

Vet Care: Online Consulting Application

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Abstract: *The "Vet Care" app is a user-friendly Android application designed to facilitate virtual consultations and online prescriptions from veterinarians. It allows pet owners to submit their pets' symptoms via text or video, which doctors can promptly review and respond to with professional advice. Particularly beneficial for individuals in remote areas or those with busy schedules and mobility issues, "Vet Care" ensures accessible veterinary care without the need for physical visits, thereby saving time and reducing stress. The app automatically records user data in its database, streamlining the process and addressing the challenge of limited clinic availability, ultimately providing a more convenient and efficient solution for pet care.*

Keywords: *Vet Care, Online prescription, Virtual consultation, Expert veterinary advice, Pet care.*

I. INTRODUCTION

In contrast to traditional pet care systems, which often involve lengthy processes and limited access to veterinary expertise, the innovative app introduces a streamlined approach. It revolutionizes pet care by offering comprehensive diagnosis and veterinary consultations within a user-friendly interface. Pet owners can input symptoms easily, access educational resources, and benefit from remote consultations, saving time and money. Additionally, veterinarians can track pets' medical histories efficiently, leading to more accurate diagnoses and treatments. Overall, the app significantly enhances the accessibility and quality of pet healthcare. Built using Java and XML, and leveraging an firebase database for backend storage, the Vet Care is developed in Android Studio to ensure compatibility with a wide range of Android devices [6]. The development process follows a systematic approach, including requirements gathering, system design, module development, integration, and rigorous testing to ensure reliability and performance. This paper details the design and implementation of the Vet Care, highlighting its key features and the benefits it brings to doctors as well as users. By integrating modern technologies and adhering to best practices in software development, the Vet Care provides a scalable and efficient solution for users to consult the doctor. The application was developed in native language in order to ensure that user can consult the doctor virtually [1].

1.1. PROBLEM STATEMENT

Access to effective veterinary care is a significant challenge, especially in remote or underserved areas. Pet owners often struggle to obtain immediate consultations and suggestions for their pets, leading to treatment delays and potential worsening of health conditions. Traditional veterinary visits can be time-consuming, costly, and logistically challenging, particularly in emergency situations or for minor health issues. There is a clear need for a convenient, efficient, and accessible solution that allows pet owners to quickly consult with veterinary professionals and receive necessary suggestions without the constraints of geographical barriers or the need for in-person visits. The "Vet Care" application is designed to bridge this gap by providing a digital platform that connects doctors directly with users [3].

1.2. OBJECTIVE OF THE PAPER

The "Vet Care" application is designed to serve the needs of both veterinary professionals and pet owners. It aims to provide comprehensive solution on proper animal care and health maintenance, addressing behaviour concerns with actionable advice for effective management. The application boasts an intuitive and user-friendly interface accessible to both veterinarians and pet owners, ensuring ease of use and increased engagement. Pet owners are empowered to

provide detailed descriptions of their pets' symptoms through text or video submissions, which are efficiently reviewed by doctors to streamline the consultation process. Additionally, doctors can promptly offer professional advice and treatment recommendations. Administrative functionalities are also incorporated to oversee app activities and maintain detailed profiles of participating doctors, ensuring smooth operation and quality assurance [3].

II. EXISTING WORK

The current veterinary care system relies on traditional, in-person visits to clinics or hospitals, where pet owners schedule appointments via phone or in person. This process involves paper-based management of pet health records and treatment plans, overseen by receptionists. However, these manual processes often result in inefficiencies and challenges in record-keeping. To address these limitations, we are developing an Android application for virtual consultations with veterinary professionals. This app will provide pet owners with a user-friendly platform for seeking expert advice and guidance remotely. By digitizing health records and treatment plans, the app streamlines administrative tasks and facilitates better communication between pet owners and veterinarians. This modernized approach enhances accessibility to veterinary care, particularly for those in remote areas or with busy schedules. Ultimately, the application aims to improve the overall efficiency and effectiveness of veterinary services, ensuring optimal care for pets while minimizing inconvenience for their owners[5].

2.1 TRADITIONAL METHODS TO CONSULT DOCTOR

The traditional approach requires pet owners to visit clinics or hospitals in person, scheduling appointments by phone or on-site. This system relies on paper-based management of pet health records and treatment plans, managed by receptionists. However, these manual methods frequently lead to inefficiencies and difficulties in maintaining accurate records.

