



Activity Tracker Deliverable 0

Literature Review

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Overview:

Activity trackers, or sometimes referred to as fitness trackers, is a device or application for monitoring and tracking fitness-related metrics. Typical fitness trackers keep a record of parameters such as distance walked, calorie consumed, time asleep, and even a user's heartbeat. In 2015 the International Journal of Cardiology labeled Fitbit as an extremely accurate and reliable device for wireless physical activity tracking. [1] Physicians at the Journal of Cardiology recognized the importance of these devices when it comes to monitoring physical activity for the prevention and maintenance of chronic diseases.

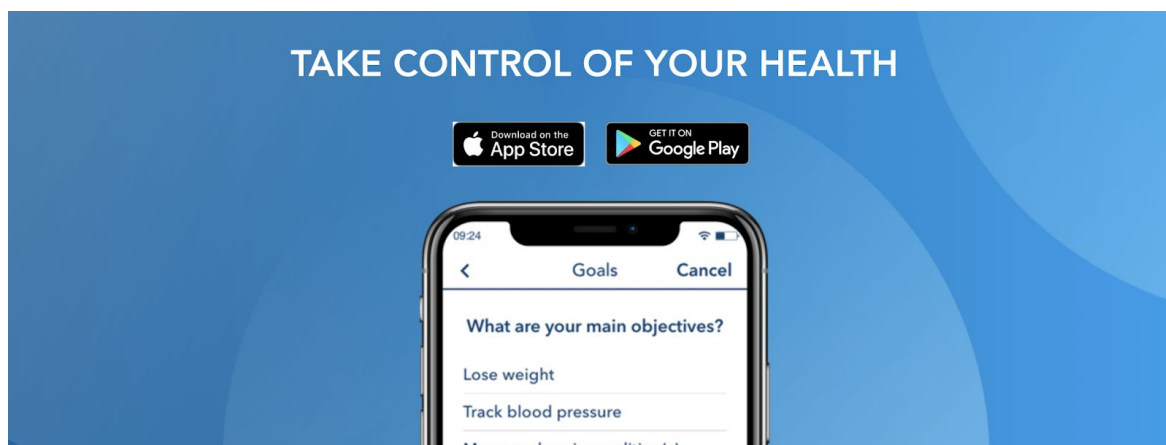
Before jumping right into a project, its good to know what devices and applications already exist on the market today. By examining other products, we will be able better wrap our heads around the activity tracker market and possibly find a niche (or a problem not yet addressed) within that market to help our project stand out.

Sources:

I. TactioHealth

<https://www.tactiohealth.com/en>

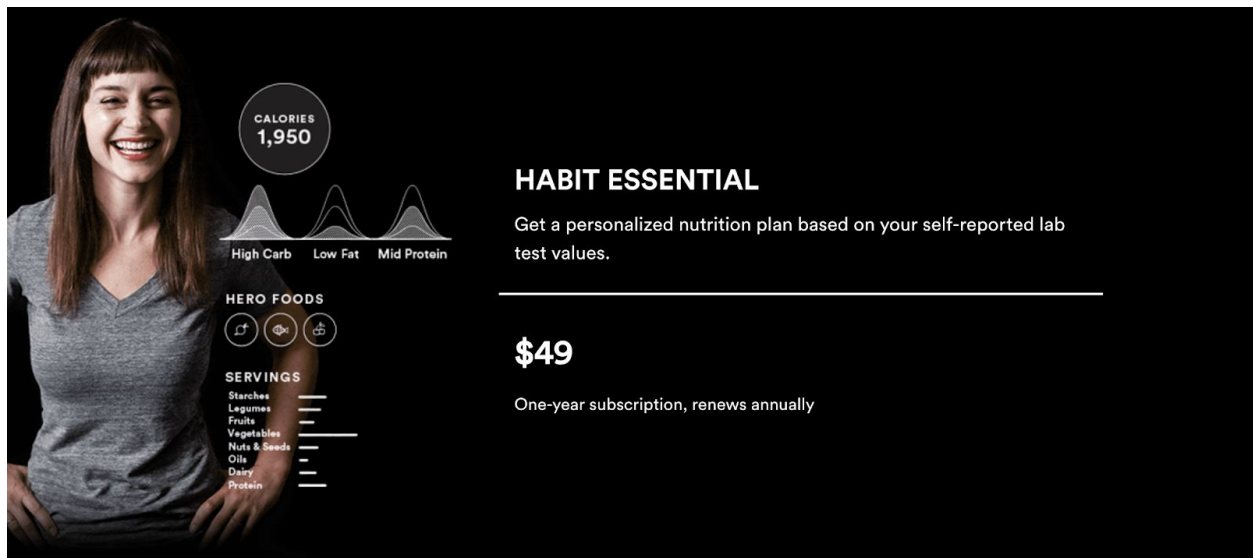
TactioHealth is a health and wellness app that can actively keep track of patient lab results and vaccination history. Tactio also allows wearers to view their blood glucose levels on the watch by getting a reading from a device implanted on the patient. It does this through IoT by getting hemoglobin A1C readings from the sensor on the implant. The implant then sends this information to the Fitbit and the Fitbit displays a color-coded feedback message telling the wearer what their A1C is and whether it is low, moderate or high. [2]



