PetsBoarding

A mobile application for helping pets owners find pet resorts and pet sitters in a more efficient way

Member: Xiaojing - MS in Computer Science

Motivation

Nowadays, many residents would love to live with pets. However, when pet owners have travel plans, they usually won't be able to carry pets with them. Searching for a comfortable and affordable place for their pets seems to be necessary. People may notice many places and individuals offering pets boarding services around the city, but choosing a good deal among all available options is not a trivial task. The information of those pets resorts is scattered on their own websites, which requires owners to read through each website to find prices and service constraints. Some companies only run their businesses for certain kinds of animals like dogs or cats, so people who own other types of animals have a frustrating time to find useful services. Due to the lack of information integration, the process of finding a satisfiable pets resort is exhausting and time-consuming. This mobile application aims at providing integrated data of urban pets resorts and individual pets sitters to simplify the process of finding suitable service providers. Users are able to refine the search by selecting hourly ranges, service types and other features before comparing the returned results to make a better decision.

Related Works and Background

At this moment, there are only a few websites aggregating information of individual care service providers. Those services usually cover child care, senior care, pet care and housekeeping. No mobile application has been developed for finding nearby pets resorts. People often just use web search engine to look for pet boarding services.

- Care.com: A website helps people to search caregivers on housekeeping, child care, and pet sitting[1]. It lists profiles of registered service providers with corresponding ratings. People can look up available individuals for care services with filters, or they can even register themselves to become caregivers. However, the pet boarding services offered on this website face a major concern that pet owners may trust certificated organizations or companies more than unfamiliar individuals.

- Websites: Some pets resorts created their own websites to let customers find their working hours, contact information and businesses on the website. Some even support online reservation for pets boarding. Because each website only contains information limited to its own business, pet owners need to spend lots of time on looking at the websites and manually making comparisons among them. The service searching is fairly inefficient due to the unorganized data.

Features of Proposed Work

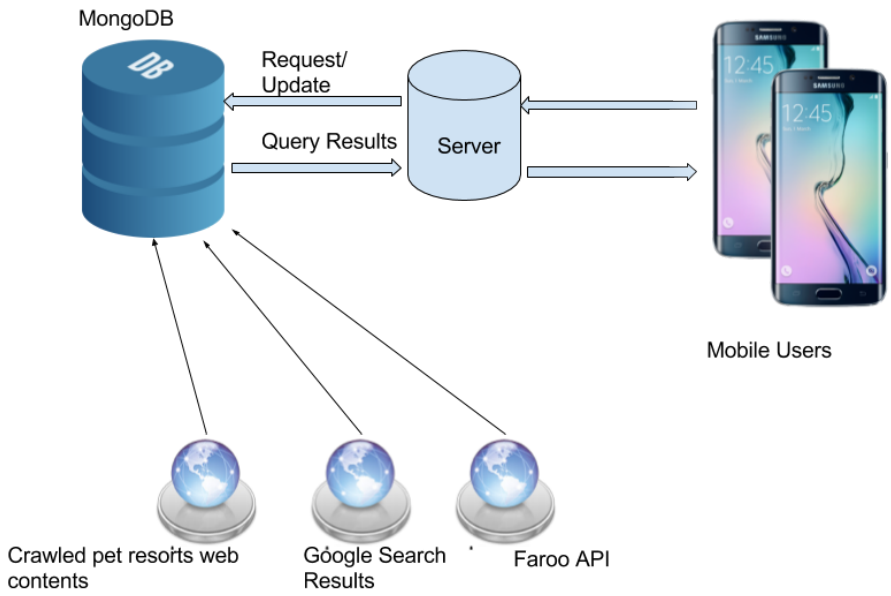
1. The goal of this project is providing a mobile application for pets owners to find and compare nearby pet resorts and pet sitters. It helps users integrate data collected from local pet resort

websites and registered care providers. Users can easily specify features like cost or animal types to filter the results. They can make a comparison among available options for a better solution, as well as leave feedbacks to caregivers or register as service providers. Based on those requirements, the following features will be implemented.

