is targeted by the exercise, targeted muscle, and an URL of an animated GIF describing the exercise.
  - b. Besides the existing dataset from Kaggle.com, we plan to generate our own dataset consisting of user profiles where plan to store user's body information (height, weight, badges, BMI, body composition, Etc.), exercise history, and general workout schedule.
6. Description of the **functionality** that your website offers. This is where you talk about what the website delivers. Talk about how a user would interact with the application (i.e. things that one could create, delete, update, or search for). Read the requirements for stages 4 and 5 to see what other functionalities you want to provide to the users. You should include:
  - a. Have an achievements system that awards badges based on consistent workouts, weight goals, hitting PRs, etc.
  - b. Generate visualizations of your daily logs to easily track and share progress
  - c. Include illustrations of exercises alongside names to guide your form and educate beginners
  - d. Compare user progress among other users in the same age/weight range
  - e. Have a user profile with favorite routine type, workouts, schedule and personal information
  - f. Have a daily log of your workouts like any other tracking app



8. **Project work distribution:** Who would be responsible for each of the tasks or subtasks? List of the person responsible for which exact functionalities in section 6. Explain how backend systems will be distributed across members. Be as specific as possible as this could be part of the final peer evaluation metrics.
- a. High-Level overview of responsibilities
    - i. **Jacob** - Work on the design and front-end of the website. Make calls to the database to display the proper information on the website.
    - ii. **Nuo** - Frontend + backend + connecting both
    - iii. **Om** - Creating the SQL database and GCP
    - iv. **Duane** - Frontend + backend + connecting both and UX of website
  - b. Responsibilities for functionalities in section 6:
    - i. **Om** - Have an achievements system that awards badges based on consistent workouts, weight goals, hitting PRs, etc.
    - ii. **Jacob** - Generate visualizations of your daily logs to easily track and share progress
    - iii. **Jacob** - Include illustrations of exercises alongside names to guide your form and educate beginners
    - iv. **Duane** - Compare user progress among other users in the same age/weight range
    - v. **Om** - Have a user profile with favorite routine type, workouts, schedule and personal information
    - vi. **Duane** - Have a daily log of your workouts like any other tracking app
    - vii. **Nuo** - Ability to add, delete, and update workouts/exercises
    - viii. **Nuo** - Search for an exercise and be able to see a .gif of how it's performed