

# Proposal for Orbital 2021

## Team Name:

fitNUS

## Proposed Level of Achievement:

Apollo 11

## Motivation

For most students studying in universities, our fitness and health, both physical and mental are usually placed last on our long list of priorities. This should not be the case, our early 20s are when our fitness peaks and as Socrates puts it: "It is a shame for a man to grow old without seeing the beauty and strength of which his body is capable."

Furthermore, much research has shown that a good and balanced lifestyle filled with sport and exercise increases mental acuity, relieves stress and keeps mental illnesses as well as physical illnesses away.

Despite having numerous sport and exercise facilities on campus, these facilities are usually under utilised by students -- Not counting students in varsity sports teams.

It is hence our goal to encourage students to make full use of these facilities and their gift of youth, to achieve growth that is wholesome and holistic. By helping to lower the barriers of entry into sport and exercise, and to enable students to take control of their health and fitness.

## Aim

Enter "fitNUS", an application that integrates a variety of workout plans with locations around NUS. With live data from workout hotspots within NUS, users can select locations based on availability, the weather and their personal goals.

Based on the location selected, users are then recommended a set of workout plans. If none of the suggestions are appealing, there's always the option to create a custom workout.

In addition, there is a community element to the fitNUS application, with the 'Exercise jio' option. Here, we hope to engage the NUS community to workout in groups (of course, following COVID-19 regulations), by having exercise or even recreational sports jios at the respective venues.

## User Stories

1. As a student who is busy drowning in work, I want break time to focus on my personal health and fitness goals. I also want to receive suggestions on workouts that I can do with the limited time I have.
2. As a female student, I'm hesitant to workout at gyms or go for a swim on my own. It would be great if there was a platform for me to find other like-minded women to exercise with.
3. As a student who wants to look attractive, I want to get fitter and more ripped, but I'm not sure how to go about it as I'm not entirely familiar with the facilities in NUS and gym memberships outside are extremely pricey.
4. Information of the sports facilities are not readily available to me, on top of this, I am also unsure of how to get to these facilities. On top of this, on numerous occasions, upon reaching the venues, these facilities are at times overbooked (due to varsity team trainings), or are simply not open.

## Features and Timeline

1. **NUS facilities information plaza:**
  - a. Location capacity
  - b. Live directions from current location
  - c. Workout suggestions: -> Based on time available, capacity, weather
  - d. Community contributions: Favourite Running routes, Workout suggestions
2. Personalised **Workout Logger:**
  - a. **User profile** to keep track of personal information such as personal workout statistics and personal information such as name, height, weight and age.
  - b. Suggests premade workout plans situated in the location selected by the user that are categorised based on muscle groups or workout goals (such as cardio, Low intensity muscle training etc). Comes with an option of customising workout plans based on preference. Rest time and reminders to resume workout included as features of these plans
  - c. Provides information on the respective exercises, such as expected calories burned, time needed for exercise
  - d. Personal workout statistics: Students can keep track of their workout progress after completion, with information such as percentage of a muscle group worked, average number of workouts per month, total calories burnt etc.
3. **The "Exercise Jio":**
  - a. Jio initiation: Jioer, Capacity (adhering to COVID-19 regulations), Venue, Time, Type of exercise/sport, Filters (e.g. Females only, boys only, etc...)
  - b. Jio reminder

- c. Directions to venue
- d. Workout statistics added to personal workout plans as well

#### **Features to be completed by the mid of June:**

1. Mobile application – Workout Logger
2. Researching on APIs/Databases required from NUS.

#### **Features to be completed by the mid of July:**

1. Mobile application – Exercise jio
2. Mobile application – NUS facilities information plaza

#### **Tech Stack**

1. Xamarin
2. C#
3. .NET
4. Android/iOS API
5. SQL

#### **Qualifications**

##### Eugene

Digital Project manager intern @ Workato:

1. Software connector building using APIs of various softwares and ruby.
2. Familiar with HTTP protocols
3. Familiar with various methods of authentication
4. Wrote in-depth documentation for the connectors
5. Familiar with version control tools
6. Familiar with HTML/CSS

##### Rushil

Wiley Certified Data Analyst

1. Familiar with Data Analysis using R
2. Familiar with Big Data analytics method
3. Equipped with Machine Learning foundations and more advance machine learning concepts
4. Familiar with Hadoop and other Big Data analytics platforms.

Languages known:

1. Ruby
2. C#
3. Java
4. R