InSpec

Project Proposal



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Problem

Lack of evidence causing rental disputes

The most commonly reported problems by owners are problems including vandalism and property damage (21%). [1] Since 2023-2024, there has been an increase of damage-related filings implying sustained prevalence of property damage, affecting the owners. [2]

Exploitable tenancy

The 2021 Canadian Legal Problems Survey (updated trends in 2023 reports) found 15-20% of renters experienced tenancy disputes, including deposit withholding for "damage"—a top complaint. [3]

National rent hikes

Compounded by multiple issues, regardless if we factor in the previous ones or not, the price of rent in Canada has increased (22% nationally), increasing scrutiny over repairs. [1] This increasing stakes involved being pushed to both parties, especially the tenant, calls for the need for a modern tool to help document damage resolve disputes before escalating.

Solution

Provide a tool that clears up disputes through facts

By providing a modern impartial tool that uses not only AI, but also documents images, a text summary, and easily readable scores - all in a downloadable report - and with real-time transparency between owners and tenants whenever a property inspection is made, rental disputes could be resolved before they happen

Help Manage Property

Provide a way for owners to monitor and also, to an extent, manage their properties. This way transparency is ensured, and helps keep the app accessible to owners regardless of amount of properties.

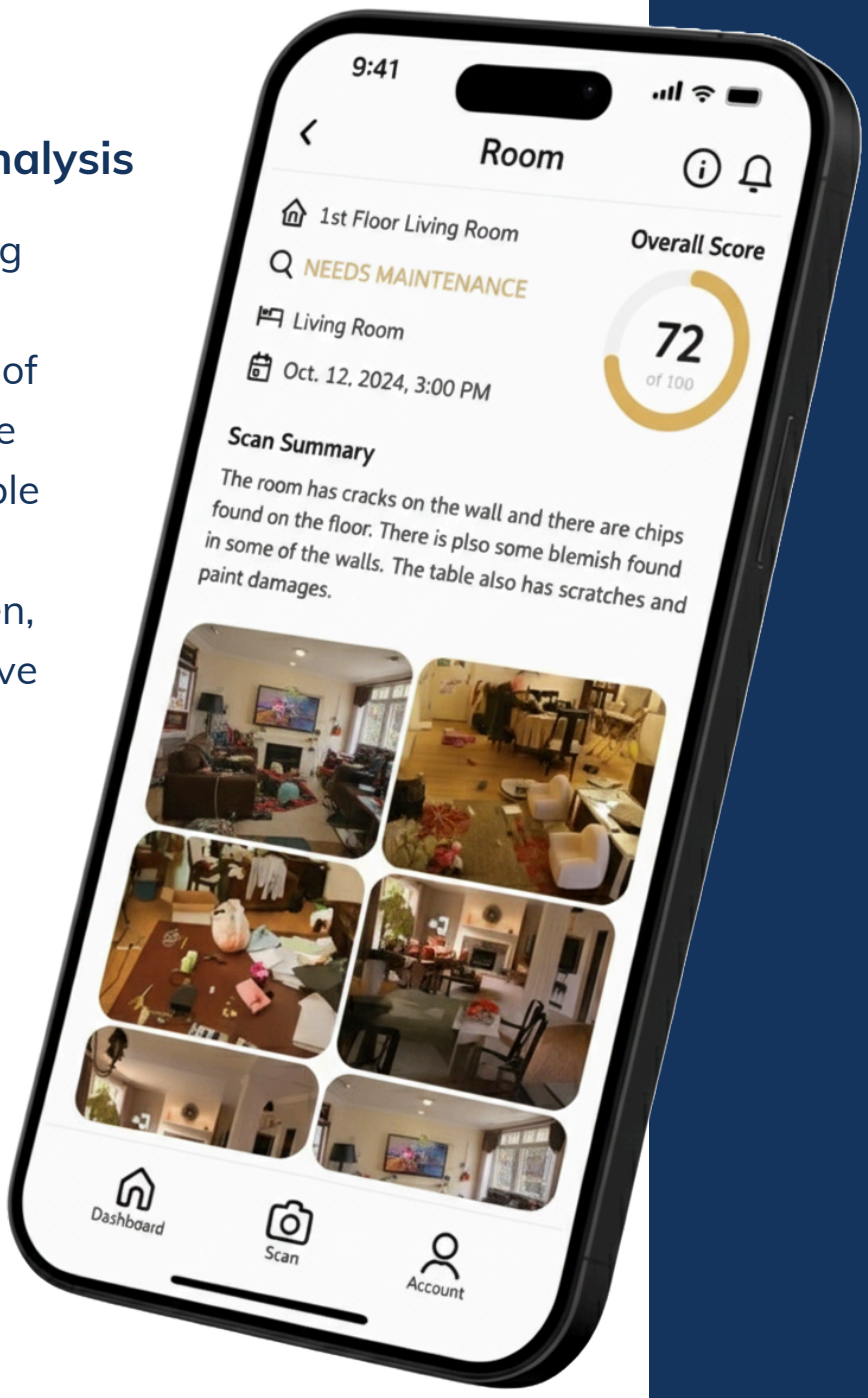
Protect Tenants

Tenants should always be able to access a history of properties they rented so as to ensure they have documentation and records of their scans in the future.

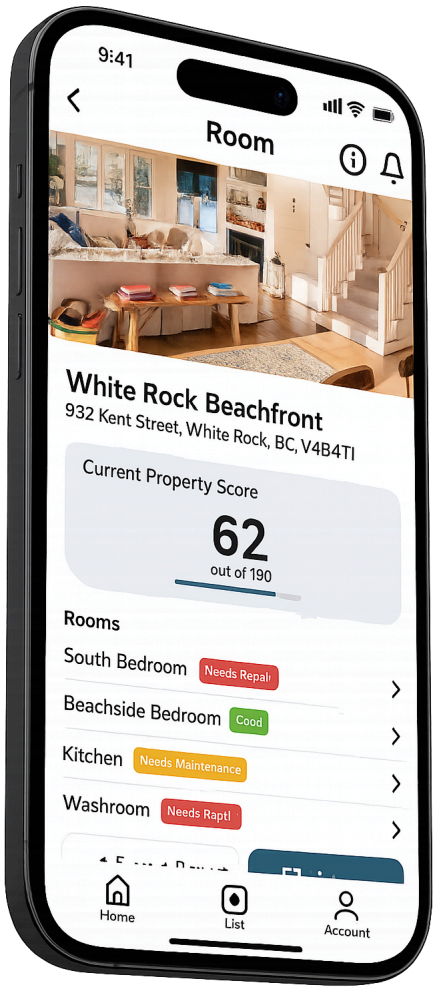
Main Features

AI Damage Detection & Analysis

With a quick and easy scanning process, users could scan each room the. The AI will record all of the damages, and based on the app's algorithm, a downloadable report containing a score and condition summary will be given, making property health objective and easy to monitor.







Property & Rental History Management

Tenants will be able to view all of a property's scans, and a history of all their past rentals. While owners will be able to monitor and compare each of their property's health over time, and also, they will be notified whenever a tenant does a scan.

