## Assignment 3 - A2GROUP8

# Team Profile

**Samuel Jones**

I have always had a personal interest in IT mostly from the perspective of video games, I spent my childhood playing video games like the Legend of Zelda and Banjo Kazooie, and other awesome Nintendo games, and I became fascinated with the IT world. However, I never really considered a career in it because I was so focused on becoming an engineer, but I eventually realised that my passion for problem solving could be used and applied in programming and development, and so I taught myself some python, and eventually decided to pursue a career in it because the logic of programming seemed to fit with how I thought and processed the world. I have little to no professional experience in the IT world, but I’m excited to see where this degree takes me.

#### Kim V Jong

My interest in IT goes back to the 80’s when my friends had Amiga 500 and Commodore 64. My first computer was a 80286 pc, before getting 80386Dx 40 and followed by 80486 DX50 in the 90’s. I started in Dos 3.3 and Windows 3.0 and did all my stuff on the pc by then. Assignments and games were all done on a computer ever since. Later in the late 90’s I worked in the IT field of assemble, diagnose and troubleshoot PC’s, servers, printers and operating system in Windows 98 / Se and Windows NT / 2000. By the time Windows XP rolled around, I started to move into Telecommunications industry in Telstra as sub-contract for 3G SDH network growth. The work requires travel around the country, and in my case majority of the east coast of Australia where the population is more dense. I have always kept up to date with IT in terms of hardware and software and I am also a PC Gamer, and have a large collection of games in steam (though I have only played a fraction of those games).

#### David Mulgrue

I’ve been living and breathing IT since I was a young child and we had our first computer, a Commodore 64. I always wanted to work out how they worked, and I was always the one that caught the blame when something went wrong because I was always tinkering, fiddling, and working things out. When finished yr12 I went into a course doing Computer forensics, which gave me enough knowledge and experience to jump into an IT support role after I dropped out of the course. Since that first job in IT, I’ve worked a lot of positions both in and out of IT, I’ve studied an Advanced Diploma in Video Game Art and Animation, and generally gained a great appreciation for the diversity and hard work that goes into even the seemingly simple games I play. Looking to the future I plan to focus on software engineering and programming to finally make my own way in the IT industry.

#### Scott Smith

I have been working in IT since 2007. During that time I have worked as a Network Engineer, Desktop Support Engineer and most recently a Project Manager. Prior to entering the IT industry, I was a member of the Australian Army for almost 8 years. I am a father of 3 children, who keep me very busy. When I am not spending time with my children, I love to go Mountain Biking. As I live in Canberra, I am very spoilt for places to go riding. As I have worked in the IT industry for over 12 years, I realise there are so many opportunities. I am excited to see where this degree takes me.

#### Jacob Smith

Hey my name is Jacob I love playing soccer, sports, skateboarding, building websites as I’ve built a few in the past but I got busy with other stuff and started a carpentry apprenticeship and I am really interested in this field of work and I would like to get some knowledge about this sort of field Hey all My name is Jacob I am 23 years of age from the central coast. I always had a passion for computers and such from a young age whether it’s gaming, making videos making music and playing a sports I started my career first as a carpenter finished that apprenticeship in 2017 now it’s time to move onto something else, from a young age About 15 I started a forum site about skating as that interested me, and a few other little niches. I guess you could say I’m trying to broaden my choices I have a little bit of experience in building websites to an extent I’m not professional I just have minimal knowledge from when I was younger doing a lot of things online keen to start the next project once I get more knowledge of the course be able to do so many more things like make a few apps and now I think it’s time to pursue a bachelor of information technology I am currently working in construction industry. I am really interested in Information Technology Because I feel I have really good ideas and I need these skills to be able to change the future for myself.

# Group Processes

During assignment two we found that it was difficult to gauge workload requirements for each aspect and so there was not a good balance for all members in the group, we are continuing to communicate via discord as we originally did, however this time we are trying to balance the work-load more appropriately so that each person can contribute their ideas whilst each doing a fair share of the workload. We will continue to try to improve this over the assignment period. However, with everyone’s busy work/life balance we continue to face ongoing challenges regarding communication.

