Designing an app that keeps track of pets -
A UX Case Study

Project Summary: Pet Scout is an app connected to a GPS tracker. The product allows people to track down wayward pets who may have got lost, run away or been dog- napped. It shows the fastest route with a clean, simple user interface. My role was to research, design and test the mapping app.

My Role: Carry out user research to discover if there was a user need for a product like this. Identify the key user groups, identify the key tasks, set usability goals, develop a prototype and run a usability test before iterating on the design.

Length of Project: 3 weeks

Platforms: Mobile

Design Tools / UX methods: Affinity sorting, personas, prototypes

The Problem

Everyone that has a pet already experienced the fear of losing them. What if he runs away? What if someone steals him?

The Solution

With a GPS tracker connected to your pet's collar, Find my Pet allows for pet owners to track their beloved ones and find their route to them in case they get lost or stolen.

DEFINE

Strategic objectives: The start-up has the technology ready for the GPS tracker's collar. It needs all the work done for the system.

Requirements: The company is thinking of an app for the mapping system, but leaves the final decision to the user need. It will depend on the user research.

Business Goals + User Goals: Track wayward pets. The user research will show the user needs and the changes the app will need to meet them.

DISCOVER

User Research

I interviewed 5 people, age range 25-53 to evaluate the need for the system. I recorded the user interviews to focus on the body language. Each interview took approximately 30 minutes and included topics to get to the core users' goals and pain points.

| **80%**	**100%**	**60%**	**80%**
have experienced their pet(s) running away.	were scared that their pet might run away someday.	will seek help from others' if their pet gets lost.	expressed a strong need to have a pet tracker.

User Interview Core Findings

Affinity Sorting

I used affinity sorting to define my *primary persona* and the *red routes*.

After interviewing the users, I wrote every observation on a sticky note, then I grouped similar kinds of observations to find patterns and themes in user behavior and situations. This helped me Create Personas, Red Routes and User Story maps, which turned out to be really useful while listing out the features for Minimum Viable Product.

[*The yellow sticky notes show the observations made by the users*]
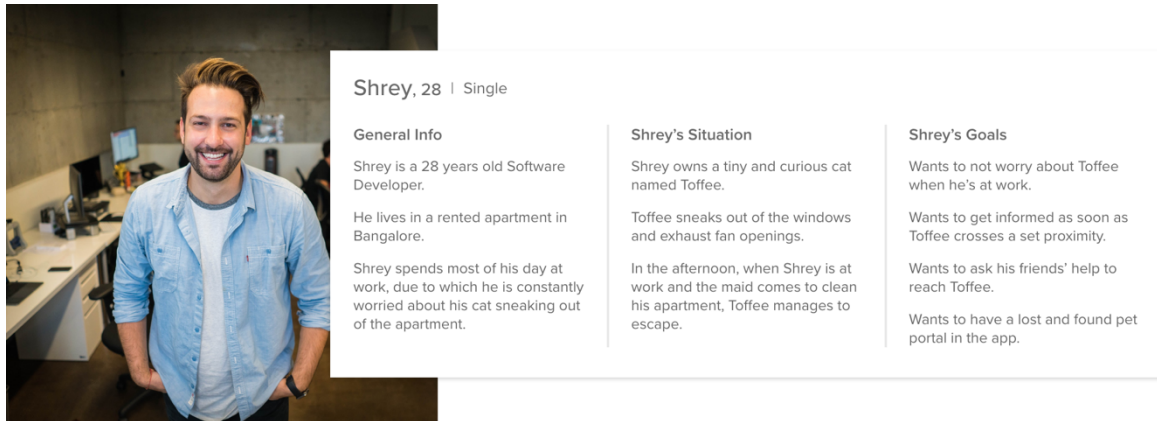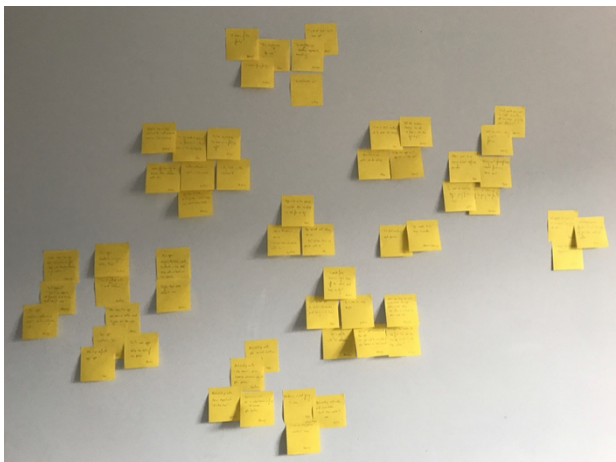

Results

2 groups stood out from this research -

- Stay-at-home owners, who want to do their day-to-day work without worrying about their pet escaping.
- Go-to-work owners, who want to go to work, leaving their pets behind at home, and not worry about their pet escaping.

