

Product Requirements

PetAlert

Team Sunrise Inc

Brief problem statement

Pet owners often face critical delays when their pets go missing due to the lack of centralized, quick-response tools that consolidate contact information, media sharing, and emergency messaging. The PetAlert mobile application addresses this issue by enabling users to instantly generate, share, and manage alerts for missing pets while maintaining organized pet profiles and related contacts.

The system provides immediate access to essential pet details and contact networks even when internet connectivity is unstable. By integrating offline data storage and one-tap alert generation, PetAlert reduces the stress and response time for owners. Sprint 3 expands the system with connected features such as social-media integration, secure cloud backups, and interface enhancements to improve usability and reliability during emergencies.

System Requirements

- **Operating Systems:** Android 10 or later | iOS 15 or later
- **Hardware:** Smartphone with at least 3 GB RAM and 150 MB free storage
- **Network:**
 - Internet required for email and social-media alerts
 - Core functions (viewing, editing, reminders) available offline
- **Third-Party Services:**
 - Firebase Realtime Database (for cloud storage and authentication)
 - Google Maps SDK (for future location tagging enhancements)
 - Flutter Plugins (`image_picker`, `path_provider`, `shared_preferences`, `flutter_local_notifications`)

User Profile

- Primary users are pet owners responsible for household pets (dogs, cats, birds, reptiles, etc.).
- Users are expected to understand English and basic mobile navigation.
- The intended audience includes both tech-savvy and general users; design follows accessibility standards (large fonts, high-contrast mode, screen-reader support).
- Users should feel confident performing essential tasks—adding pets, updating info, sending alerts in three taps or fewer.

List of Features

Provide a numbered list of features (F1, F2, etc.) that concisely, clearly, and accurately describe that which constitutes your project.

F1- Pet profiles that list one pet's information (name, age, breed, a recent picture of the pet, owner's name, owner's contact information, and emergency contact's information). A different profile must be made for each pet.

F2- Alert system that automatically drafts and delivers an email to the local police station with the missing pet(s) information and sends a notification with the same information the police received to other Pet Finder users in the area.

F3- Notification system that regularly prompts the user to update or check that his or her pet's information is up-to-date.

F4- Photo gallery that allows users to upload more than one picture of his or her pet onto the app.

F5- Recommendations section that displays treats or toys a listed pet in the user's pet profiles might enjoy.

F6- Toxic food infographic that displays and informs users of possible dangerous or poisonous foods for a listed pet in the user's pet profiles.

Functional requirements (user stories)

List the Priority as 1 (High Priority - Critical) to 3 (Low Priority – Would be nice if we have time)

No.	User Story Name	Description	Priority
R1	Pet Profile	As a user, I want to be able to make my own profile for my pet.	1

R2	Owner & Emergency Contact Info	As a user, I want to be able to include my contact information in case of emergency.	1
R3	Missing Pet Alert System	As a user, I want to be able to have an alert system/notification for a missing pet.	1
R4	Regular Update Prompts	As a user, I want to be able to post regular updates	2
R5	Photo Gallery	As a user, I want to upload multiple photos of my pet and store those photos in a gallery	2
R6	Section for Recommendations	As a user, I want the app to suggest treats and toys based on pet's species, breed, and age	3
R7	Info Graphics for Possible Toxic Foods	As a user, I want to view a simple infographic of toxic foods, so that I can quickly learn what to avoid.	2

Non-Functional Requirements

Describe any constraints or cross-cutting characteristics of the system in a manner that is clear, specific, and testable. Each requirement should have a unique identifier (e.g. NF1, NF2,...). Only present those which are applicable to your system. Categories include but are not limited to:

Security

- NF1. Implement Firebase Authentication with optional “Stay Logged In” toggle.
- NF2. Encrypt stored pet and contact data on-device using platform-native secure storage.

Reliability

- NF1. Implement Firebase Authentication with optional “Stay Logged In” toggle.
- NF2. Encrypt stored pet and contact data on-device using platform-native secure storage.

Usability

- UF1. All major functions accessible within three taps from the home screen.
- UF2. Consistent theme and iconography across all modules.
- UF3. Clear success/error feedback on every major action (save, share, upload).
- UF4. Supports large text, high-contrast mode, and TalkBack/VoiceOver.
- UF5. Designed for stress-free emergency navigation—minimal prompts, focused layout.

Cross-Platform Compatibility

- Maintains equivalent functionality on Android and iOS; layout tested on various resolutions.

Accuracy

- NF7. All generated alerts, posts, and emails must display verified pet details and contact information without truncation or formatting errors.

Sponsor Requirements

I have read and approved the material in this document. If there is no external sponsor, the TA or instructor will sign it for accuracy/scope.

Print Name

Signature

Date