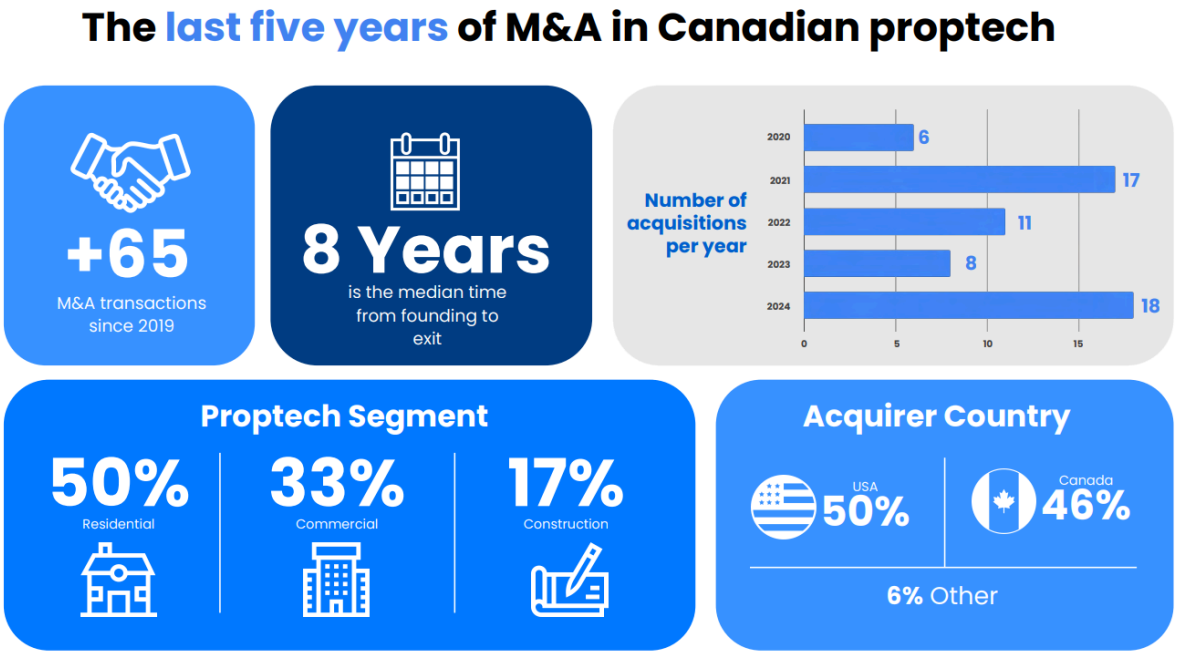


Quick Scan

Owners that are prospecting for new properties could use InSpec's quick scan to check the condition of a property and generate a downloadable report.

Market Research

InSpec thrives in Canada's PropTech sector, valued at USD 2.42B (≈ CAD 3.27B) in 2022, projected to USD 8.84B (≈ CAD 11.93B) by 2030 (17.6% CAGR) [4]. Mobile-first tools digitize inspections to reduce rental disputes [5]. Property/deposit disputes often hit tenancy boards; BC mandates strict docs, or claims fail [6]. InSpec offers manual image uploads (pre/during/post-occupancy) with AI damage detection and GPS/time-stamped histories for verifiable trails, boosting transparency. Unlike HappyCo [7], zInspector [8], and Spectora [9] (checklists/basic photos), InSpec's AI+GPS yields accurate records, matching Canadian regulations for confidence.



Proptech Collective, 2024 annual report [2]

Competitive Analysis

		HappyCo	zInspector	Spectora
AI Damage Detection	✓	✗	✗	✗
Property Health Score	✓	✓	✗	✗
Baseline Comparison	✓	✗	✗	✓
GPS Property Organization	✓	✗	✗	✗

Most of the inspection tools today heavily rely on manual checklist and basic photo uploads, while InSpec delivers a more data-driven and accurate view of the property condition by leveraging the use of the newer technology. [6] [7] [8]

Project Timeline

The team used Agile methodology, with 1-3 total weekly scrum meetings/checkpoints between 2 teams, Frontend and Backend, where the PM meets them. Both teams applied rolling progress in their tasks, slowly completing then shifting to other tasks. BE slowly switched to styling for FE as it approached the middle of timeline.

