

ANIMAL WELFARE AND WELLNESS APPLICATION USING JAVASCRIPT

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Abstract— The project introduces the social software performance model and uses it to interpret the evolution and usage of social networking sites. Drawing the idea from influence of social networking sites on our day to day life, an application for the betterment of pets will be developed by using the concept of native application development. The application serves a platform to the user where they can share pictures of their pets, shop for pet accessories, a forum where the users can ask or answer questions about their pets. The motive behind developing this application is to search for shelters for abandoned animals and raise an awareness among people about the plight of strays and how each one of us can ensure a better and safer environment for these animals. The application will be named as "Paws". It will be designed in React Native. The application will be developed in Android Studio. The back end of the application will run in NodeJS to use the package managers like npm and yarn, also NodeJS provides functionalities to create easy to deploy development servers which are relatively easy to debug. Since it's an Android application written purely in JavaScript, the React Native library which was open-sourced by Facebook for Developers in 2015, a possibility to write native applications for mobile devices without formally having any knowledge pertaining to languages native to given operating systems, like Java or Kotlin for Android, or Swift or Objective-C for iOS. React Native allows us to write and use purely native applications in JavaScript(ES6). It is not a typical WebView, i.e. a Web Application wrapped in a mobile browser content to be responsive (E.g.: Ionic or PhoneGap), it runs on purely native code depending on the operating system, React wraps its JavaScript code around a Native Application Wrapper, which interprets and compiles the code from ES6 Standard to underlying native code, and thus, we get a much faster, more fluid and more responsive application. React Native is one of the most versatile libraries open sourced by Facebook.

Keywords- Arduino; React Native; NodeJS; Android; Social Networking

1. INTRODUCTION

Social interaction is supported by the internet from a micro level that includes two-way conversation to macro level that includes of creating a global online social network that connects millions of people from all over the world and helps them to connect with each other. Social media today symbolizes the

purpose of social media marketing is to promote a brand, increasing its visibility by developing relationships with the consumers through social media platforms [1].

Social media was started from scratch to enable communication between people of two different places. This has made the world a small global village where everyone can connect to each other easily and effectively. It is not only used for establishing communication but, also to market about some product or even some thoughts. Social media has become the epitome of spreading social awareness about some huge societal problems such as women upliftment, Pet friendly communities, racism, etc. The reason behind why social media is used as a platform for spreading such awareness is because each person in this world spends some of his/her free time on social media platforms like Facebook, Instagram or other platforms where one come across several posts that feeds into one's mind and leaves an impact. Hence, social networking site plays a vital role in publicizing or promoting a product, thought or theme. Social media comprises of blogs, pictures, wikis, social bookmarking, etc [2].

The importance of social media on our lives is so much that we can easily get influenced by any post or readings we come across. Today, it has become an important outlook for every company to market their product on social site so that they can easily connect to millions of users. Social campaigns also seek help from social media platform to connect with people and make them interested to join their campaigns hence, taking this idea the project openly uses social media as its base [5].

The project uses social networking site as its foundation. It is basically used to connect interested users together at one platform where they can reach out to each other to adopt a stray or injured dog and provide a shelter to them. The site will also fulfill its users' other requirements like buying some pet accessories, pet food and also to search for nearby pet hospital. Media is said to be the mirror of the society hence we are using this mirror to reflect on the problem of injured and abandoned animals and find a necessary shelter for them. The project uses React Native to develop the web application, the corresponding application will be developed in Android studio. The project will have a user-friendly interface that can be easily accessed by them.

2. PROPOSED SYSTEM

Late years have become the epitome of development of social media platform. Knowing the importance of social media's effect on everyone's day to day life, the project aims to use it as the foundation and develop the rest of the application using React native and android studio. The existing system has already covered up crucial topics like connecting people together across the world. Different platforms have been formulated to meet this requirement such as Facebook, Instagram, Tumblr, Wordpress, LinkedIn and various such sites. Every platform comes with different motive through which users are connected and help each other to fulfill the motive. For example social networking site like LinkedIn is a platform that connects different professionals at one place, people can create their job profiles and connect with each other so that easily any help can be provided to each other and also helps one to get any job around the world.

Facebook comes up with connection people across the world and is also used to market different business pages and also leads social campaigns. There are many social campaigns regarding protection of abandoned animals but, there hasn't been found any social networking sites that connect people across world to find a shelter of an abandoned animal and also to buy pet friendly accessories.

Therefore, the proposed system meets the above requirements by developing a social networking site where different users come together to find shelter for abandoned or injured animals. The platform is also used to share pictures of their pet dog and also to find pet food and accessories for them. The social media is developed with an user friendly interface, some attractive designs that makes the site more effective. The proposed system includes following software component for its development:

2.1 React Native

React Native is a platform that helps one to build mobile applications using JavaScript. It makes use of the same react design, that leads to a rich mobile UI from declarative components. Using React Native, one not only builds a "mobile web app", an "HTML5 app", or a "hybrid app" but, it builds a real mobile app that's completely different from an app built using Objective-C or Java. React Native makes use of the same fundamental UI building blocks as regular iOS and Android apps. Only those codes are put in those building blocks together using JavaScript and React. There's no clause of recompiling the codes instead one can reload the app instantly to see the desired output [7].

