

FLORIDA INTERNATIONAL UNIVERSITY



PetGuardian

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Problem Statement

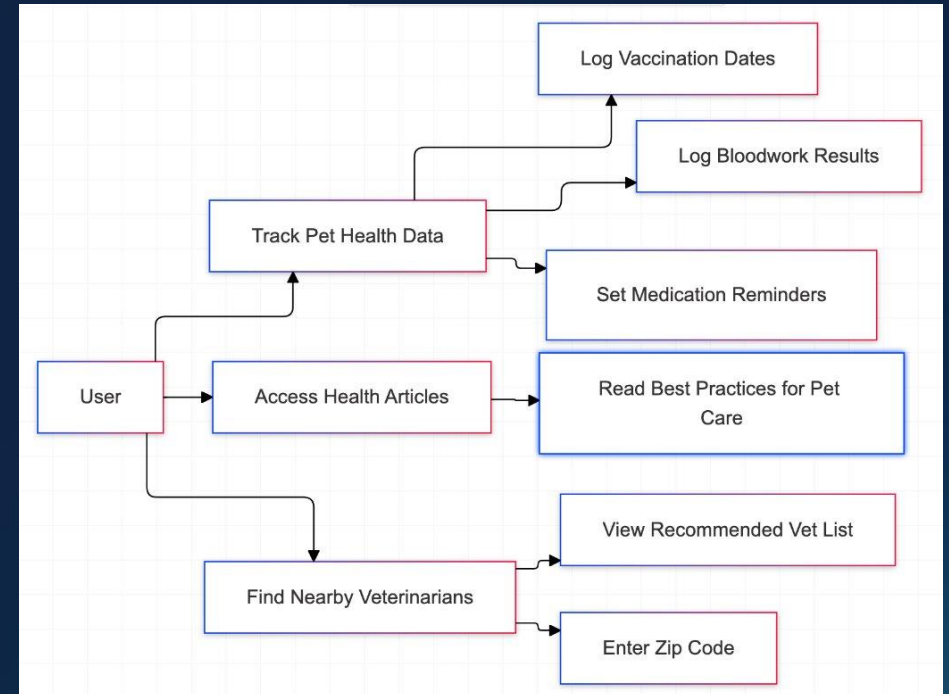
- Managing pet health is challenging without proper tools.
- Disorganized animal records lead to missed treatments and stress.
- Reliable pet care is difficult to access.
- PetGuardian's aim is to centralizes records, connects to trusted vets, and offers reliable care resources.

Project requirements

- Web application
- Internet connectivity
- Pet Health Management
 - Centralized dashboard for tracking vaccinations, medications, and bloodwork.
- Vet Finder Tool
 - Maps nearby veterinarians based on zip code.
- File upload
 - Support for adding pet images and documents.

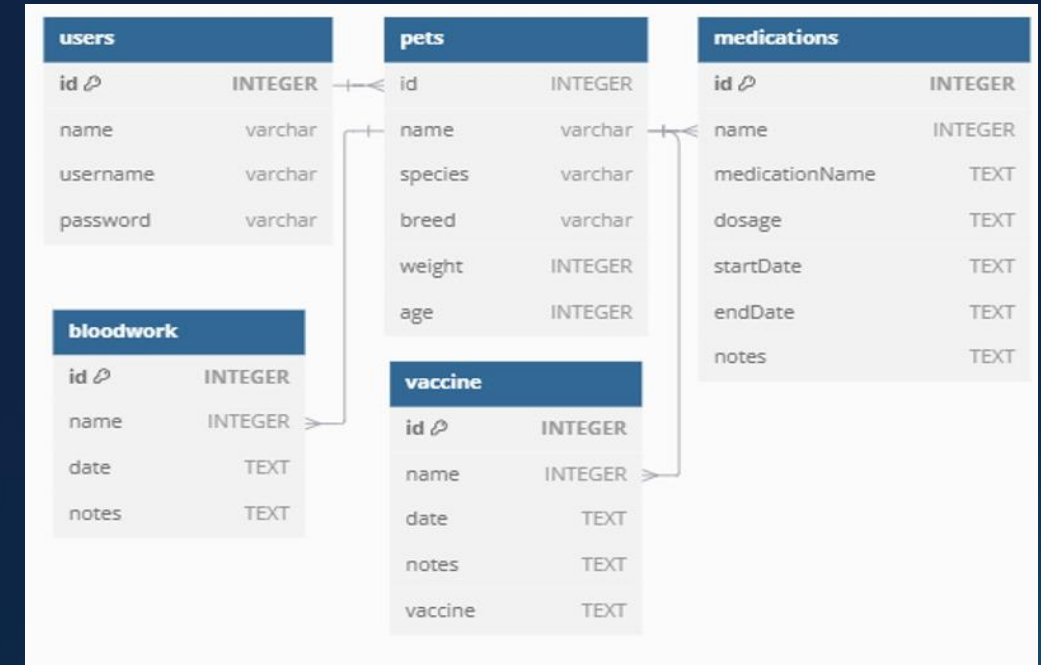
System Design

- Frontend Technology: React for user interface design and interaction.
- Backend Technology: Node.js with Express for handling APIs and authentication.
- Database: SQLite for data storage, demonstrating how user and pet information is managed.



