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## ANIMAL WELFARE AND WELLNESS WEB APPLICATION

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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.

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### I. INTRODUCTION

The animal welfare and wellness web application is a platform designed to promote the well-being of animals through education, advocacy, and community engagement. The web application provides a range of features and resources to support animal owners, animal welfare organizations, and animal enthusiasts in their efforts to promote animal welfare and wellness. One of the primary features of the web application is a directory of animal welfare organizations, which allows users to search for and connect with local and national organizations dedicated to animal welfare. The web application also provides a database of articles and resources related to animal welfare and wellness, covering topics such as animal nutrition, health, behavior, and training. In addition to these resources, the web application offers a forum for users to discuss animal welfare issues, share information and advice, and connect with like-minded individuals. The web application also includes a marketplace where users can buy and sell animal-related products and services, providing a platform for small businesses and entrepreneurs in the animal industry. Ultimately, the goal of the animal welfare and wellness web application is to promote the well-being of animals by fostering a community of animal advocates, providing resources and support, and promoting education and awareness of animal welfare issues. By connecting animal lovers and advocates from around the world, the web application aims to make a positive impact on the lives of animals and promote a more compassionate and caring society.

### II. MOTIVATION

- Moral and ethical considerations: Many individuals are motivated by moral and ethical considerations to promote animal welfare and wellness. Studies have shown that individuals with a strong sense of empathy and compassion for animals are more likely to engage in animal welfare activities.

- Health and well-being benefits: Research has demonstrated that owning pets and engaging in animal-related activities can have positive impacts on human health and well-being. This may motivate individuals to support animal welfare and wellness efforts.
- Environmental considerations: Animal welfare and wellness are closely linked to environmental sustainability. Many individuals may be motivated to engage in animal welfare and wellness activities due to concerns about the impact of human activities on animal habitats and ecosystems.
- Economic considerations: The animal industry is a significant contributor to the global economy. Some individuals may be motivated to support animal welfare and wellness efforts due to economic considerations, such as the potential for job creation and economic growth in the animal-related industries.

### III. EXISTING SYSTEM

In a literature survey by reviewing existing research, articles, and publications related to the various platforms, websites, and applications that exist in the animal welfare and wellness space. The literature survey may cover topics such as:

- Existing platforms and websites: There are several existing platforms and websites that provide resources and support for animal welfare and wellness, such as directories of animal welfare organizations, educational materials, and forums for discussion. The literature survey can examine the features and limitations of these platforms and websites, and identify gaps in the available resources.
- Animal-related apps: There are several animal-related apps available that offer a range of services such as tracking pet health and wellness, connecting pet owners with local pet services, and finding adoptable pets. The literature survey can explore the features and effectiveness of these apps and identify areas where they can be improved.
- Online marketplaces: There are several online marketplaces where users can buy and sell animal-related products and services, such as pet supplies, veterinary services, and pet grooming. The literature survey can examine the effectiveness and popularity of these marketplaces and identify opportunities for improvement.
- Social media: Social media platforms have become an important tool for animal welfare and wellness advocates to promote their cause, share information, and engage with others. The literature survey can examine the role of social media in animal welfare and wellness advocacy and identify effective strategies for using social media to promote animal welfare and wellness.

### IV. PROPOSED SYSTEM

The animal welfare and wellness web application is a comprehensive and centralized platform that brings together various resources and opportunities for collaboration related to animal welfare and wellness. The system aims to provide the following features and functionalities:

- Directory of animal welfare organizations: A comprehensive directory of animal welfare organizations that users can search by location, type of organization, and areas of focus.
- Educational resources: A wide range of educational resources related to animal welfare and wellness, including articles, videos, and online courses.
- Community forum: An online forum where users can discuss animal welfare and wellness topics, ask questions, and share ideas.
- Volunteer opportunities: A platform for animal welfare organizations to post volunteer opportunities, and for users to search and apply for these opportunities.
- Pet adoption platform: A platform for animal welfare organizations to post adoptable pets and for users to search and adopt pets. The proposed system aims to provide a one-stop-shop for individuals and organizations to connect, learn, and advocate for animal welfare and wellness. By centralizing resources and opportunities for collaboration, the system aims to increase engagement and support for animal welfare and wellness efforts, ultimately leading to improved animal welfare and wellness outcomes.

