

Group Formative Research Report

TEAM: HipDog

1. Title

Team HipDog

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2. Introduction

As the number of in-person socializing decreased due to the Covid-19 pandemic, online classes naturally increased and social distancing began, and naturally many people's outside activities are limited. As a result, people are spending more time at home, so if there is a dog owner, our team thought that the dog would have a social problem as their outdoor activities would decrease due to the Covid-19. Therefore we set the target user for dog owners and dogs.

Our team is trying to design an application that solves the problem of dogs' outdoor activities and lack of sociality due to Covid-19 in the current era where dogs are also considered part of the family. Just as sociality is important to people, it seems to be an important issue for dogs as well. However, in the current situation that owners get limited outdoor activity, dogs' walking and outdoor activities, which must be accompanied by the owner, have reduced also. This not only leads to a lack of sociality in dogs, but also affects the health of dogs by limited walking. Therefore, we designed a matching service that allows dogs and owners to communicate and exchange information with other companions, and to take walks or outdoor activities with nearby dogs.

Currently, there are many app services for dogs. For example, a service that introduces cafes, parks, and travel destinations where dogs can be accompanied, a dog basic training guide service, and a service that provides basic knowledge of companion animals and useful information. These services are simply for the purpose of providing information. On the other hand, the service designed by our team will give local small-scale matching service for dogs (divided with small, medium and large size dogs) for the dogs' sociality. By matching dogs with each other can solve the dog social problem mentioned above by going for a walk or doing outdoor activities together. In addition, since it is an app for dogs, it will be possible to sign up through a dog registration certificate, and after matching between users, when users engage in outdoor activities together, users can write a review or report the other party, and the feedback will be shown to everyone else through profile. This will allow users to use the service more safely.

3. Background

Past 2 years, all over the world has suffered from Covid-19. Governments lock down the entire city and limit the time spent on sales facilities. Because of such regulations, people's activities are restricted. As people's outdoor activities have decreased, their pets are also affected. According to the article "The COVID-19 pandemic affects owners walking with their dogs", the

duration of walking with dogs was decreased due to COVID-19 pandemic restrictions. 59% of 216 adult dog owners walked with their dogs for more than 150 minutes before pandemic, but the number of owners who walked their dogs for more than 150 minutes after pandemic decreased to 44% (Vučinić et al., 2021). As such, it can be seen that COVID-19 affects not only humans but also pets. Therefore, we will provide opportunities to meet and walk with other dogs through matching service and also community services for dogs to increase their walking time, which was reduced by COVID-19.

To provide this service to target users, we decided to research why walking or being outdoors is important for dogs. Basically, dog walking is a normal activity for a dog owner and dog, so it should be beneficial to the health of the dog and the health of the owner. Dog owners benefit from improved cardiovascular health, reduced blood pressure, strengthened muscles and bones (formed by regular walking), and reduced stress, while dogs can solve many medical problems associated with obesity, including osteoarthritis, cardiovascular disease, liver disease, and insulin resistance by walking (Epping, 2011). Walking also affects hormones, which can make dogs and their owners very happy. Hormonal experiments conducted by Junko and Mitsuaki found positive effects not only on dogs but also on owners. They found that dog walking did not boost the owners' salivary oxytocin or cortisol but did inhibit brain noradrenergic nerves via GABA (which is an inhibitory neurotransmitter) activity, suggesting stress relief (Akiyama & Ohta, 2021, p. 1).

Therefore, with this basic background, we searched for apps that use the service we thought of or a similar service. There are a lot of existing apps for dogs. One of the existing products which was relevant to our service idea is "Petmire". Because we plan to build an application for dogs that gives information and opportunity to communicate with other dogs, this application is relevant. As Figure 2 shows that the application is a social community for pets, so it has the function of sharing information about pets and posting their pets' pictures and communicating with other pets, and finding nearby pets. Our application will differentiate from Petmire by only targeting dogs and focusing more on the matching service. We will collect the dog tendencies from owners and based on that, we will provide a customized service to meet dogs with similar tendencies. Also, as Figure 1 shows that while Petmire can log in with a Google account or Facebook, our application will require a pet ID for the user's dogs in order to log in and expect that this will prevent the users with improper purposes.