2. **Search Filter**: sorting and refining data is the key feature of this project. Filters include serving hours, accepted animal types, ratings, and cost range. Users can specialize their requests by selecting available options on the filter.
3. **Display Results in Comparison Format**: Pop-up refined service providers to the user. In order to make results more readable, information will be formatted into a list which includes attributes like price and rating. Users can compare different providers in a more efficient and straightforward way.
4. **Rating**: users do care about the rating of pet resorts and individual pet sitters. Good feedback will attract more customers and prove the reliability. Regarding pet owners usually don't trust strangers, a good overall evaluation leaves a positive impression to pet owners and encourages them trying services from pet sitters. The system provides a feature for entering ratings and comments. On the backend side, ratings will be accumulated to get an overall score.
5. **New caregiver registration**: considering the amount of pet resorts is limited and their services might be expensive, this system provides pet sitters' information as an alternative solution. Some people enjoy spending time with animals and would like to get paid for looking after them, so they can register to become a pet sitter. Their profiles show their contact information, interests, introductions and hourly/daily rates. Besides, evaluations from previous customers will be displayed. This feature gives more options and more flexibility to pet owners.

System Architecture

The system contains a mobile frontend and a centered backend. The backend connects to a database storing profiles of pet resorts and pet sitters. Profiles of pet resorts are collected from third-party sources and profiles of pet sitters are created by registered users who consider themselves as caregivers. The third-party sources include the searching results returned by Google search engine, Faroo API, and crawled contents from pet resort websites. Faroo API can be an alternative for deprecated Google Web Search API[2]. Queries are able to be returned in multiple formats like XML or JSON. In order to collect more detailed data, contents on some pet resort websites will be crawled as well. The data source is one of the major components of this mobile application, so ensuring data reliability is a crucial task. After collecting data by those three approaches, I will preprocess the data and import extracted contents to MongoDB. The system is going to be built in Meteor platform which integrates nicely with MongoDB database. Meteor supports mobile applications for both Android and iOS devices. At this moment, the application will be tested on one of those two systems first.



• Backend: The backend which handles requests received from mobile users is written in JavaScript. It responses to valid refine requests and processes the queries with data stored in MongoDB.
• Data Sources: three kind of sources will be considered and useful data will be transformed into a good format. Nosql database MongoDB will be applied to store and manage data. Noticing the workload of collecting information for all cities is too heavy, I will use the city of Atlanta as an example for the project.
• Mobile Users: the application should be accessible by smartphone users. Meteor offers HTML and CSS to improve the quality of user interface. The client frontend sends requests to the backend and visualizes data returned from the server.

Foreseen Risk

The current design does not require user information to write the feedback. This anonymous feedback system may lead to spam evaluations and invalid commentary. Due to the time constraint, extra functionalities for fixing this issue cannot be implemented, but this can be added to future work of the project.

Deliverables

- Source code of the project
- Mobile application that is ready to be shipped
- Project presentation and demonstration materials
- Project report

Schedule and Work Plan

Date	Milestone
February 12th - February 18th	Complete the project proposal
February 19th - February 25th	Collect data source from Google, Faroo API, and crawled contents from pet resort websites
February 26th - March 4th	Preprocess collected data, write scripts to extract keywords and useful information from collected websites
March 5th - March 11th	Import data to MongoDB database. On meteor platform, server side can send data to the client side. Client side displays the data
March 12th - March 18th	Create page for caregiver registration. Add new user to the database
March 19th - March 25th	Create UI for user login.
March 26th - April 1st	Implement the filtering feature. Allow users to select options on the frontend
April 2nd - April 8th	Continue implementation on the filtering feature. Backend processes the requests and returns refined results to the client
April 9th - April 15th	Implement rating feature. Create UI for users to enter comments and scores.
April 16th - April 27th	Display comments and overall ratings for each care provider.

References

1. "Find Child Care, Senior Care and Pet Care and More." *Care.com: Find Child Care, Senior Care and Pet Care and More*. N.p., n.d. Web. 17 Feb. 2017. <https://www.care.com/>.
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3. *Database PNG Transparent Images*. Digital image. *PNG ALL*. Rojal, 3 Apr. 2016. Web. 17 Feb. 2017. <http://www.pngall.com/database-png>.