### V. PROBLEM STATEMENT

The lack of a comprehensive and centralized platform that brings together various resources and opportunities for collaboration related to animal welfare and wellness. Currently, individuals and organizations interested in promoting animal welfare and wellness have to navigate through numerous disparate resources, which can be time-consuming and overwhelming. Additionally, many animal welfare organizations struggle to connect with

volunteers and donors due to a lack of visibility and outreach. This fragmented landscape results in limited engagement and support for animal welfare and wellness efforts, ultimately leading to suboptimal animal welfare and wellness outcomes.

To address these challenges, there is a need for a comprehensive and centralized animal welfare and wellness web application that provides a platform for individuals and organizations to connect, learn, and advocate for animal welfare and wellness. The proposed system aims to provide a one-stopshop for individuals and organizations to find resources, connect with others, and contribute to animal welfare and wellness efforts. The system will increase visibility and outreach for animal welfare organizations, promote collaboration and engagement among individuals, and ultimately lead to improved animal welfare and wellness outcomes.

## VI. SCOPE

The scope of the animal welfare and wellness web application includes the following:

1. Providing a centralized platform for animal welfare organizations to register and showcase their work, enabling them to connect with potential volunteers, donors, and adopters.
2. Offering a range of educational resources related to animal welfare and wellness, including articles, videos, and tutorials.
3. Facilitating discussions and queries related to animal welfare and wellness through an interactive community forum.
4. Providing a marketplace for buying and selling animal-related products and services, such as pet food, toys, and grooming services.
5. Offering a pet adoption platform that connects animal shelters and rescues with potential adopters.
6. Providing a fundraising platform for animal welfare organizations to raise funds for their projects and programs.
7. Enabling users to search and apply for volunteer opportunities with animal welfare organizations.
8. Providing social media integration to enable users to promote animal welfare and wellness efforts on various platforms. The scope of the animal welfare and wellness web application is broad and encompasses various aspects of animal welfare and wellness. The application aims to provide a comprehensive platform that connects animal welfare organizations, volunteers, donors, and adopters, making it easier for them to collaborate and work towards the common goal of improving animal welfare and wellness.

## VII. SYSTEM DESIGN

The system design for the animal welfare and wellness web application can include the following components:

- **User Interface Design:** The user interface design includes the layout, navigation, and visual elements of the web application. The design should be user-friendly, intuitive, and accessible. The user interface can include the following:
  1. Home page with an overview of the application's features
  2. Navigation bar with links to different sections of the application
  3. User registration and login pages
  4. Animal welfare organization registration and login pages
  5. Community forum section
  6. Volunteer opportunities section
  7. Pet adoption section
  8. Fundraising section
- **Database Design:** The database design includes the data model and schema for storing and managing data. The database should be efficient, scalable, and secure. The database can include the following:
  1. User data, including name, email, and password
  2. Animal welfare organization data, including name, location, and contact information
  3. Volunteer opportunities data, including organization, location, and requirements
  4. Pet adoption data, including animal profiles, adoption fees, and adoption status
  5. Fundraising data, including fundraising campaigns, donors, and amounts donated

- System Architecture Design: The system architecture design includes the components of the web application and their interactions. The system should be scalable, reliable, and secure. The system architecture can include the following:
  1. Web server for hosting the web application
  2. Application server for processing user requests and generating responses
  3. Database server for storing and managing data
  4. Search engine for finding animal welfare organizations and volunteer Opportunities

### VIII. OBJECT ORIENTED MODEL

Modeling is an essential aspect of developing an animal welfare and wellness web application as it helps to create a visual representation of the system and its components, which can help identify potential issues and improve the overall design.

- One of the key benefits of modeling is that it allows developers to identify potential problems before they occur. By creating a visual representation of the system and its components, developers can identify potential bottlenecks, design flaws, or other issues that could impact the performance and usability of the application. This can help them make necessary adjustments to improve the system's overall performance.
- Another benefit of modeling is that it can help to improve communication and collaboration between developers and stakeholders. By creating a shared understanding of the system and its components, developers and stakeholders can work together to identify potential issues and design a system that meets the needs of all parties involved.
- Modeling can also help to reduce development costs by identifying potential issues early on in the development process. By addressing issues early, developers can avoid costly rework later in the development process, which can save time and money. Overall, modeling is essential for developing an animal welfare and wellness web application as it can help to identify potential issues, improve communication and collaboration, and reduce development costs