# Career Plan Comparison

Samuel Jones – Full Stack Web Developer

David Mulgrue – iOS Engineer

Scott Smith – Desktop Team Leader

Jacob Smith – Systems Analyst

Kim V Jong – Policy Analyst

Throughout our team we have a lot of diversity in terms of career goals and plans. Some of us have been in the industry for a while and are looking to expand and broaden our horizons, whilst others are just transitioning into IT now. For example, David and Sam have similar goals, that is to get into varying forms of software development, but have vastly different experience, one totally new to the industry and the other with a wealth of experience, however where David is most interested in iOS development Samuel wants to work as a full-stack web developer.  
Jacob and Scott also have similar goals in terms of providing support to an organisation, however their paths diverge where Scott wishes to lead a team of people who support a business, Jacob wants to focus on designing and implementing IT systems. Kim, is the most unique of the group, who is looking to supplement his extensive experience in IT with the ability to control and implement complex organisational policies. Where the other four are focused mostly on IT systems, their implementation or the software surrounding that, Kim is focused on a broader scope goal. For the entirety of the group, our career path is the same though. We are all focusing on completing a bachelor (IT for David, Samuel, Jacob and Scott and Arts with a major in politics for Kim).

# Tools

Group Website - <https://kvjong.github.io/FitnessApp/>

Group GitHub - <https://github.com/Kvjong/FitnessApp>

Regarding our audit trail … /\*To be completed\*/

# Project Overview

#### Focus The major goal for our application is to provide a progression and education focused framework for users to implement in their lifestyle. This framework will ultimately allow to the user achieve success in three key areas, diet, fitness programming and personal fitness goals. Whilst achieving these goals, the core design philosophy of the application is this: “Small achievable goals that end in successes, result in long-lasting changes in lifestyle”. The three key focuses of the application are as below.

#### Firstly, our app will provide the user with the tools and education to control and manage their diet. This will come in many forms including; calorie counting, educational documentation/videos to demystify the information surrounding food, customised meal plans for the user that shows them what to do in terms of food in-take and educates them as to why these things are important and how it works in the bigger picture, which is a key ingredient in implementing long-term change.

#### Secondly, the application will provide the user with the tools and education to manage their workout programs, allowing them to customise their workout based on personal preference, target areas, experience/fitness level. This component will include education on how to exercise each area of the body, what different exercises do for them physiologically and provide varying levels of intensity based on their physical attributes. The workout program section will provide the user with a structured plan for set periods throughout the year i.e. 3-month, 6 month and yearly plans.

#### Lastly, the fitness app will tie the first two components in to a targeted and achievable plan which helps the user to focus on implementing changes in their lifestyle through small incremental goals. This component will be designed so that each goal is targeted and personal whilst manageable so that the user develops long-term habits without feeling like they have failed if they suffer setbacks. This is the core concept of our application and where the largest portion of work will go, including to developing proprietary personal progression software which uses user generated photos to measure progression over a set period. It should be mentioned, that whilst this is the current focus of the application, there is a potential to pivot this into an app specifically designed for Personal Trainers to provide custom programming and meal plans for their clients, however base functionality will be quite similar, we will be noting some aspects that are “potential” in terms of this consideration.

#### Motivations Accessibility and convenience are vitally important, but when it comes to actual users personalisation is a major factor in long-term use of mobile fitness applications[[1]](#footnote-1) This application focuses on that need for the user to have a specific program for their lifestyle, because as we can see from the top 20 fitness trends[[2]](#footnote-2) worldwide, there is a diverse demand from users for their fitness needs, so how can you fit them all with a single program? The answer is that you cannot, but what you can do, is design individualised content that cares about the users desires and focuses them. This is the key motivator for this application in terms of intention. Regarding professional motivations, this application will show future employers that we can work in a major development project that combines complex programming with multi-disciplinary collaboration (from software, to medical professionals), as well as manage large-scale projects.

#### Commercial Landscape There is a wide range of Mobile Fitness Applications on the market currently, all which implement varying components of our design, be that food management, meal plans, workout plans, weight loss goals. Two fantastic examples of this are MyFitnessPal and Strong5x5. MyFitnessPal is primarily a food management application which utilises a food diary to help the user achieve their weight loss goals, the inclusion of exercise plans is minimal. Conversely, Strong5x5 is a singly focused exercise application which follows along a specific strength training program, this gives the user a clear goal and helps them incrementally improve their overall strength. Whilst both of these applications are fantastic in that they set out to achieve a specific goal and they provide the user with fantastic tools to achieve this, they ultimately fail to address the multi-faceted nature of health and fitness, and fail to truly give their users the skills required to one day be application independent. Our application intends to address this issue, by creating more intuitive and personalised plans that consider each user’s unique attributes.

