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## **Date-a-Dog**

*The Problem:* Shelter dogs are often confined to kennels which leave very little room for physical activities leading to a stressful life behind chain link walls. While animal shelters work hard to reduce stress in homeless dogs by bringing in volunteer dog walkers, the number of volunteer is often not sufficient, as a result most dogs will rarely leave their kennels.

*Our Solution:* Date-a-Dog is an android app which allows users to schedule a date with local shelter dogs without any long term commitments. Our primary goal is to reduce stress in the life of shelter dogs by increasing the amount of physical activity, and exposure to human companionship they currently lack. Our secondary goal is to increase the likelihood for adoption, as dates could result in special bonds between human and canines. Finally, we also seek to raise pet overpopulation awareness, which could influence user's decision to adopt, as opposed to buying pets from breeders in the future.

*Competitive Analysis:* Although there are other applications which focus on making shelter dogs' profiles easily accessible to users, the option to set up a date with a dog must be made directly through the shelter (i.e. walkzee.com). Our app will automate the request for a walk for users by storing user information required by a shelter, eliminating the need for users to contact the animal shelter directly. In addition to the user interface, we will have an animal shelter interface where appointment requests by users can be visualized, and approved or denied by animal shelters.

## **Software Architecture**

Date-a-Dog will be developed as a mobile APP. The Project development will be divided into the following front/back-end components:

1. Front-end (developed using Android SDK framework)
  - User interface to create new account, search, and request a date with a dog
  - Facebook user authentication for user's identity.
  - Shelter user interface, where animal shelter can visualize pending, current and historic dog dates. This interface will also provide shelters user information to perform screenings, and accept/deny date request.

## 2. Back-end

- User and scheduling data storage through Amazon's AWS RDS for MySQL.
- Live data querying through petfinder.com's REST API to maintain up-to-date shelter data by making use of JSON request/response contracts.

### **Challenges and risks**

Getting dog shelters to adopt our interface will be a challenge, as our app will greatly depend on shelters to periodically check on existing requests from users, conduct a screening, and provide a response to the date request within a reasonable amount of time. We will minimize the risk by making it as effortless as possible for shelters to interact with our app, through customized user data collection for screening, and simplified schedule layout.

Another challenge our app will face is the dependency on external API (i.e. petfinder.com) to provide up-to-date data on homeless dogs and animal shelters around the country. In addition to possible unreliable data, we also face limitations on the number of calls we can make to the API, and system down time. We plan to mitigate the risk by caching API data into our own database through a single daily call to the API. This course of action will introduce another risk of displaying outdated data during API down time, however, it is still a better alternative to complete failure.