Bilkent University

Department of Computer Engineering

Senior Design Project

HelPet

Project Specifications

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Progress/Final Report
May 3, 2010

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1. Introduction

For the maintenance of a balanced ecosystem, we cannot consider a world without animals. However, as the cities becomes bigger and wider, some of the animal species such as dogs, cats, birds, etc. start to live in the cities with us 'humans'. Some of us prefer to live with the animals and own them as pets but some of us do not prefer that. For the pet owners, having pet requires too much responsibility and attention. In other respects, without any human support, a lot of animals try to live in the crowded and dangerous cities. To help both pet owners about their pets and the stray city animals, we will develop an android application HelPet.

According to American Veterinary Medical Association, only in U.S.A. there are almost 44 millions of household dog owning, 36 millions of household cat owning and 3 millions of household bird owning [1]. For each household, veterinary visits per year is almost 3[1] .Thus, there is a huge need and market for pets and their care. By the help of HelPet, pet owners can easily manage their pets care. An android application HelPet can be reached by anybody who have the Internet access and smart phones to get help for their pets. By the help of the HelPet, pet owners can see the top rated veterinary services near their current location and rate the veterinary services regarding their performance. HelPet send notifications to the pet owners about their pets veterinary service appointments, vaccine dates and feeding times. Also HelPet users can have a profile for their pets if they want to breed their pets with others which they want to pair according to their profile. In addition, according to statistics of American Society for the Prevention of Cruelty to Animals, the %15 of the pets gets lost [2]. Thus, as a solution for that issue, HelPet users also can find their lost pets by sending their photo and location where pet is lost and receive the photo and the location of the suspicious lost animal by the other users. Pet owners also can find a temporary caretaker for their pets if they have to leave their pets for a while and report the caretakers performance by rating them. Lastly, HelPet users can ask question about animals, get answers about users and get tips about the animal care as notification.

On the other hand, there are numerous city animals which have not got any house or owner who support them to live a healthy and happy life. According to presentation of Prof. Dr. Tamer Dodurka, there is no information about the number of

pet dogs and stray dogs in Turkey [3]. However, according to Dodurka, in the world %75 of the dog population consists of the stray dogs and only in Italy, %25 of the pet dogs is abandoned by their owners into the city streets [3]. To help the stray animals, animal lovers can report an animal which needs any help by taking the photo of it, specify the location and send it to the HelPet. This reporting will be sent to the nearby animal care volunteers as a notification and make them to be aware of the animals that need help. Also users can report the dangerous animals to protect people and also the other animals.

In the following parts of this report, the brief description of the application will be given. Also,i under the title of constraints, there will be several approaches about restrictions and limitations of the application will be discussed.Thereafter, professional and ethical issues will be argued. Lastly, functional and non-functional requirements of the application will be clarified.

1.1   Description

HelPet is a mobile application that targets to animal lovers. It can be considered as a platform that provides help, consulting to owner of pets and animals that is wounded or lost.

When people encounter an animal that is wounded or indigent, even they want to help them they may not help in some cases. Because they may be in a situation that they have to go somewhere else or do not have enough time or equipment. With the help of HelPet they have a chance to notify people by sharing the picture and location of the animal. This feature does not require registration.

Pet owners have difficulties about finding proper partner for their animals to mate. But HelPet offers a feature to solve this problem. Pet owners add their pet and its features to their profile. Users could make their search by filtering the features of pet acording to their wishes. Then users are able to contact with the owner of the pet they want to mate with their pet.

Pet owners may forget their pets' vaccine time. While adding a pet to their profile, they may add time periods of vaccine of their pets. HelPet can remind pet owner on the vaccine time.

Also people who can not be able to look after their pet anymore need to find a safe place to give their pet. HelPet has a category which people can add their animals with their features and location for adoption. People who want to adopt a pet can search an animal from that category by filtering acording to their personal demand. Hence adoptation is very sensitive issue for both who gives the pet and who adopt the pet, HelPet provides an opportunity user to see and comunicate with candidate owner of their pets.

It is very difficult to take pets to everywhere. For example people who need to travel for two weeks may not be able to take their pets with themselves. Therefore, they need to leave their pets to private pet hotels but they may not be affordable or suitable. Via HeLPet users can find people easily to look after their pet. Because HelPet includes a category which consists of announcements from people who want to be a host to pets for a limited time. Also hosts declare which animal tand which time period they can host so that people who search for a host can find the proper caretaker and they can communicate with host. In additon, at the end of the time period of takecare, pet owner can rate the host and comment to his/her profile.