# Project Plan

#### Aim

#### Plans and Progress

#### Roles

#### Scope and Limits

#### The scope of our project is essentially split into fundamental deliverables, which are the essential components of our application that provide a baseline level of usability, and potential features which are not part of the core offering of the application but will enhance the user experience. One thing to note of regarding mobile fitness applications, however, is that perceived ease of use directly affects whether a user will continue to utilise the application and their enjoyment in using it, so we must make sure that each feature provides value combined with functionality, rather than just adding features for the sake of it.

#### Regarding our key deliverables, they are shown as below, separated into the following, KEY which are required functionality and will be completed, and POTENTIAL these are components that may be included depending on time limitations, but are the features which will take the app from matching the industry to one that goes above and beyond. For clarity of scope, we will consider all KEY functionality to be the scope of the project, and all potential to be stretch development or pivot goals which CANNOT be started until the key functionality is completed. Whilst scope creep is an issue with app development, it cannot suppress innovation, a balance needs to be struck.

#### Food Diary - Key a) Functionality for tracking and counting calories, this will be integrated with a library of existing foods and their related energy. (Will be known as food diary) b) Monthly/Weekly summaries, including graphical representation of calories consumed. c) Macronutrient tracking, including integrating with libraries which provide specific information on this too. Potential a) Integration with the weekly meal plan, so that the meal plan pre-fills the daily diary, and the user can manipulate the information in there. b) Barcode scanning for calorie information, commonly utilised in food tracking apps but may be outside the scope of our development team.

#### Meal Plans -

#### Key a) Pre-generated weekly meal plans based on specific user information, including functionality to replace meals with alternatives that fulfill similar requirements (ie by calories or by macronutrients though these are similar in effect, there is a common distinction in the industry)

#### Potential a) Diet on a budget, low cost meal plans. b) Custom meal plans submitted by PTs, to be inserted into user profiles.

#### Workout - Key a) Workout tracking functionality, a set amount of exercises which are installed into the app, allowing the user to track weight/repetitions of these exercises b) Workout programs, pre-generated 12 week programs which focus on specific user set goals, that provide a set routine and allow the user to track their weight lifting/running time etc progress and represents it graphically in a weekly/monthly format. Potential a) Personal Trainer generated workouts that are submitted for their clients. b) Visual progress tracker, and potential software that gives the user indication of changes to their body based on photos provided.

#### Education - *Education components will be sub-aspects of the above, but it is worth considering it as its own entity in terms of development scope as there is a significant time cost to this component. This component deserves its own full plan, and will come last in the development phase, after designing the core components of the application.* Key a) Modules covering basics of food intake/versus output and how that relates to weight gain weight loss. b) Modules covering key exercises and correct form to avoid injury, incorporating basic education in physiology regarding understand of targeting muscle groups. Potential a) Ongoing modules that expand on basic concepts. Articles/Videos. Visual Progress Tracker - *This is the most complex and unknown of the components and could blow the scope of the project out of the water. However, it will be the first component added after the core of the application is complete* Potential a) Photo recognition software designed to recognise user progress based on weekly photos from the user. This software would compare current to past photos to provide the user with a % weight loss/mass loss comparison.

#### Tools & Technologies

#### Testing

Testing our application will be an essential component in providing a quality product to our clients, due to the fact that the success or failure of the app relies heavily on user experience and perceived usability, we will need to test each feature as we go through the development process. With this user focused design style in mind, testing is best implemented as each feature is introduced into the base component of the application, as well as one final testing phase which allows the users full access to the application. The proposed testing schedule as below, would also give structure to the design process and keep the project on a tight deadline. Each test group would involve 10-20 people based on needs.

Pre-Development

* Group Profile: Gym novices only.
* Age Profile: 18-55
* Focus group for the progress tracking software (concept only), and the educational content.
* Testing outcomes: Indication of what to invest development time in, and whether these products will provide a significant point of difference

Phase 1. Week 9 of Development

* Testing Group Profile: Gym/Fitness novice and intermediates
* Age Profile: 18-55
* Testing Modules: Food Diary, Workout Tracker, Meal plans
* Testing timeframe: 2 Weeks trial, separated into an initial week’s trial, followed by another week trial after implementing changes to the application based on feedback.
* Testing outcomes: Usability of core components of the application

Phase 2. Week 12 of Development (dependant on prior input)

* Testing Group Profile: Gym Novices
* Age Profile: 18-55
* Testing Modules: Educational content
* Testing timeframe: 3 Hour Long sessions.
* Testing outcomes: Designing content that is desired by people new to fitness, avoiding overcomplexity of content.

