

Promotional material

Link to promotional video :

<https://www.youtube.com/watch?v=xaQ10tCSYKA>

Introduction (including unique features)

Research indicates that many individuals abandon fitness activities after just 1 or 2 visits (Radhakrishnan et al., 2021). The reasons include a lack of time, uncertainty about how to use gym equipment, and the absence of guidance from a personal trainer.

Our target audience comprises young people who need to exercise and are fond of virtual pets yet lack the motivation to persist. We seek to address the challenge of sustaining motivation by leveraging Social and Mobile Computing insights and integrating knowledge and theories from modern literature (for example, operant conditioning theory).

What sets us apart is the introduction of an interactive feature with a virtual pet. Through contextual research, we've analyzed many established fitness apps competitors. The primary functions of these apps revolve around fitness tutorials and challenges. Very few of them focus on fitness socialization, for instance, the "Keep App". Moreover, we discovered that almost no fitness software tries to introduce the concept of virtual pets as a feature to entice young users to stay committed. Concurrently, we've combined the development of our application with insights from Social and Mobile Computing, further strengthening our edge in the social fitness arena.

What is the problem/opportunity space?

Background:

Many young people understand the benefits of exercise, such as helping young users get out of sub-health status. However, for various reasons, such as lack of motivation, feeling lonely or bored, lack of fitness guidance, etc., they often find it hard to stick with it for a long time. But at the same time, this generation of young people is also deeply interested in virtual pets and social interaction.

Core Questions:

1. How to provide a fun and engaging exercise platform for young people who know the benefits of exercise but lack long-term persistence?
2. How can gamified elements of virtual pets be used to increase the motivation and participation of young people in exercise?
3. How can these young people be provided with a social fitness environment so they no longer feel lonely during their workouts?

Solution:

- The developed fitness social app uses a light blue background layout and incorporates several cartoon characters to make the app look more fun, helping to attract young users.
- Using electronic pets' feeding mechanism to increase young people's exercise motivation, this mechanism is based on B.F. Skinner's operant conditioning theory (Fioravante et al., 2008). In positive reinforcement, rewards strengthen the response or behavior, leading to the repetition of the desired behavior. By checking in and exercising, pets will get pet food, and feeding the pet will elevate its level. This forms a positive loop for young people, where their persistence in exercise continuously gets reinforced. In terms of engagement, if users do not complete the exercise within a set time, the virtual pet will shed tears and converse with the user to express its feelings.
- Several concepts from Social & mobile computing are introduced to prevent users from feeling lonely while exercising. This is specifically reflected in the software's social functions. For instance, the concept of "Conversation" from Social & mobile computing allowed us to design an instant messaging feature for software users, where they can chat and exchange exercise experiences with nearby friends who have also exercised. We also combined the concept of "Activity traces" with the app. Activity traces typically refer to the behavior traces or records left by users in a digital environment. In the app, users can like and comment on information posted by different users in the community section and leave a record. Combined with the Asynchronous concept, the app also provides a professional message board for users. On the other hand, we have also incorporated the concepts of "Location-aware" and "Location-specific." The app can recognise and utilize the user's geographical information. Only after the user provides their location details (latitude, longitude, and distance constraints) will the app locate nearby gyms.

Prototype Link:

<https://xd.adobe.com/view/5fdb1bbc-4675-40af-a284-50f088fbb339-0a88/>

How the Prototype Works:

Upon accessing the prototype interface, users click the 'Start' button and then agree to our privacy policy, leading them to the initial screen. Once registration is completed, they enter the prototype. Here, they'll encounter a kitten. The kitten initiates a dialogue to introduce the concept behind our pet design. If users wish to skip the introduction, they can select the "skip" option. Subsequently, they can name their kitten and click "Adopt a cat" to adopt it.

The main interface of the prototype offers four primary functionalities: "Rank List", "Exercise", "Social", and "Profile". By selecting the corresponding buttons, users navigate to different screens.

- Rank List: This displays a feed ranking of users based on the feeding of their pets. Through this ranking, users can discern which participants have exercised for more extended periods and maintained a consistent workout check-in routine.
- Exercise: Here, users can view tutorials for different exercise modes. For instance, the interface offers tutorials for "Running" and "Rope Skipping". Clicking on these options will pop up related instructional videos, aiding users in their exercise routine.
- Social: On this screen, users can view their friends and their respective workout logs. By selecting different friend chat boxes, they can initiate conversations and share workout insights. Additionally, within the Social interface, users can tap the "Community" button to access a forum. In this forum, they can engage with other users, exchange ideas, like posts, or even upload their thoughts by clicking the "+" button.
- Profile: This screen displays personal workout data and the pet's stats, such as feeding frequency and the number of days it's been alive.

To encourage users to persistently engage with the app for exercise and socializing purposes, we also incorporate a fault-tolerant mechanism. If a user neglects the app for an extended period, causing their pet to starve to death, they can click on the "Back New" button on the main interface to readopt a pet (this feature has a usage limit).

Key Innovations of the Prototype:

The prototype boasts several groundbreaking elements:

1. Integration of Social & Mobile Concepts: One of the most prominent innovations is the integration of Social and mobile computing concepts, such as the prototype's "Social Part" feature. By facilitating social interactions and creating a community atmosphere, the app significantly increases the likelihood that users will stick with it over the long term.

2. Introduction of a Virtual Pet System: This is where the app truly differentiates itself. Instead of relying on the social aspect to keep users engaged, the app incorporates a virtual pet system by melding this with the operant conditioning theory formulated by B.F. Skinner (Fioravante et al., 2008), the app offers a potent motivational boost.

- Positive Reinforcement: As proposed in the operant conditioning theory, positive reinforcement can drive behavior. In the context of the app, this is seen when users consistently exercise and check in, leading to their virtual pets leveling up and receiving treats. This gratifies the user and instill a sense of achievement, prompting them to persist.

- Negative Reinforcement: On the flip side, the app also employs negative reinforcement. If users fail to regularly check in or exercise, their virtual pets suffer – they become hungry, weaken, and could eventually die. This creates a scenario where users are motivated to prevent these adverse outcomes. The distress at the idea of their virtual pets suffering or dying serves as a potent deterrent, making users more inclined to use the software daily and adhere to their exercise regimens.

In conclusion, this prototype is not just another fitness app. It's an ingenious fusion of behavioral psychology, social interaction, and gamification, all of which come together to ensure users don't just start a fitness journey but stay on it.

Reference List:

Fioravante, D., Antzoulatos, E. G., & Byrne, J. H. (2008). Sensitisation and habituation: Invertebrate. *Learning and Memory: A Comprehensive Reference*, 31–51.

<https://doi.org/10.1016/b978-012370509-9.00005-x>

Radhakrishnan, M., Misra, A., Balan, R. K., & Lee, Y. (2021). Gym Usage Behavior & Desired Digital Interventions: An Empirical Study. *ACM Digital Library*, Pages 97–107.

<https://doi.org/10.1145/3421937.3422023>