Development has 3 phases;

- Research and Setup
- Development
- Testing and Deployment

Design has 3 phases;

- Research and UX Design
- Wireframe and UI Design
- Documentation

Week 1

Development

- Brainstorm Project Ideas

Design

- Brainstorm UX

Week 2

Development

- Discuss Core Features
- Plan Data Model
- Tech Stack

Design

- UX Prototyping
- User Persona

Week 3

Development

- Finalize Data Model
- Authentication

Design

- UX Blueprint
- User Flow

Week 4 BE

Development

- Setup Backend configuration
- Kick-off BE Development
- Establish BE and Database connection

Design

- Kick-off Wireframe

Week 5 BE

Development

- Kick-off FE Development
- Start Owner Development
- Camera Implementation
- AI Development Begins

Design

- Research UI Kit

Week 6 BE FE

Development

- Establish BE and FE connection
- Start Tenant Development,
- Property Management implementation

Design

- Wireframe Revision

Week 7 BE FE

Development

- AI Detection implementation
- AI Camera Feature Implementation

Design

- Research Branding

Week 8 BE FE

Development

- Cloud Deployment Setup
- Rental History implementation
- Owner Features finalized

Design

- Research Standardized UI
- Kick-off Branding Kit

Week 9 BE FE

Development

- Tenant Features finalized
- Alpha Build – 100% feature complete

Design

- Upgrade to High Fidelity Wireframes

Week 10 BE FE

Development

- Alpha Bug Fix
- Standardized UI implementation
- Testing Proper

Design

- Final Wireframe revision
- Finalize Branding Kit

Week 11 FE

Development

- Alpha Bug Fix
- Beta Build – 50% styling applied
- Regression Test
- UI Work

Design

- Beta Presentation
- Documentation work

Week 12 FE

Development

- Beta Bug Fix

Design

- Documentation work

Week 13 FE

Development

- Documentation work
- Final Presentation

Design

- Final Presentation

Tech Stack

The project uses a modern and flexible technology stack to deliver a smooth experience. The mobile app is built with React Native, using NativeWind for styling and Expo for development and deployment. On the backend, Node.js and Next.js handle the core services, while Supabase manages authentication, the database, and storage. The backend is hosted on AWS and a separate landing page is created with Next.js to introduce the app