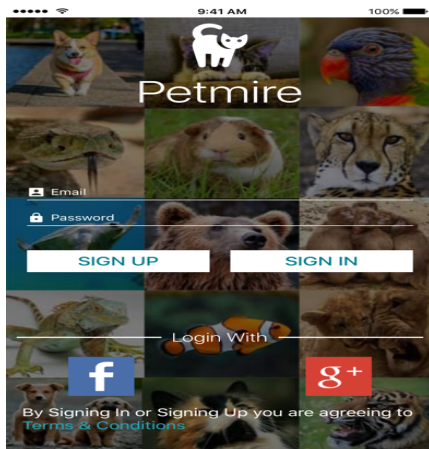


Figure 1: <Petmire>

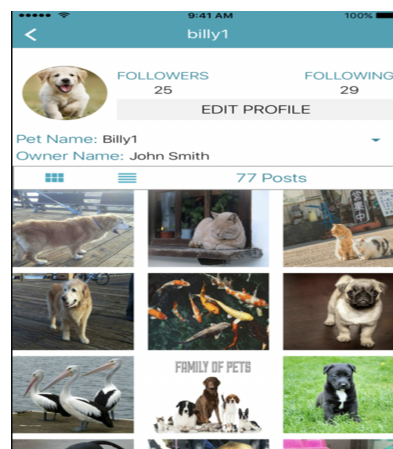


Figure2 :<Petmire>

For our solution of providing the matching service among the users, it is crucial to regulate the unrighteous meetings which fall out from the intention of using our application. Therefore, being aware of the problems which can easily occur when using a community and matching service application was necessary for our team before we actually move on to the materialization of our ideas. Dating applications are a representative example for having dangerous risks and crimes from the relationship between users. This fact was closely relevant for our solution in which the dog-owners, humans will actually be the users even though they have purposes on their dogs. According to the research paper “Threaten me softly: A review of potential dating app risks”, the paper reveals that “technology-facilitated intimate partner violence affects one in three women and one in six men in the course of their lifetime”(Phan, Spellar, & Choo, 2021). Despite these existing problems still needing to be solved, the paper also shows that due to the digitalization and the recent COVID-19 lockdowns, the users of dating apps such as Tinder and OkCupid have increased by 20% and 30% respectively from March 11, 2020. On the other hand, as a countermeasure for these kinds of risks and hazardous problems from the dating apps, we found out that one of the most famous dating apps which is “Tinder” adopted biometric face verification and achieved a number of things which the increase in safety and security was also included (Iproov, 2021). Considering our solution in which we will require a pet ID in order to sign-up, it was different from the tinder in which the method is used but was identical for increasing the verification of user identity.

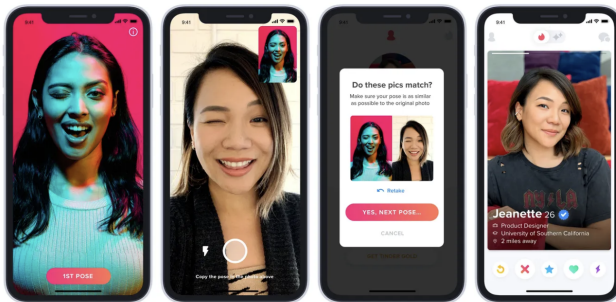


Figure 3: <Tinder using photo verification system>

4. Target Users

Our primary and target users are the people who have dogs and desire to meet other companion dogs. Due to the Covid-19 pandemic, dog owners' activities are limited and they have difficulty meeting other companion dogs. It directly affects dogs' activities as well. Therefore, by providing SNS for dogs which included the Matching service, the community will help develop dogs' activities and sociality.

5. Formative User Research

a) Interview: Dog Owners

1) Participants:

Our team chose the interviewees from two groups. First, our friends who have dogs, and second, those who volunteered on doing the interview from our

survey. These participants were selected because they were our primary target user group, which is dog owners. Therefore, we thought that it was necessary to get their needs and feedback about our design plan since the dog owners who actually have dogs know much and have special interest in dogs.