#### Time Frame

Below is the timeframe for our project based on ideal situations for the first six weeks, and that we invest time in developing the educational content portion of the project. Below the table is a brief weekly summary.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Week | Samuel | David | Kim | Scott | Jacob |
| 1 | Concept Plan | Concept Plan | Concept Plan | Concept Plan | Concept Plan |
| 2 | Design Website | Collate group A2 information | Build Project Plan, assign roles | Investigate testing procedures | Write risk plan |
| 3 | Implement App mockup | Investigate required tech, investigate server pricing | Investigate app development plans, write aims section | Set-Out goals/timeframe for group, including framework for presentation | Research fitness/workout plans, collate data with sam to implement features |
| 4 | Continue App mockup | Collate / assess data | Collate/assess data | Collate/Assess data | Collate/Assess data |
| 5 | Write Scope / Limits, Overview | Write Roles, tools / technologies | Consolidate aims, set out plan / processes | Re-write timeframe, write testing procedure | Write Risks/Group processes |
| 6 | Group presentation | Group Presentation | Group Presentation | Group presentation | Group presentation |
| 7 | Software Review | Software Review | Focus/Review | Focus Group | Focus Group |
| 8 | Complete Food Diary, Workout Program, | Server set-up | Edu Content Plan, progress review | Finalise details for F/G information, write report on findings and finalise testing phase 1 | Edu Content  Plan/Content Begin |
| 9 | Testing Phase 1 | UI Mock-Ups | Testing phase 1 | Testing Phase 1 | Edu content continue |
| 10 | Review implementation | UX Design plan | UI/UX design, review implementation | Data collection/organisation, organising w2 trial. | Edu content continue |
| 11 | Testing Phase 1 Week 2 | Final UI/UX design concepts. | Edu Review | Testing Phase 1 Week 2 | Edu content modules complete |
| 12 | Software Review/ Forward Check | Software Review/Forward check | Edu Focus Group | Edu Focus Group | Edu Focus Group |
| 13 | Implement “potential” components | Web-site completion, consolidate branding | Final Stage review and progress assess | Consolidate data, and review all data gathered from w2 of testing phase 1 | Edu Content adjust |
| 14 | Final Review | Final Review | Final Review | Final Review | Final Review |
| 15 | Submission | Submission | Submission | Submission | Submission |

Week 1:  
Design process planning week, discussing features details of the progress and solidifying a unified group plan regarding project outline.

Week 2:

Implement initial phases of design and plan as a group for moving forward. Sam and Jacob to nut-out details of work-out programs and meal plans. (To be implemented later)

Week 3:  
Initial app design, begin looking into advanced recognition software, start researching core concepts of health and fitness for app, investigate similar apps. Write aims so group can have a core idea of our plan moving forward.

Week 4:

Collate data and work as a group to make sure we are on the same page regarding vision for the fitness application.

Week 5:  
Report writing week, leaving time in week 6 for any errors corrections that must be made.

Week 6:

Document review, alongside presentation preparation and final submission.

Week 7:  
After initial submission we will begin working with a focus group in week 7 regarding focuses for the educational content, and we will be reviewing current state of features implemented. This week we will also review the status of the software and discuss next steps, prior to the first round of testing.

Week 8:

This will be the week that the “core” components are completed, being the following- food diary, workout tracker and meal plans. Progress on the edu content will begin after focus group.

Week 9:

This is our first testing phase, Sam and Kim will be involved with this, with Sam focused on programming and Kim focused on user experience Scott will be assisting in this process, post first session, David will be providing some UI mock ups for the trial group and the team.

Week 10:

This will be about assessing initial feedback and making improvements based on this, a UX mock-up will be done to implement for week 2 of trial based on feedback.

Week 11:

Week two of phase 1 testing, consolidating UI/UX design moving forward, educational content modules should be complete for core concepts and we will be implementing this into the app from here.

Week 12:  
We’ll be doing a software assessment and deciding on implementation of “potential components” and the viability of the photo software, as well as finalising educational content through with our focus group.

Week 13:  
We will expand on core components of the app, finalise educational content, finalise branding/website design.

Week 14:  
We will review current progress on extra components, decide to pursue or cut, alongside a group final review.

Week 15:

Everything is completed and the submission of the initial prototype is done. We should have completed the key components, plus adjusted for market demand, have a functional website and have set-up data storage for users of our application.

#### Risks

#### Group Processes and Communication

# Skills and Jobs

#### Overview

To transition from prototype to full development we will need to make decisions regarding development of the application that are yet to be decided, however the following four positions assume that we have decided to do the following.

1. Implement on android only initially.
2. Invest resources in developing educational content
3. Decided that brand launch will come once the product is finished, so no investment has been made in marketing etc roles at this time.