Object Design

- Express Application (app): Encapsulates routing and server setup.
- Database Object (db): Handles database interactions like creating tables, inserting users, and querying data.



Implementation

- Integrated Node.js for secure user authentication with username and password.
- Developed a medical records page with a React-based interface for tracking pet health.
- Used Express to create API routes, enabling smooth data exchange between the front-end and database.
- Implemented features like pet image uploads and a vet finder tool based on zip code.



Login Page

- Username & Password Entry:
 - Fields for users to input their credentials.
- Error Handling:
 - Displays error messages for incorrect username or password.
- Redirects users to the registration page if they need to create an account.



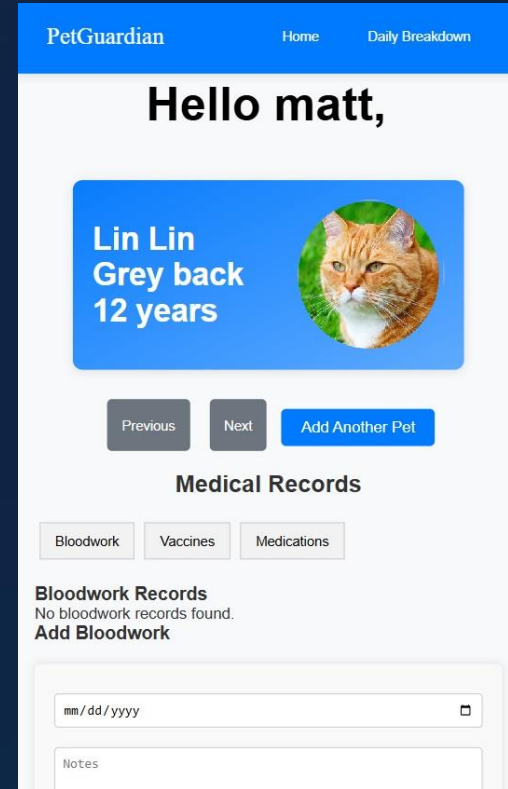
The logo features a blue square with a white outline of a dog's head and a halo, with the text "Pet Guardian" in white below it.

[DON'T HAVE AN ACCOUNT?](#)

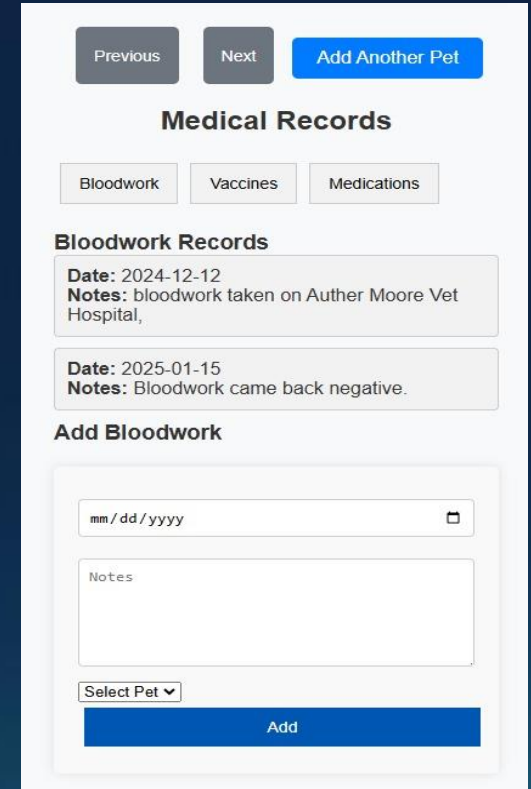
[SIGN IN](#)

Medical Records

- Shows the pet's name and medical details if a profile exists.
- Displays any available bloodwork results for the pet.
- Keeps records of vaccinations and medications, with reminders for doses.
- Users can add pets by name, type, and breed.
- Option to upload a pet photo for identification.