II. Habit

<https://habit.com/>

Habit is an online platform and mobile application to help users build customizable meal plans. The genius of Habit is its comprehensive approach to weight loss that includes biology-based nutrition recommendations, digital tools like food journaling, digital meal plans, recipe tracking, goal tracking, and activity tracking with FitBit. [3] To get started with Habit, first fill out a questionnaire. From there based recommendations look at your cholesterol levels, activity level, and personal wellness goal, to understand what your body needs. With all the following information, Habit will customize your ideal plate, daily food guide, top-ranked foods in each food group, and personalized recipes. All with the intention of helping you push forward with your personal wellness goals. [3]



The advertisement for Habit Essential features a smiling woman on the left. To her right is a digital interface for a nutrition plan. At the top, a circular graphic displays 'CALORIES 1,950'. Below this is a line graph with three peaks labeled 'High Carb', 'Low Fat', and 'Mid Protein'. Further down, a section titled 'HERO FOODS' contains three circular icons. Below that, a 'SERVINGS' list includes Starches, Legumes, Fruits, Vegetables, Nuts & Seeds, Oils, Dairy, and Protein, each with a corresponding horizontal bar. To the right of the woman, the text 'HABIT ESSENTIAL' is prominently displayed, followed by the description 'Get a personalized nutrition plan based on your self-reported lab test values.' A horizontal line separates this from the price '\$49' and the subscription details 'One-year subscription, renews annually'.

III. Endomondo

<https://www.endomondo.com/>

Endomondo turns your phone into a personal trainer in your pocket - ideal for running, cycling, walking and other distance sports. Connecting with a friend adds another layer of motivation and encouragement. Endomondo is integrated with a wide range of watches and sensors in order to enhance the user experience and provide you with more comprehensive workout data, such as heart rate stats. [4] Endomondo comes with a variety of features to help give users that personal trainer feel such as real-time GPS tracking, live

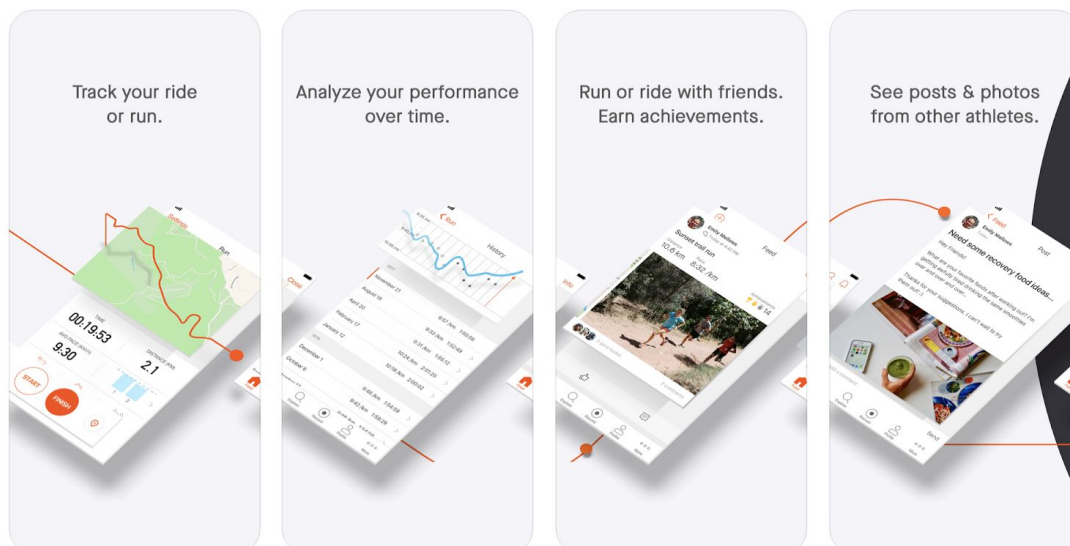
maps, workout history, and heart rate sensors. Endomondo also comes with a variety of social features to help motivate you along your journeys like Global Fitness Communities, New Feed Sharing, and Facebook, Google+ and Twitter integration. Endomondo is a very comprehensive workout planner, however, it does not include meal prep features which is what Habit mainly focuses on. [4]



