Snout & About

An intuitive pet health tracker that centralizes wellness data, reminders, and insights for better pet care.

(Ongoing)
My Role : End-to-End
Tools : Figma, Python

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Image Credits : Unsplash (Kara Eads)

Problem Statement

While developing a medical diagnosis system for humans, I recognized how central communication is to healthcare workflows.

This revealed a fundamental challenge in pet healthcare. Animals cannot articulate symptoms, leaving caregivers to rely on subjective observation.

Pet owners and foster caregivers therefore lack access to consistent and objective health data that could support early detection and preventive care.

Existing pet health solutions primarily function as intermediaries for manually submitted reports rather than as active monitoring systems.

The absence of personalized data collection limits timely intervention. It also places cognitive and observational burden on users, making pet healthcare largely reactive rather than proactive.

Goals & Constraints

Goals

1. Support real-time accurate monitoring of pet health to enable early intervention.
2. Reduce caregiver cognitive load by shifting from subjective observation to objective data.

Constraints

1. Technology: Mobile based app in communication with accessible hardware sensors.
2. Resources: Solo project with no external funding, prioritizing feasibility and scalability.

Research

Caregiver interviews

I spoke to pet owners who struggled to interpret their pet’s health signals.
They frequently relied on online advice or homemade remedies due to lack of clear and reliable resources.

Contextual insights

In India, many pets are adopted stray animals. Caregivers often do not have the resources for regular veterinary visits. Existing online information is largely tailored to domestic breeds and fails to account for these constraints.

Design implication

These factors motivated a low-cost and easily accessible solution focused on continuous health awareness rather than expensive or frequent clinical care.

Ideation & Exploration

Compared manual health report entry, camera-based monitoring, and sensor-based approaches by consulting pet caregivers about usability and effort.

Identified a preference for sensor-based solutions due to reduced manual effort and more consistent data logging.

Explored low-cost, wireless sensors that could be clipped onto a pet’s collar, harness, or vest to support passive health monitoring.

Design implication: Prioritize passive, wearable sensing that minimizes caregiver effort while remaining affordable and adaptable to different pet types.

Design Decisions

1. Passive sensor-based monitoring over manual logging to reduce caregiver cognitive load and improve data consistency.

2. Non-ML rule-based approach as a deliberate trade-off to keep computation lightweight for on-device use and to preserve data privacy by avoiding cloud processing.

3. Low-cost clip-on wearable sensors for easier accessibility for resource-constrained households and foster caregivers.

4. Multi-pet profile support to accommodate foster care contexts where caregivers manage multiple animals within a single system.

Ongoing Design Exploration

Translating research insights and design decisions into interaction wireframes.

Using low-fidelity prototypes to evaluate clarity, trust, and cognitive load.

(Iterations will be guided by early feedback from pet caregivers.)