Searching lost pets is really challenging issue even in our times. There is no easy way to find a pet but HelPet supports a category for lost animal announcements. People can post their lost animals with their picture and probable province. If someone sees the picture of any lost animal, they can communicate with the owner of announcement owner. Also they can check the category that shows indigent animals with their picture and location, and they can be absolutely sure from the picture.

In addition HelpPet includes a forum that users can ask questions, share information and consult each other about their pets.

Furthermore, the pictures are out of purpose will be reported by users and then admin can remove the picture or ban the user if it is essential.

1.2 Constraints

Implementation Constraints

- HelPet needs to have mobility so it has to be mobile application.
- Application will be targeted for Android users.
- Implementation language will be Java.
- GitHub will be used for version control.

Economic Constraints

- The application will be free to download from Google Play and there will be no app-in purchase.
- In order to publish the app, one-time payment is required to Google Play Store which is $25 USD.
- All API's, libraries, frameworks will be free to use. (For example, Google Maps to set the location of wounded animals)
- Database system is required to keep personal information and photos taken by users.

Sustainability Constraints

- The application will be updated regularly for bug fixes according to users review and their feedbacks.
- New improvements and recommendations from the users will be considered.

Social Constraints

- Application will be released in English since the fact that English is one of the most spoken language in the world.

Security Constraints

- Users' personal data will not be shared such as phone number, e-mail address, location, etc.

1.3   Professional and Ethical Issues

Ethical Issues

- The application will collect personal information from the users like their contact information. Other users are not allowed to see others' contact information. These information has to kept as private as long as user want to share them on their profile. The application will always ask for a permission from the user when they use this information such as their location, surname, etc.

Professional Issues

- Source code of the application will be kept as private in GitHub.
- There will be a group meeting once a week.
- We will divide project's workload into equal pieces.
- Each member is responsible for completing others' jobs when they are lack of knowledge.

2. Requirements

Functional Requirements

- User should register the system and create accounts.

- Users will be able to add their pets in their profile.

- User can search a partner to his/her animal to mate by filtering based on the features that is demanded.

- User will be able to take picture of a wounded animal or through the HelPet and transmit to other users with location of animal.

- User will be able to take notifications which inform users about the wounded animal that is located nearby.

- User can search a volunteer to look after his/her animal temporarily, user can declare his/her expectations and the time.

- User can announce that he/she could look after an animal temporarily.

- User can rate and comment the hosts and they can see the ratings.

- User can search pets and select to adopt.

- User can report his/her pet as missing pet an.

- User can be reminded by HelPet about his/her animal's vaccine time.

- User will be able consult each other through provided Q&A.

- Users will be able to report irrelevant posts.

Non-Functional Requirements

- **Reliability**

  The provided services must be accessible 98% of the time

- **Performance**

  During the process "Update Customer" system responses should be no more than 1 second. System respond time shall be at most 1.5 seconds.

- **Precision**

  In case of any changes made to the system entities, the time of change must be recorded with detail.

- **Configurability**

  The website will be configurable enough to make the necessary or arbitrary changes. It may also allow small changes such as the ability of a user to change his/her credentials.

- **Capacity**

  Up to 500-600 of users can use the site at the initial state. up to 100,000 unique user can be recorded to the system.

- **Concurrency**

  All online users can use the emergency services for pets and street animals.

- **Backup and Recovery**

  In any case of unscheduled system crash, data on the website will be recovered from the backup database whichs daily updated. All processes can be made within 1 work day after the crash.

- **Availability**

  The platform is available 7/24. Users will be able to log-on and update the social feed any time.

- **Auditing and Reporting**

  User activities will be recorded regularly by the system admins. The recorded activities are going to be accessible with reports. This will allow site admins to watch over users who tend to use the app for abusive purposes.

3. References

[1] "U.S Pet Ownership Statistics", Avma.org,(2012).[Online]. Available: https://www.avma.org/KB/Resources/Statistics/Pages/Market-research-statistics-US-pet-ownership.aspx. [Accessed: Feb. 17, 2018].

[2] "Lost Pet Statistics: Survey Looks At Likelihood Of Finding A Missing Dog Or Cat", *The Huffington Post*, November 7, 2012.[Online]. Available: https://www.huffingtonpost.com/2012/07/11/lost-pet-statistics-survey-dog-cat_n_1662860.html. [Accessed: Feb. 17, 2018].

[3] Tamer Dodurka, "Köpek Popülasyonunun Yönetimi", turkvet.biz, May. 2012.[Online]. Available:

www.turkvet.biz/yazi/hr_kopek_pop_yonet_dodurka.pps. [Accessed: Feb. 17, 2018].