IV. Strava

<https://www.strava.com/>

Strava is the number one app for runners and cyclists. With features made for athletes, by athletes, Strava sets out to track and analyze every aspect of your exercise activity. Strava turns your iPhone and Android into a running and cycling computer. Strava also has the capabilities to be integrated Start Strava before an activity and you can track your favorite performance stats, and afterward, dive deep into your data. [5] Strava's key features include a runtime tracker, which will monitor your running distance over time. Performance analytics to give you feedback on your overall running goal, and social aspects to challenge competition among peers. [5]



V. Drivebit

<https://drivebit.soft112.com/>

A common issue that arises with Fitbit, or any fitness watch in general, is that sometimes when counting steps, the watch will misinterpret activities that do not consist of walking. Unfortunately, the watch has no other workaround other than manually logging driving activities so that it does not add steps to the step counter. Luckily, Drivebit has come up with a solution to make this a bit easier. A user can simply start the app and when prompted by the watch, they can enable that they are driving. This essentially turns off any count added to the pedometer. [6]



VI. Loseit

<https://www.loseit.com/>

One of the main features of the Fitbit is the ability to track exercises and activities. Loseit wondered, what is the point of keeping track of all your exercising information? There really wasn't any, other than knowing that you have burned 400 calories today. Loseit's mission is to give the watch's ability to track all this information a purpose. The app begins by asking you a series of questions to learn a little bit more about you. It then uses this information to create a personalized daily calorie budget. It does this by allowing the user to track his/her calorie intake like the foods they eat and also deducts calories whenever the user performs activities like running or biking. It uses the watches pedometer along with a few

formulas based on your height, weight, and age to calculate a calorie budget for each user. [7]



VII. Stridekick <https://stridekick.com/>

Stridekick connects to a number of different fitness trackers so you can compete with your friends no matter which device they use. Stridekick sets out to make exercising more social by engaging communities to challenge one another. Users can choose from three challenge modes: Leaderboard, Streak, and Target. After choosing, users can invite up to nine other people for friendly competition. [8] Users not only can join local games, but they can also join more significant community challenges with other runners on the Stridekick platform. New community challenges are always being added to keep users engaged, which pushes them closer and closer to their personal wellness goals. [8]



VIII. Trainerize

<https://www.trainerize.com/>

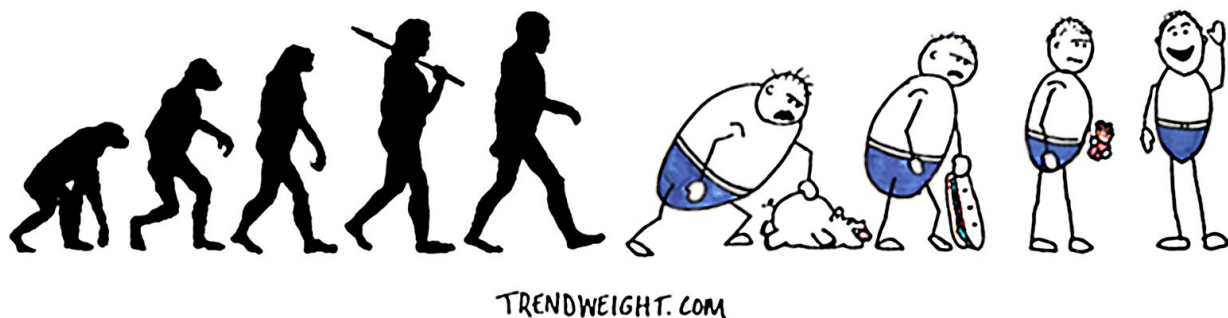
In a lot of fitness apps, we can see that the process is very automatic. And while that does work to a certain degree, it is missing that personal touch that real personal trainers can provide. Trainerize allows real fitness training professionals to set calorie goals and workouts for people through the app. The personal trainer can then give a user real feedback and tailor workouts accordingly. The reason this app is so successful is that it allows fitness trainers the ability to monitor the workout progress of their trainees and make sure they are getting the motivation that they need. The app uses the heart rate monitor, pedometer, and GPS to monitor the intensity of workouts and the duration to provide an accurate reading for the app. [9]