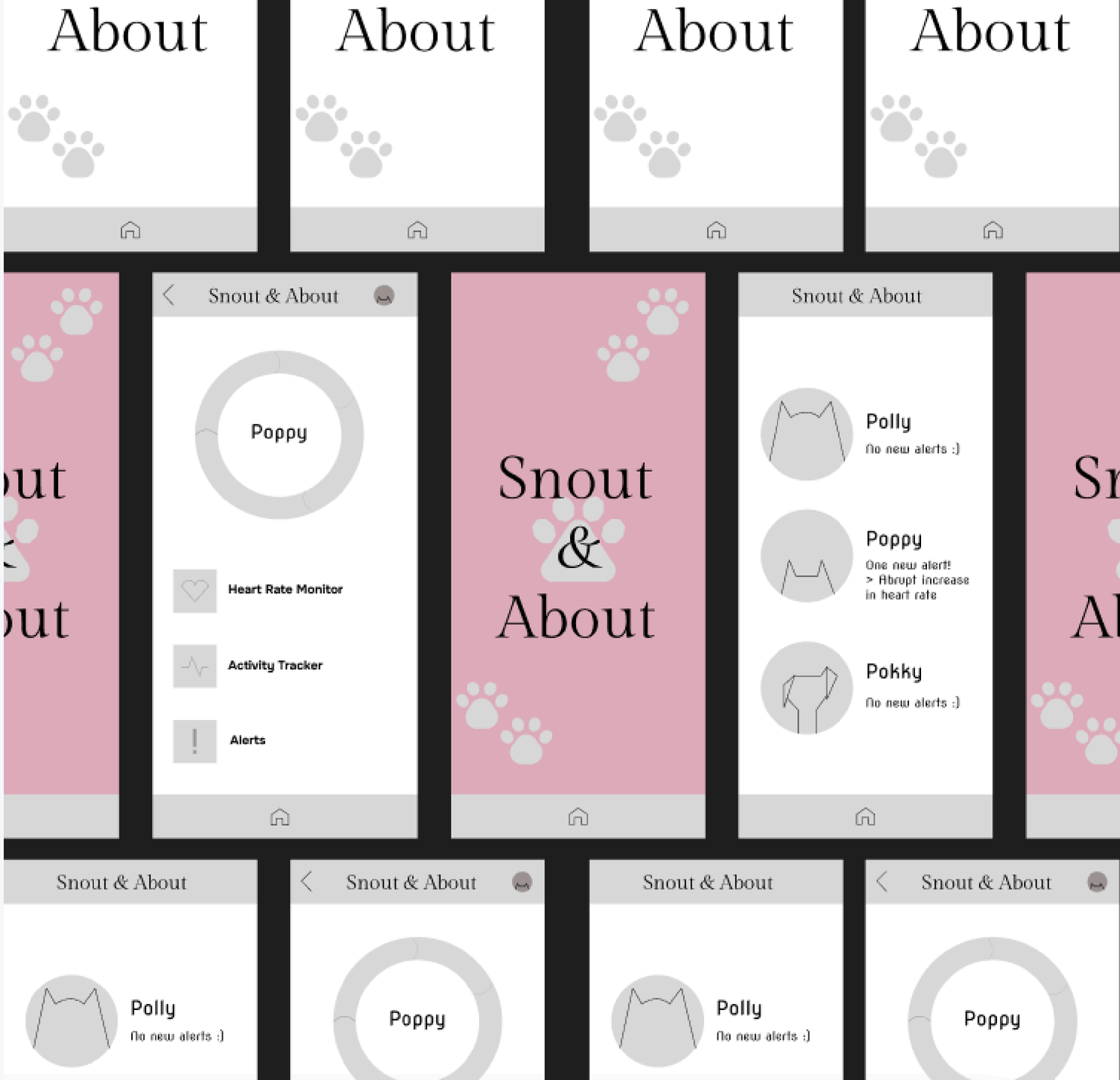

Image: First iteration of wireframes made in Figma

Future Work

(This project is ongoing, and the following directions are exploratory and may evolve as development progresses.)

1. Conduct longitudinal field studies with pet owners and foster caregivers to evaluate usability, trust, and sustained engagement over time.

2. Investigate hybrid inference approaches that balance lightweight on-device processing with optional, privacy-preserving analytics.

3. Incorporate veterinary feedback loops to support interpretability and responsible caregiver decision-making.

Reflection & Research Questions

1. Designing for non-verbal users shifted the focus from medical diagnosis to awareness, interpretability, and caregiver trust.

2. Ethical considerations emerged around over-reliance on automated indicators. This emphasizes the need to clearly communicate uncertainty and limitations.

3. Data privacy and ownership are central design concerns. It is important to prioritize on-device processing.

4. Research questions:
    a. How do caregivers interpret and act on non-diagnostic health indicators?
    b. What interaction designs best support trust without creating false authority?
    c. How do cost and caregiving context influence long-term adoption?