Personas

Since both the user groups had the same goal to track their pet's location, I came up with my Primary Persona Shrey.

Shrey, 28 | Single

General Info

Shrey is a 28 years old Software Developer.

He lives in a rented apartment in Bangalore.

Shrey spends most of his day at work, due to which he is constantly worried about his cat sneaking out of the apartment.

Shrey's Situation

Shrey owns a tiny and curious cat named Toffee.

Toffee sneaks out of the windows and exhaust fan openings.

In the afternoon, when Shrey is at work and the maid comes to clean his apartment, Toffee manages to escape.

Shrey's Goals

Wants to not worry about Toffee when he's at work.

Wants to get informed as soon as Toffee crosses a set proximity.

Wants to ask his friends' help to reach Toffee.

Wants to have a lost and found pet portal in the app.

Shrey – Primary Persona

Shrey says "As an IT professional, I need to get an alert if my cat escapes while I am at work, to be able to track her and get her back."

Red Routes

Based on the user research results, I identified the key tasks to understand user goals.

	Few of the people	Some of the people	Most of the people	All of the people
All of the time		Add trusted contacts in the app.	Post on social media / lost and found portal.	Get an alert if the pet crosses Safe Zone. See pet's live location. Navigate to reach the pet.
Most of the time		Create pet profile.	Inform neighbours, friends, family.	Know gps tracker battery status.
Some of the time	Locate nearby vets and grooming centres.	Create and join lost and found groups.	Add pet's health details.	Change/Disable safe zone.
Very little of the time	Give away rewards to the people who find their pet.			

User Story Map

Based on the user goals, I created a user story map.

| Situation	Can't see pet.	Start the search.	Involve community.	Get pet back home.	Take future steps.
Reaction	Scan the house. Look for cues.	Decide a starting point.	Inform friends and neighbors.	Check pet's physical and emotional state.	Write contact details in collar.
	Call the pet by name.	Assign all family members to search in different areas.	Inform search groups and pet shelters.	Inform all those who helped.	Consider getting a microchip.
	Inform the family members.	Assign one person to be at home if the pet returns.	Post on social media.	Remove flyers and posters.	Look for possible pet trackers
			Print posters and flyers.		
App Feature	Receive alert on app.	View pet's live location.	Share with contacts to ask for help.	Inform contacts that pet has been found.	Share the app with other pet owners.
		Navigate to the pet's location.			

User Story Map

Based on the findings, I approached my design in three steps: MVP Core Features, Wireframes and Usability Testing.

MINIMUM VIABLE PRODUCT CORE FEATURES

From these findings, I deduced that Pet Scout MVP should feature the following:

- Pet's live location
- Directions to locate pet
- Safe Zone (edit and disable)
- Friends
- Inform Friends
- GPS Battery indicator
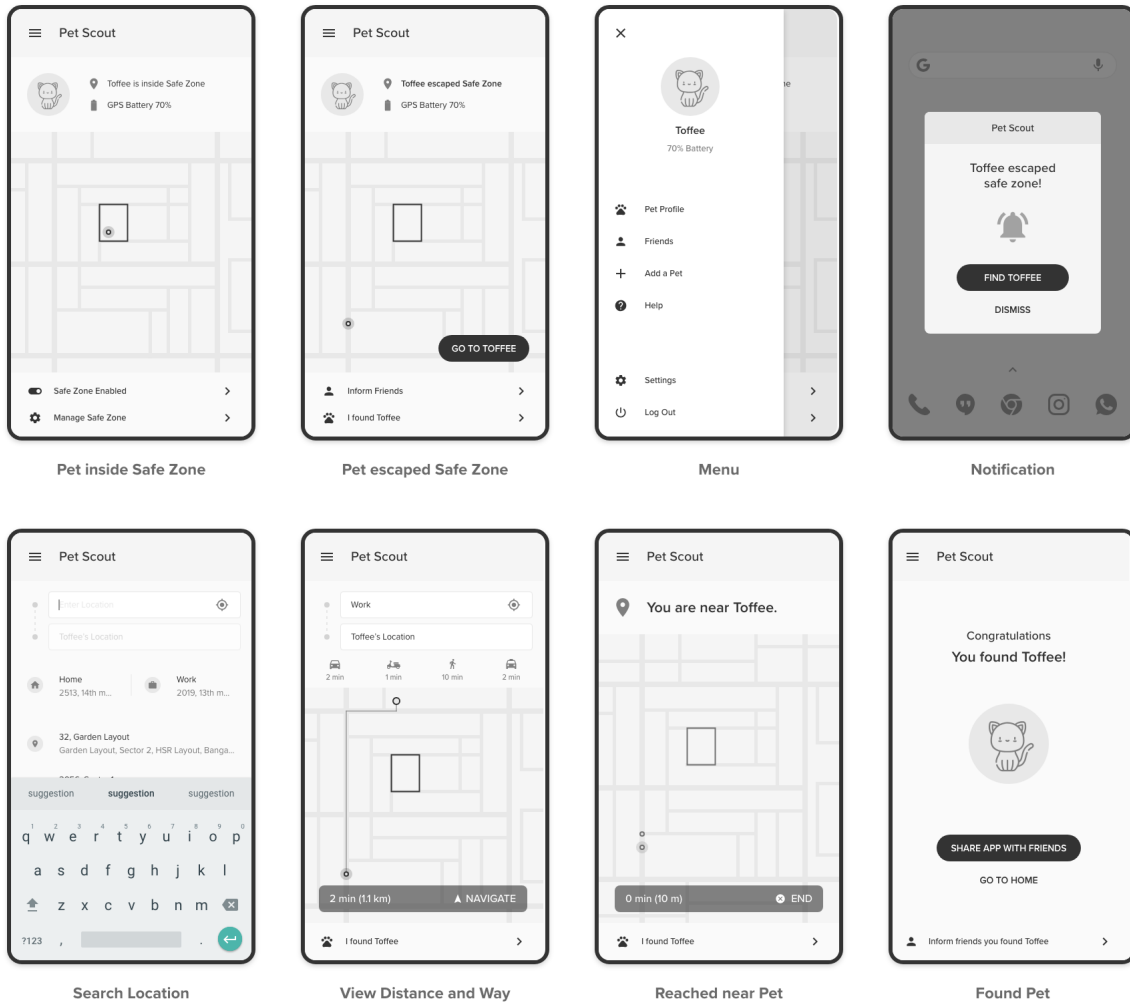
Pet inside Safe Zone

Pet escaped Safe Zone

Menu

Notification

Search Location

View Distance and Way

Reached near Pet

Found Pet

Wireframes

MEASURING USABILITY

Since this app design was a concept project with no real development happening, I tested the working prototype of wireframes with 5 users to get a measurement of **effectiveness**, **efficiency** and **satisfaction**.

I gave the users 3 tasks each.

Task 1

You are at work and you suddenly get a notification that your cat Bingo has escaped the Safe Zone. Since you are at work, it'll take some time for you to leave. You plan to inform your friend Nikhil who lives in the neighbourhood about Bingo's escape.

Task 2

You are at a supermarket near home and you suddenly get a notification that your cat Toffee has escaped the Safe Zone. You want to find Toffee as soon as possible. Use the app to find her.

Task 3

You want to log out of the app (I did this to check the discoverability of hamburger menu).

USABILITY TEST RESULTS

	Task 1	Task 2	Task 3
User 1	✓ 33 sec	✓ 43 sec	✓ 08 sec
User 2	✓ 44 sec	✗ -	✓ 03 sec
User 3	✓ 35 sec	✓ 45 sec	✓ 04 sec
User 4	✓ 41 sec	✓ 42 sec	✓ 07 sec
User 5	✓ 37 sec	✓ 40 sec	✓ 05 sec
Geo Mean	38 s	42 s	5 s

Results of Usability Test

Effectiveness

Effectiveness is the accuracy and completeness with which users achieve specified goals.

Success Rate: 93% (14 out of 15 tasks were completed successfully).

Efficiency

Efficiency is the accuracy and completeness of goals achieved in relation to resources (here, time).

The average time taken to complete each task: 38 sec (Task 1), 42 sec (Task 2), 5 sec (Task 3).

Satisfaction

Freedom from discomfort and positive attitude towards the use of the system.

I calculated satisfaction using the System Usability Score (SUS). SUS Score should be more than 60 to achieve Satisfaction.

SUS for all 5 users: 82.5, 85, 87.5, 85, 82.5

My design succeeded in all three aspects of Usability, i.e., Effectiveness, Efficiency and Satisfaction.

OUTCOME

- **Learnings?**

I put my UX knowledge in practice to *Define* a user need, *Discover* how to solve the user's goals, *Design* a clean and simple app through iteration and usability tests.

- **Insights on user research?**

Despite the differences between the users, they mostly shared the same goal. I was surprised to see how speaking with users clarified instantly the basic features they would need to solve their problems and make their lives better.

CONCLUSION

The users had a great role to play throughout the design process. I realized that a lot of important aspects go un-noticed and un-catered if we design without involving users.

A big thank you to the people who participated in the interviews and gave me feedback to improve my design.