#### Position 4: Sport and Exercise consultant

What we are looking for?

We are looking for a sports and exercise consultant who has a passion for enabling those with little to no education or experience in nutrition and exercise to grow and learn more. This role is a full creative lead on a suite of fitness modules designed to give fundamental knowledge to users of the product about the following key concepts;  
  
a) Demystifying food/calories and their relation to weight loss and exercise.

b) Exercise and how it affects your body

c) Resistance training benefits (related to all components, weight loss, strength gain, muscle gain)

d) Exercise and how to do it, various guides on correct forms and activities

In addition to this, the right applicant would be involved in developing custom workouts, meal plans and specifications for various goals/cases on a mobile application, as well as assist in the design process of the application, offering assistance regarding features which could be beneficial to potential users.

What does this mean for you?

* Have a degree in sports and exercise or other similar field of study. (Nutrition also highly valued if paired with the right experience in the sports industry)
* Ability to work on a small team, and to tight deadlines.
* Experience designing educational content highly preferred
* Ability to translate complex concepts into simple directives
* Willingness to work with developers to suggest and guide on tools that will equip users to take control of their fitness.
* Passion for equipping people with the tools to improve their lifestyle.

#### Position 2: Senior Android Developer What we are looking for? We are looking for an Android developer who is looking for a passion project that will help make a change in peoples lives. The right applicant would be prepared to work in a small team of four, with a broad stroke direction but ability to innovate through the useful of creative problem solving and forward-thinking design. This role is for a driven professional who has a passion for mobile applications (and ideally fitness), someone who is not afraid of deadlines, and aims to go above and beyond the simple specifications of the project. If you’re someone who needs constant direction and cannot problem-solve on the fly, you need not apply. What does this mean for you?

#### Provide technical direction and architecture for development, design, and systems integration of mobile applications from ideation through to implementation.

#### Create and execute development plans and revise as appropriate to meet changing needs and requirements

#### Work alongside UI design and Web Developers to deliver a single unified product, being willing to compromise or match design elements that are required to execute a unified product.

#### Proof of completed independent start-up projects, or relevant experience working on small teams.

#### Experience designing complex UI

#### Understanding of REST, HTTP and efficient networking on Android

#### Position 3: UI & UX Lead Designer

#### What we are looking for? We are looking for a strong lead designer to direct the implementation of sophisticated and modern looking UI across web and mobile platforms, along with working alongside software developers to develop and effective UX design to drive strong user usage. We require someone with prior experience in leading and directing small teams in application development. What does that mean for you?

#### Execute the UX design process end-to-end, which involves understanding our users and their problems, collaborating on solutions, prototyping ideas and testing them

#### Advocate for the user throughout the design process

#### Deliver UI/UX mock-ups using tools of choice and providing alternative solutions where technical possibilities do not match design plan cross-platform.

#### Ability to execute plan based on overarching project concepts, without needing direction beyond that

#### Willingness to participate in user research (user reviews/testing) and implement feedback into design process (including scrapping or adding features)

#### Extensive digital portfolio showing strong focus on minimalist design principles.

#### Position 4: Full Stack Web Developer

#### What we are looking for?

#### We are looking for a Web developer who has a passion for designing clean and efficient websites that integrate with mobile applications and is willing to work closely with a UI Lead designer to drive the overall creative direction for a start-up. The right applicant would be prepared to work in a small team of four, with broad stroke direction regarding parameters but ability to innovate using creative problem solving and forward-thinking design. This role is for someone with prior experience in leading creative direction for small-scale project launches, this will be a key role in the project. What does this mean for you?

#### Strong skills with back-end technologies, including the express framework.

#### Proficiency in front-end development including JS, CSS and HTML (experience with Bootstrap highly valued)

#### Experience working in an innovation driven environment, that has a lot of creative freedom

#### Experience driving creative direction and working closely with a UI/UX designer to provide a client focused product.

#### Ability to implement architecture from the ground up

1. Jang Yul, Kwak. "Determinants of Users Intention to Adopt Mobile Fitness Applications: an Extended Technology Acceptance Model Approach." (2014). https://digitalrepository.unm.edu/educ\_hess\_etds/16 [↑](#footnote-ref-1)
2. Thompson, Walter R. Ph.D., “FACSM ACSM's Health & Fitness Journal: [November/December 2019 - Volume 23 - Issue 6 - p 10-18](https://journals.lww.com/acsm-healthfitness/toc/2019/11000)” [↑](#footnote-ref-2)