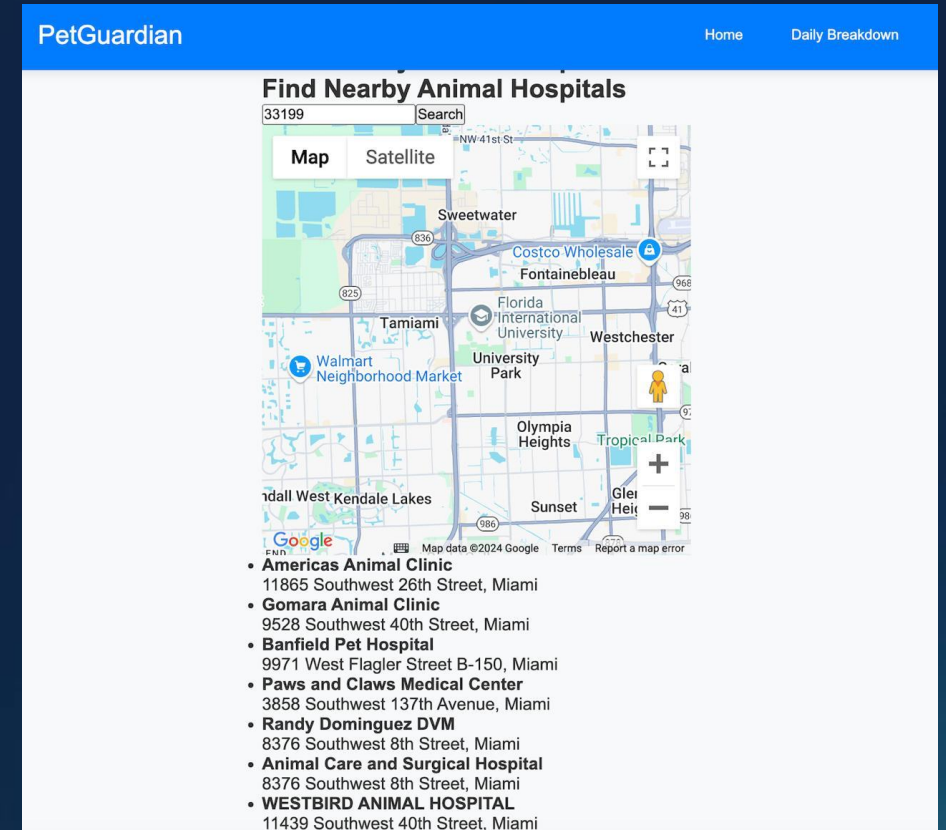
The screenshot shows the PetGuardian app interface. At the top, there's a blue header with 'PetGuardian' and navigation links 'Home' and 'Daily Breakdown'. Below the header, it says 'Hello matt,'. A blue card displays 'Lin Lin', 'Grey back', '12 years', and a photo of an orange cat. Below this card are 'Previous', 'Next', and 'Add Another Pet' buttons. The 'Medical Records' section has tabs for 'Bloodwork', 'Vaccines', and 'Medications'. Under 'Bloodwork Records', it says 'No bloodwork records found.' and 'Add Bloodwork'. At the bottom, there's a form with a date input (mm/dd/yyyy) and a 'Notes' text area.



The screenshot shows a detailed view of the medical records. At the top, there are 'Previous', 'Next', and 'Add Another Pet' buttons. Below them is the 'Medical Records' section with tabs for 'Bloodwork', 'Vaccines', and 'Medications'. The 'Bloodwork Records' section shows two entries: one dated '2024-12-12' with notes 'bloodwork taken on Auther Moore Vet Hospital,' and another dated '2025-01-15' with notes 'Bloodwork came back negative.' Below this is the 'Add Bloodwork' section with a date input (mm/dd/yyyy), a 'Notes' text area, a 'Select Pet' dropdown, and an 'Add' button.

Vet Finder Tool

- Allows users to find nearby veterinarians by entering their zip code.
- Uses Express to integrate with external vet-finding APIs for real-time results.
- Displays a list of veterinarians, including names and addresses.



Tests and Verification

- Cross-Device:
 - Tested on desktops, tablets, and smartphones.
- API Validation:
 - Used Postman to ensure correct responses and data consistency.
- Regression Testing:
 - Verified new features didn't affect existing functionality.
- Stable & User-Friendly:
 - Ensured overall app stability and responsiveness.

Summary

- PetGuardian helps pet owners manage health records and find veterinarians.
- Tracks vaccinations, medications, and bloodwork in one place.
- Features secure login, pet image uploads, and a vet finder by zip code.
- Built with HTML, CSS, JavaScript, React, Node.js, Express, and SQLite.
- Simplifies pet care, reducing stress for owners.

