Sri Eshwar College of Engineering
Coimbatore | Tamilnadu
An Autonomous Institution
Affiliated to Anna University, Chennai

Department of Computer Science and Engineering

Course name /Course code: Project with Design Thinking(Product /Software Development Life Cycle)/ U23CS651

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Class / Section / Semester	:	II CSE / B / IV
Batch	:	2023-2027
Project Review	:	First Review
Title of the project	:	ResQtail
Date	:	18.03.2025
Project Guide with Designation	:	Ms.J.Keerthika
Team Members	:	NAVEEN PRASANTH P NIGUN KARTHI R SANTHOSH SIVA S

CHALLENGE STATEMENT

- **Delayed Emergency Response**: Many injured or abandoned animals do not receive timely help due to the lack of a centralized reporting system.
- **Lack of Real-Time Location Tracking**: Rescuers struggle to locate animals in distress because reports often lack accurate geolocation data.
- **Limited Public Awareness & Participation**: Many people encounter animals in need but do not know how or where to report them for rescue.
- **Inefficient Coordination Among Rescuers & Shelters**: Lack of a streamlined system makes it difficult for rescuers, veterinarians, and shelters to communicate and collaborate effectively.

EMPATHY MAPPING

SAY: “I want to quickly report and rescue animals in distress.”

THINK: “Will someone respond fast enough to save this animal?”

FEEL: Frustrated by slow response times, worried about the animal’s safety.

DO: Posts on social media, calls shelters, tries to help but lacks resources.

CONCEPT / SCOPE OF SOLUTION

- **Our SOS Web Application for Domestic Animal Rescue is a real-time rescue platform that allows people to report injured or abandoned animals. It connects rescuers, veterinarians, and shelters to ensure quick response and proper care.**

- **Key Features:**
  - **One-Tap SOS Alert:** Users can report an animal in distress with photos & location.
  - **Live Location Tracking:** Rescuers get precise GPS coordinates for quick action.
  - **Rescue Coordination:** Connects volunteers, vets, and shelters efficiently.
  - **Adoption & Foster Care:** Helps rescued animals find a home.
  - **Automated Notifications:** Alerts the nearest rescuers & vets instantly.

- **Future Enhancements:**
  - **Drone-Assisted Rescue** – Uses drones for searching animals in remote areas.
  - **Multi-Language Support** – Expands accessibility for global users.
  - **Integration with 911 & Emergency Services** – Notifies authorities for legal action on animal cruelty cases.

SDG mapping

SDG 3 (Good Health and Well-being):
Ensures the health and safety of rescued animals by connecting them with veterinarians, shelters, and caregivers.

SDG 9 (Industry, Innovation, and Infrastructure):
Utilizes technology and cloud-based solutions to create an efficient, real-time rescue management system for domestic animals.

SDG 17 (Partnerships for the Goals):
Encourages collaboration between animal welfare organizations, rescue volunteers, and local authorities, improving response efficiency and fostering community-driven animal care initiatives.

LITERATURE SURVEY / BACKGROUND STUDY

PAPER	APPROACH	REMARKS
1.Animal Rescue Challenges & Need for SOS Systems	"Stray Animal Welfare and Rescue Operations: A Global Perspective" (2020).Identifies lack of centralized rescue systems as a major barrier to timely intervention. Highlights the role of technology in improving animal rescue efficiency.	
2.Social Impact and Community Engagement in Animal Rescue	Community-Driven Approaches for Animal Rescue: A Social Network Perspective" (2021) Examines the role of mobile apps, social media, and digital platforms in mobilizing rescue efforts.	
3.GPS, and Geolocation for Animal Rescue	“GPS and IoT-Based Tracking for Animal Rescue Operations” (2021).Discusses how Google Maps API can improve the efficiency of rescue operations by optimizing travel routes for rescuers.	

EXISTING METHOD

- **Manual Case Reporting & Tracking** – Rescuers and the public rely on phone calls, social media, and messages, leading to delayed response times and unstructured case management.

- **Limited Real-Time Collaboration** – No centralized system for rescuers, vets, and shelters to communicate and coordinate efficiently, causing miscommunication and rescue delays.

- **No Integrated Rescue & Adoption System** – Shelters and rescuers manually track rescued animals, making it difficult to update adoption status and medical care history.

PROPOSED / INNOVATIVE METHOD

- One-Tap SOS Reporting – Users can instantly report distressed animals with photos, location, and severity level using a web-based platform.
- Real-Time Rescuer Alerts – Cloud Pub/Sub notifications automatically notify the nearest rescuers, veterinarians, and shelters.
- Live GPS Tracking & Optimized Rescue Routes – Google Maps API enables accurate location sharing and navigation for faster rescues.
- Integrated Adoption & Foster System – Rescued animals can be listed for adoption with profiles, medical history, and real-time availability.

TECHNOLOGY USED

Frontend: HTML, CSS, JavaScript (React.js for dynamic UI)
Backend: Node.js with Express.js (Handles API requests and business logic)
Database: MySQL / PostgreSQL (Stores rescue cases, user data, and logs)
Notifications: Google Cloud Pub/Sub (Real-time rescuer alerts)
Mapping & GPS: OpenStreetMap API (For case location tracking)

SPECIFICATION

S.NO	SOFTWARE SPECIFICATIONS
1	Platform: Web-based application (Responsive for mobile & desktop)
2	Database Model: Relational Database (MySQL)

Action Plan

S.No	Major activities (or mile stones) to be completed	Target period of completion	Actual date of completion
1	Requirement Analysis & Planning	March 2025	
2	System Design & Database Setup	April 2025	
3	Core Development & Feature Implementation	June 2025	
4	Testing & Optimization	Augest 2025	
5	Deployment & Official Launch	September 2025	

CONCLUSION

- **Real-Time Rescue Coordination** – The application enables quick reporting and response through Google Cloud Pub/Sub notifications and GPS tracking, ensuring timely rescues.

- **Efficient Case Management** – A structured database system (MySQL) helps track rescue cases, medical history, and adoption status, improving rescue operations.

- **Scalability & Accessibility** – The platform is cost-effective, cloud-integrated, and user-friendly, making it scalable for rescuers, shelters, and the public.

REFERENCES LINKS

Stray Animal Welfare and Rescue Operation

GPS and IoT-Based Tracking for Animal Rescue Operations

sos wildlife

THANK YOU