JavaScript:

JavaScript is defined as the programming language of HTML and the web. It is light weight and is mostly used as the part of

the web page whose major implementation is used to develop a client-side scripting that allows the page to interact with the user. The advantage of JavaScript is that it enables immediate feedback to the users also it leads to increased interactivity and richer interfaces. Therefore, JavaScript is used to enable user and webpage interaction [8].

2.2 Firebase:

Firebase helps in faster building of application with less managing infrastructure. Firebase gives one functionality like analytics, databases, messaging and crash reporting so that one can move quickly and focus on their respective users. Firebase APIs are packaged into a single software development kit so that one can expand to more than one platform and reach out to many programming languages, including C++ and Unity, with Firebase as one's unified backend [9].

2.3 Yarn:

Yarn saves every package it has downloaded in cache, so there is no need to download the package again and again. Yarn is fast, reliable and a secured software. The important features of yarn are that the package can work in offline mode, deterministic and it has good network performance [10].

3. SYSTEM ARCHITECTURE

The project aims to bring a revolutionary idea for bringing change in the society. Keeping in mind the working of social media, the project is designed in React Native, the platform where that helps to build mobile applications in an efficient way. The back end of the project is developed using NodeJS to use packages like yarn and npm

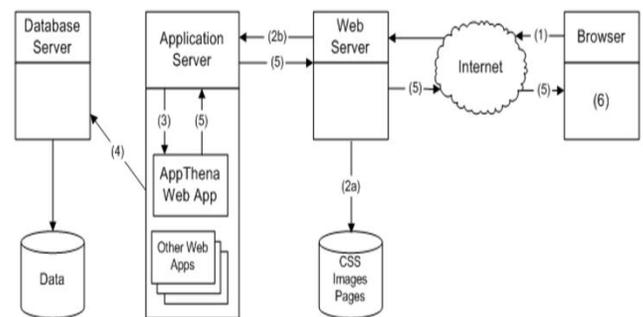


Fig.1: System Architecture

The system architecture of the project is shown in the Fig.1. As explained in the diagram, the users' data, location of shelters, various pet friendly product's data is stored in the database server. All the necessary data is retrieved from the server from time to time. Now, the application server is maintained to store the App theme and other web application software and data.

Application server is connected to database server where it shows the data asked or required by the user. Application server is defined as a software framework that provides both features to create web applications and a server environment to run them successfully. An application server works as a set of components that is accessed by the software developer through a standard API that is defined for the platform itself [11].

As the project is a web application, web server is included that works as a server software, or hardware dedicated to currently running said software, that can serve contents to the World Wide Web. The web server checks for a file that the user enters, it generates the response that describes the contents of the file and contain the file itself or an error message is returned saying that the file is unavailable. The web pages are made responsive and attractive by using Cascading style sheets that describes how html elements should be displayed. It is basically a style sheet language that describes the presentation of a document written in a markup language [12].

The important component is the internet that connects all the server together for an efficient implementation of the project. Internet manages the connectivity and availability of data, it checks for the users' input and hence retrieves the required data from the server. The internet introduces a new way of connecting computers and the server ensures that the information flows freely between them. The last element is browser from where the implementation of project actually starts. The user looks for the web application on the browser, in result browser searches for the required data or files and generates a response for the same. Therefore, the software architecture is setup for the project.

4. MODULE DESCRIPTION

The projects are divided into different modules:

1. Login Page- In this page, the user can create new profile or login to their profiles using their username and password. In the profile page, the user can view their profiles, what they have posted or shared.
2. Image feed- This will be the news feed page, where user can see posts shared by their friends and pages they have liked.
3. Project SOS- In this page, people can post about abandoned animals and help them to find a home/shelter.
4. About us- This page will show the details about the developer's team.
5. Account settings- Users can change their password, change their privacy settings, etc. This page will also show the details about the developer's team.

5. OUTPUT

6. Future works

The project aims to build a pet friendly social networking site where the users can get connected to each other, share their pet's pictures and also share the picture of some abandoned animals they come across to, through which a shelter can be searched for the poor animal. The project also displays items that can be bought by users for their pets' nourishment and care. The future implementation of this project is that later GPS location will be added to the site through which location of the abandoned animals and shelter for them can be reached easily. Other features like creative dog emojis and change in CSS of the page will be implemented. As the project is a pet friendly site, more pet friendly products will be added to the purchasing frame of the site. Moreover, guidelines about taking proper care of pets and nearby pet clinics will also be suggested on the site.

7. CONCLUSION

The proposed system is influenced by the impact of social media on our day to day life which in result provides a social cause curing social networking site. The networking site is designed in React Native and developed using Android Studio. The back end of the project is developed using NodeJS to work with yarn and npm packages. The project is a web application which has the similar functionality to either a desktop software application or to a mobile application. The aim of the project is to introduce a pet friendly social networking site where shelters are found for an abandoned animal whose information is uploaded on the site by the users connected together here, that in result raises an awareness among people about the plight of strays and how each one of us can ensure a better and safer environment for these animals.

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