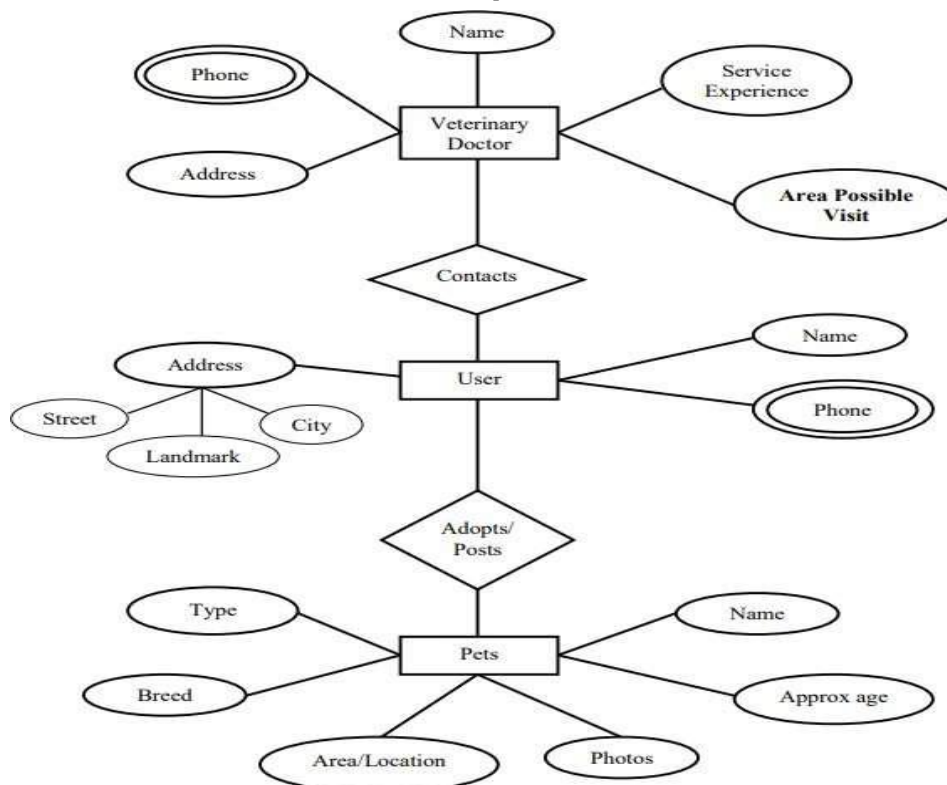


Fig 1: E-R Diagram

### IX. FUTURE SCOPE

Some of the potential areas of future development for this type of project include:

1. Integrating Artificial Intelligence (AI): One area of potential future development for an animal welfare and wellness web application is the integration of AI technology. This can include developing chatbots or virtual assistants to help users find information or connect with animal welfare organizations and services.
2. Mobile Application Development: As more people access the internet through mobile devices, there is a growing demand for mobile applications. Developing a mobile application for the animal welfare and wellness web application can make it more accessible and user-friendly for mobile users.
3. Social Media Integration: Integrating the animal welfare and wellness web application with social media platforms such as Facebook, Instagram, and Twitter can help increase its reach and engagement with users.
4. Gamification: Gamification can be a powerful tool to motivate and engage users in animal welfare and wellness activities. Developing interactive games and activities can help users learn more about animal welfare and wellness while having fun.
5. Internationalization: As the project grows and expands, there may be opportunities to offer the application in multiple languages, making it accessible to a wider global audience.
6. Advanced Data Analytics: Developing advanced data analytics tools can help the application better understand user behavior and preferences. This can be used to develop more personalized services and improve user experience.

## X. CONCLUSION

An animal welfare and wellness web application can provide a valuable service to animal lovers and pet owners by offering them a platform to access information, resources, and services related to animal welfare and wellness. Such an application can help promote responsible pet ownership, connect animal lovers with each other, and support animal welfare organizations and services. Developing an animal welfare and wellness web application requires careful planning and consideration of the needs and requirements of users and stakeholders. A well-developed project plan should be comprehensive and detailed, outlining all aspects of the project, including project scope, timeline, budget, team, risks, and issues. The project plan should also include a launch and maintenance strategy to ensure the successful adoption and long-term sustainability of the application. To stay relevant and meet the changing needs of users, the future scope of an animal welfare and wellness web application can include the integration of AI technology, mobile application development, social media integration, gamification, internationalization, advanced data analytics, and partnerships with animal welfare organizations.

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