IX. Trendweight

<https://trendweight.com/>

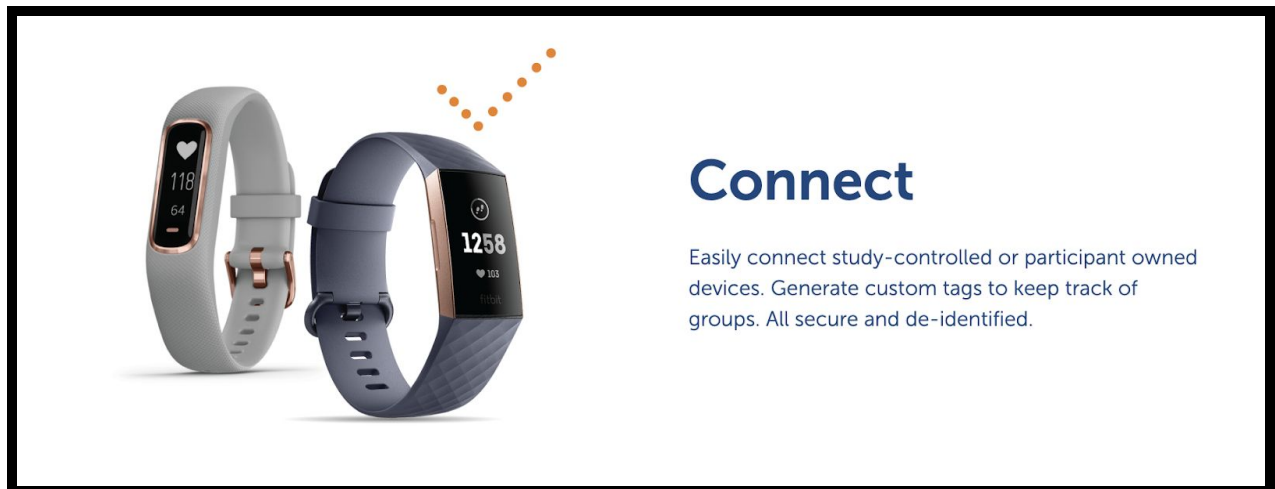
Trendweight is very different compared to traditional Fitbit apps. The purpose behind Trendweight is to teach people not to worry about day to day fluctuation of your body's weight but rather the trend over time. Trendweight only uses the watches interface to display a graph in which the user can see a calculated trend line based on their weigh-ins on a Bluetooth enabled scale. It plots a moving average in which this average can be used to determine a better idea of how your body's weight is trending, hence the name. [10]



X. Fitabase

<https://www.fitabase.com/>

Fitabase is a data management platform designed to support innovative research projects using wearable and internet-connected devices. Fitabase supports a wide ecosystem of wearable activity tracking devices and internet-connected scales such as Fitbit and Garmin. Fitabase is constantly exploring new opportunities to support additional devices and health data applications. [11] Fitabase includes daily trackers for several exercise routines such as steps, METs, Energy expenditure, heart rate, and floors. With many robust and personalized features, its the perfect application to integrate into an activity tracker.



Conclusion:

The market for activity trackers is quite saturated. After viewing a number of different sources it is evident that our product needs a specific vision that causes it to stand out amongst all the different competitors. It is also worth looking into other features that could possibly be implemented that could improve features associated with the activity tracker we will be creating in the coming weeks.

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