2) Procedure:

We conducted our interview by using 3 different methods which are by phone, zoom meeting, and in-person. All the interviews were conducted equally by introducing our purpose of designing our idea, asking permission for recording and taking notes during the interview. Finally, we analyzed and synthesized the responses by sharing the organized notes and comparing the interview results of the total 7 interviewees with each other.

3) Results:

We had a total of 5 interviewees who are dog owners. They were in their 20s, either students or interns at their respective companies. It was surprising that they commonly mentioned that the impact of COVID-19 to their dogs was not negative, rather it was positive for their dogs in some ways. Typically, they pointed out that “due to COVID-19, their dogs had more time to spend with them or their families because of the less outdoor activities of people which increased their dog’s sociality.” In the perspective of their needs as dog owners, they had some different kinds of concerns about their dogs but were similarly expecting for the application to provide helpful information about dogs. For example, the interviewees wished for information about dog- health, places where dogs are allowed, and price comparison over dog supplies. At the end of the interview when we asked them about our design plan ideas, most of the interviewees thought that our primary idea was good however, they emphasized that it would be important for us to concretize our plans in more detail regarding that COVID-19 doesn’t really have bad impact on dogs.

b) Interview: Participants who are interested in dogs(Non-dog owners or the one who has experience of raising dogs before)

1) Participants:

We chose a non-dog owner from our survey. We thought non-dog owners may have different opinions from those who have dogs. Therefore, we interviewed a non-dog owner to get their ideas and feedback about our design plan and direction of the app.

2) Procedure:

We chose an interviewee from the survey and interviewed in person. We started the interview with simple questions and asked their ideas or opinions about our functions and designs of the app. During the interview, we took notes. After that, we organized the contents and analyzed it with our team members.

3) Results:

A non-dog owner wished to have services that provide information to people who are willing to adopt dogs and that feed dogs through application. Also,

the interviewee pointed out if there is no clear purpose of the community, then the intention of community could be changed badly. At the end, he emphasized that the purpose is for dogs to meet and play, but the users are people, so if a system is equipped to filter out users with impure intentions, it will be a good application.

c) Survey: Anyone who are interested in dogs

1) Participants:

We posted a Google Form Survey on SNS Instagram and asked our followers and friends to take a survey. We conducted a survey because we wanted to get a common opinion from all people who are interested in dogs, regardless of whether they own dogs or not.

2) Procedure:

We make a Google Form that asks different questions to people who have dogs and those who don't. We posted a link to a Google Form Survey through Instagram and gave a link to friends who have dogs to get an opinion from them. We asked in the form to leave a contact number or kakaotalk id if it's possible to interview. Based on the people who leave their contact information, we divided them into two groups which are non-dog owner and dog owner and in those groups, we randomly choose interviewees.

3) Results:


We got 47 responses. 48.9% (23 people) have a dog and 51.1% (24 people) don't have a dog. Because we plan to make an app that requires a pet ID for sign-up, we asked if they have a pet ID or not. 75% of respondents have a pet ID. We received several answers which are "it doesn't affect dogs", "Spend a lot of time indoors with the owner, so dogs like it", "Dogs can get a Covid-19", and "frequency of walking with dogs decreases" to the question of whether COVID-19 affects dogs. We expected to get answers that dogs only get negative effects, but we got several answers that dogs get positive effects. Also, in the question, "Were there services you wanted for an app for dogs?", they answered that they want services such as introducing restaurants which can go with dogs, booking hospitals, and matching walking mates for dogs.

6. Conclusion

Our team thought that as people's outdoor activities were restricted due to COVID-19, dogs' outdoor activities are also limited and it causes negative effects on dogs such as problems of sociality. However, while we were researching for background, we found that dog walks have a positive effect on owners who have been cut off from outside activities due to the Covid-19. In other words, Covid-19 tends to have no direct restrictions on dog walking. Also, as a result of interviews and surveys and direct communication with dog owners, we learned that due to Covid-19, dogs are having more time to communicate and spend more time with their owners, which had a positive effect on dogs. Therefore, we will focus on the design direction that can serve the dog's safety, health and sociality, rather than the problem caused by Covid-19. While focusing

a little more on a simple social dog matching service, we will also implement “Designing for Good” too by identifying the needs of users through interviews and surveys.