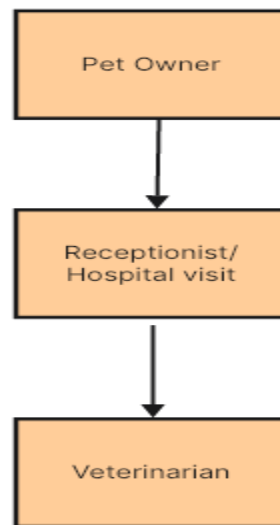


Fig:1 Existing work

In fig 2.1, we can observe the existing work. The figure tells that pet owners typically visit clinics or hospitals in person, scheduling appointments either by phone or on-site. This traditional system relies on receptionists to manage pet health records and treatment plans using paper-based methods while consulting the veterinarian.

2.2 Limitations of Existing Work

Despite the advancements, existing systems still face several limitations:

- Relies on in-person visits, inconvenient for pet owners.
- Manual appointment scheduling via phone or in-person visits.
- Paper-based health records lead to inefficiencies.
- Receptionists manage appointments, inquiries, adding to workload.

- Reluctance to seek care early in illness.
- Limited accessibility, especially in remote areas.

2.3 The Vet Care Approach

The Vet Care application aims to address these limitations by providing a user-friendly, mobile-based application as a solution. It leverages modern technologies such as Java and XML for development and firebase database for backend storage. The application is designed to be intuitive and accessible for doctors and users.

2.4 Key features of the Vet Care include:

Admin Management: Admins oversee doctor profiles, add categories, and handle user feedback.

Doctor Registration: Doctors register easily, access user requests, and provide professional guidance.

User Interaction: Pet owners submit requests, receive timely updates, and give feedback for improved service.

III. PROPOSED WORK

The Vet Care project proposes the development and deployment of a mobile-based application used for pet owners and doctors. The goal is to create a comprehensive, user-friendly application that addresses the inefficiencies of traditional system by leveraging modern technology and better user experience. The proposed work involves several key phases, each focusing on critical aspects of the system's functionality and performance.

- We are developing a system designed to be user-friendly for people. The application, named "Vet Care," is an Android platform that serves the needs of both veterinarians and pet owners.
- Pet owners can use the app to communicate their animal's health issues to veterinarians. They can send detailed descriptions of their pet's signs and symptoms through text or by uploading videos. This allows pet owners to provide comprehensive information about their pet's condition, ensuring that the veterinarian receives a clear understanding of the issue.
- Once a pet owner submits their request, it is received by a veterinarian who will review the information. The veterinarian can then respond with professional advice, suggestions for treatment, or further questions to clarify the pet's condition. This interactive communication ensures that pet owners receive timely and accurate guidance from qualified professionals. They can check the status of their submissions, view any responses from veterinarians.
- The app enables veterinarians to manage incoming requests efficiently, ensuring that they can provide timely responses to each case. The admin feature allows for overseeing and managing both the doctors' and users' activities and viewing detailed doctor profiles.

3.1. DEVELOPMENT OF CORE MODULES

- **Admin Module:** Admin logs in with valid credentials to perform various tasks. These include viewing and managing doctor details (accepting, rejecting, deleting), adding categories, and viewing user feedback.
- **Doctor Module:** Doctors register and login with credentials, enabling them to view requests, add suggestions, and check feedback.
- **User Module:** Users register and login with credentials, allowing them to add requests (text or video), check status details, change passwords, and provide feedback.

3.2. INTEGRATION & DATA MANAGEMENT

Objectives: Ensure seamless interaction and data flow between the doctor and user modules.

Activities:

- Develop and implement communication between the frontend and backend.
- Ensure data consistency and integrity through proper validation and error handling.
- Set up and configure the firebase database to handle backend.

3.3. USER INTERFACE & EXPERIENCE ENHANCEMENT

Goals: Create an intuitive & responsive interface for all users.

Tasks:

- Design & implement responsive interfaces for doctors & users.
- Ensure accessibility & easy navigation of the application.

3.4. TESTING

Goals: Validate functionality performance security of the application.

Tasks:

- Conduct unit testing for components to ensure correct functioning.
- Perform integration testing for module interactions validation along with whitebox and blackbox testing.
- Conduct system testing to verify the application meets all specified requirements.

IV. EXPERIMENTAL RESULTS

4.1 USER HOME

The fig 4.1 shows the user page of the application. This is the main screen of the User in the application. Once the user login to the application then the application will show him this page as a result. This screen holds the data as follows

- A logout button
- View Doctors
- Add Feedback
- Change Password
- View Patient History

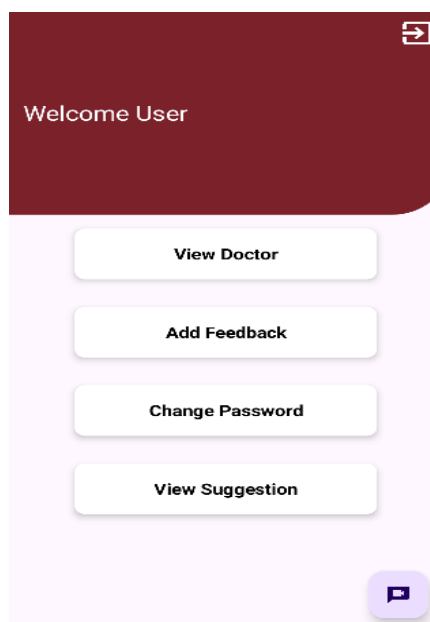


Fig: 2 User Home

4.2 VIEW DOCOTRS

The fig 4.2 shows the view doctors page of the application. In this page the user can select the doctor based on the specialization and experience to consult the doctor. Then the user adds the request in the form of text or video. In this page, all the details of the doctors like name, mobile number, qualification, experience, specialization and status of the doctor. Users can select a doctor based on the combination of these factors, ensuring they find a professional who meets their requirements for specialization and experience. Once a doctor is selected, users can add their consultation request. This request can be submitted in the form of text or video, providing flexibility for the user to describe their pet's symptoms and health concerns comprehensively. The "View Doctors" page is designed to streamline the process of finding and consulting with a veterinary doctor, making it easy for users to access the care their pets need. By offering detailed profiles and multiple ways to submit requests, the application ensures a user-friendly and efficient experience, promoting better health outcomes for pets through accessible and expert veterinary advice.

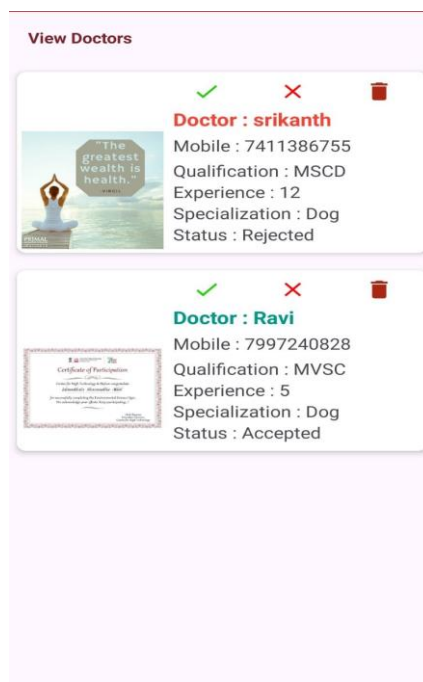


Fig: 3 View Doctors

4.3 DOCTOR HOME

The fig 4.3 shows the doctor home screen of the application. This is the main screen of the Doctor in the application. Once the doctor login to the application then the application will show him this page as a result. This screen holds the data as follows

- A logout button
- View User Request
- Check Feedback
- Change Password
- View Patient History

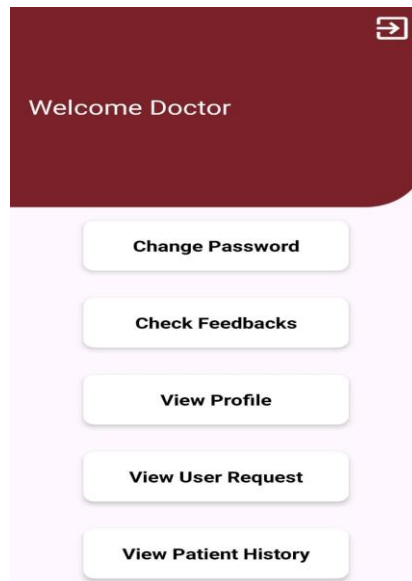


Fig: 4 Doctor Home

4.4 ADD USER REQUEST

The fig 4.4 illustrates the "Add User Request" page within the user module of the application. This page is specifically designed to enable pet owners to submit detailed descriptions of their pet's health issues to the doctor. On this page, users have the flexibility to describe their pet's problem in two ways: by typing a text description or by uploading a video. The text description allows users to provide a written account of their pet's symptoms. Alternatively, users can choose to upload a video, which allows them to visually explain the issues their pet is facing. This can be particularly helpful for showcasing symptoms that are more effectively demonstrated visually, such as unusual movements, physical abnormalities. The next step is for the user to pay the consultation fee. Ensuring that the payment is completed is necessary for the request to be reviewed by the doctor. After successfully processing the payment, the user needs to click the "Submit" button. Clicking this button finalizes the request, and if a video was uploaded, it will be stored in the database. This organized process ensures that the doctor receives all necessary information promptly and can proceed with the consultation efficiently.