7. References

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8. Appendix

1. In-class research outline critique on March 21 by U5 Abhishek Gaire
 - Overallly, the idea targeting dog owners looks good since it is not difficult to approach them and keep in track with the idea and their needs.
 - It would be nice to survey some communities or groups where they are able to give some helpful information.
2. Raw data collected from formative research
 - a) Interview Questions :
 - <Motivations & Behaviors>
 1. Do you have any concerns or questions related to dogs(especially your dog(s)) these days?
 - 1.1. What do you think as a solution for your concerns and questions?
 2. Do you have any concerns especially about your dog’s sociality(including meeting new dogs) due to Covid-19?
 - 2.1. What do you think as a solution for your concerns and questions?
 3. Do you have any concerns or difficulties faced with your dog whenever they go for a walk?
 - 3.1. What do you think as a solution for your concerns and questions?
 - <Behaviors>

4. Do you have any experience using application services for your dog?
 - 4.1. If yes, what was your purpose for using the service?
 - 4.2. If so, which app did you use? And what result did you get? (Did the service meet your expectations?)

<Needs>

5. Do you have any expectations or wishes on an application service for dogs?
6. Do you have any intention of using an app service that provides SNS for dogs?
7. Our team is planning to design a service which has the following features. What do you think about it?
 - A customized matching app service depending on the size of each dog (size: L,M,S etc.) and among users at close range
 - SNS, Community service (posting and comment such as instagram) Sign-up by pet identification card
 - User report accumulation system in order to verify the users
- 7.1. Feedback about our service plan

b) Interview Responses (done individually by each team members, 6 participants in total):

- Gyuri Kim
<https://docs.google.com/document/d/1hwhXJCxF9ltB9ALoapVDpQ1slvcLPhiME7VWnQPnhE/edit?usp=sharing>
- Sungjoo Shin
<https://docs.google.com/document/d/1FrHU25lfZQmhcasAQZAaY5oMFwJQvtVenY1xSNtu24g/edit?usp=sharing>
- Dayoung Yoon
<https://docs.google.com/document/d/1E4nFzgUaZ47tADwaKToTbQRfY3O31N08eEILsZws2E/edit?usp=sharing>

c) Survey on our instagram followers (total 1441 followers):

- Questions:
<https://docs.google.com/forms/d/1u6UABqdxAZphHMwKzsh9Xr0ZY6MMexsFHZcM2Betuac/edit>
- Responses:
<https://docs.google.com/spreadsheets/d/1sA7ffftplxD1JkpXUc7c2K0YrsjUHQ6gOy1cB2dA3Y0/edit?usp=sharing>

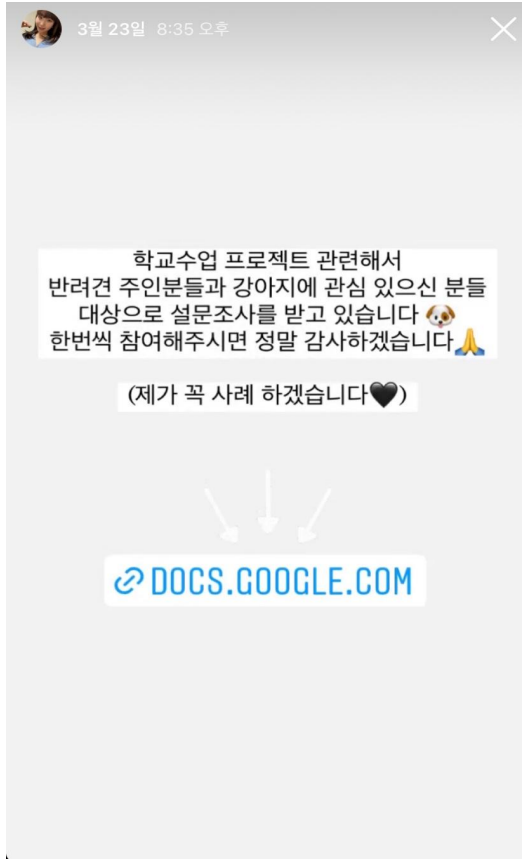


Figure 4: <Survey upload on Instagram>