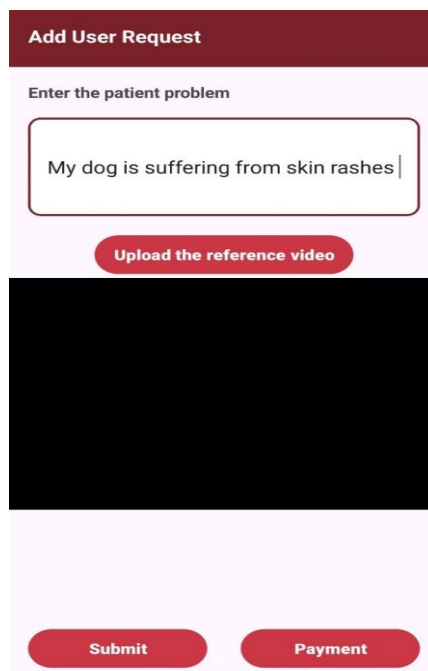


Fig: 5 Add User Request

4.5 VIEW SUGGESTION

The fig 4.3 shows the view suggestion of the application. In this page the user can view the medicines prescribed by the doctor.



Fig: 6 View Suggestion

4.6 ADD FEEDBACK

The fig 4.5 shows us the feedback screen in the user profile. The above image shows the feedback page in user profile. User can provide their feedback in this page. The user can provide the feedback after consulting the doctor. The feedback given by the user can be viewed by the doctor and admin in their profile. The user can write the feedback and then click on the submit feedback button, then the feedback is submitted to the doctor.

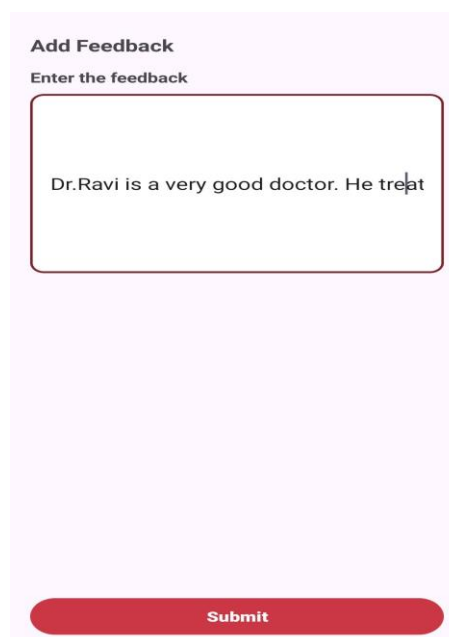


Fig: 7 Add Feedback

V. CONCLUSION

In conclusion, our Android application is a groundbreaking tool designed to bridge the gap between pet owners and veterinary professionals, particularly in remote areas where access to veterinary services is often limited. This user-friendly Android app empowers pet owners by enabling quick and easy communication of their pets' symptoms and signs to veterinarians. Pet owners can document and send detailed descriptions and videos of their pets' conditions, ensuring veterinarians receive the comprehensive information necessary for accurate consultations. The intuitive interface guides users through the process of recording and sending information, making veterinary consultations accessible to a broader audience. This inclusivity is particularly important in remote or underserved areas where traditional veterinary services may be scarce. Additionally, the app offers access to a wealth of resources and information on pet care and common health issues, empowering pet owners to better manage their pets' health. For veterinarians, "Vet Care" extends their reach beyond the confines of their clinics. They can provide guidance and support to a wider range of pet owners, ensuring more animals receive the care they need. This is particularly beneficial for veterinarians in developing countries or regions with limited veterinary infrastructure, as it enables them to maximize their impact and contribute to the well-being of a larger animal population.

VI. FUTURE ENHANCEMENTS

Regularly update the app based on user feedback, incorporating new features and improvements to continually enhance the user experience. Enhance multi-language support to cater to a broader audience, ensuring accessibility for non-English speaking users. Enhance the app's capabilities to support a wider range of pets, including exotic animals. Integrate streamlined Appointment Scheduling for booking virtual or in-person consultations. Enhance the digital health records management for centralized storage of pet medical histories and for easy access to past consultations, treatments, and prescriptions. Integrate automated notifications for upcoming vaccination and schedule management for timely immunizations.

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