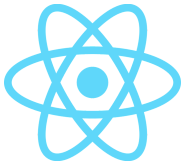
VERSION CONTROL



Github

DEVELOPMENT

FRONTEND



React Native



NativeWind



Expo

BACKEND



Node.js



Next.js

HOSTING



AWS

AUTHENTICATION



Supabase



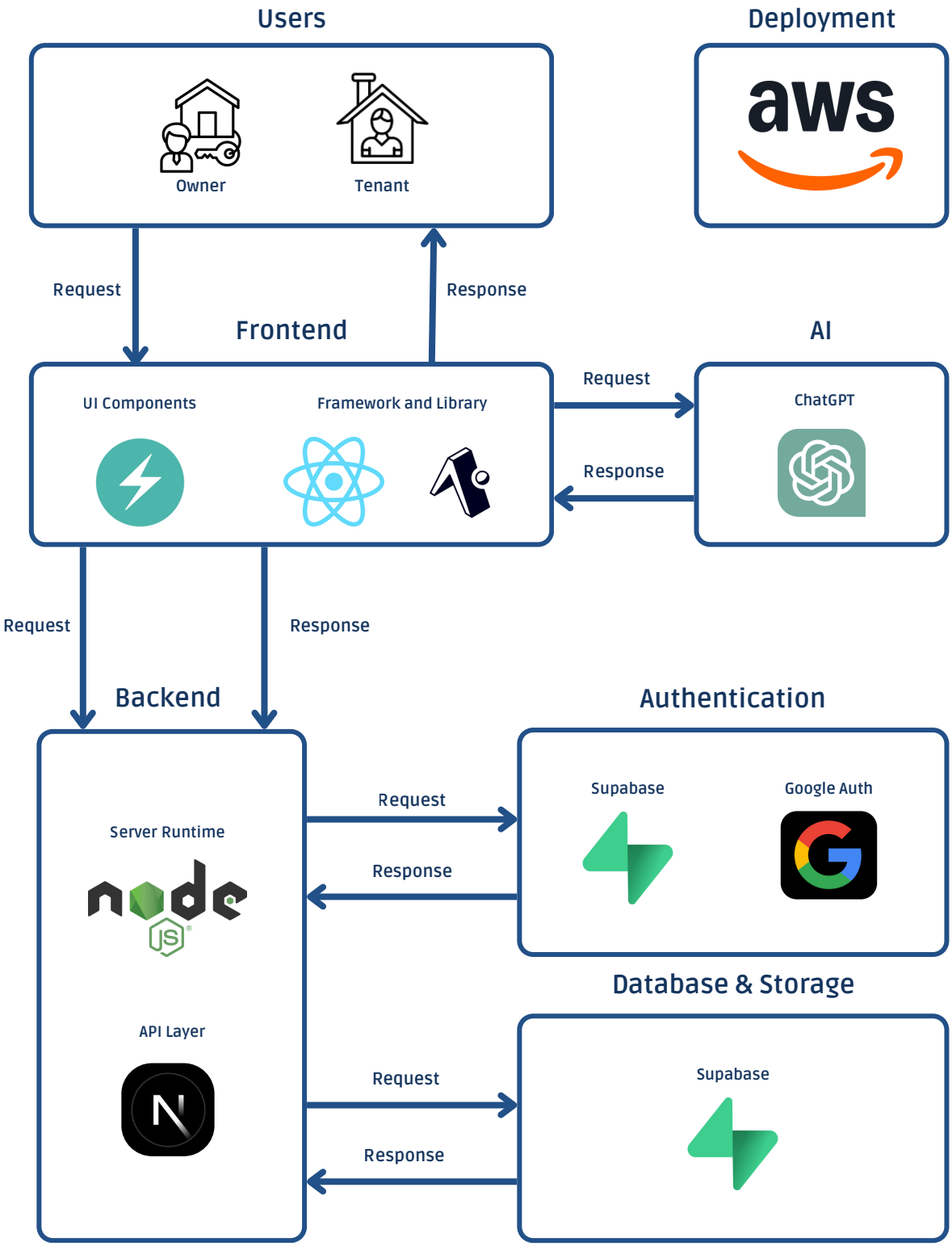
Google

DATABASE AND STORAGE



Supabase

System Architechture



Data Model


property_room_report
id int8
created_at timestamptz
property_id int8
room_id int8
description text
scanned_images _text
score int2
user_id uuid
user_type user_type
property_report_id int8
property_rooms
id int8
property_id int8
name text
type text
created_at timestamptz
property_report
id int8
property_id int8
scan_type scan_type
overall_score int2
created_at timestamptz
user_id uuid
user_type user_type
notifications
id int8
created_at timestamptz
body text
dismissed bool
property_id int4
sender_id uuid
receiver_id uuid
last_scanned_date text
rentals
id int8
tenant_id uuid
property_id int8
auth.users.id
properties
id int8
created_at timestamptz
name varchar
type varchar
addr... text
city text
country text
user_id uuid
code text
selected bool
image text
tenant_user_id uuid
users
id uuid
email text
first_name text
last_name text
phone_number int8
dob date
addr... text
type user_type
created_at timestamptz
Primary key
Identity
Unique
Nullable
Non-Nullable

Design Tools



Figma



Affinity

Early on in the project, the team had already started sketching UX and User flows and low-fidelity wireframes on Figma, which helped all the way until High Fidelity Prototype.

PROJECT MANAGEMENT



Trello



Slack

Since we use an agile methodology, Trello has been chosen due to its simplicity in handling tasks. Slack was also used due to its tab features in group chats where members could easily see an Overview/links, a Files tab, and a Pinned tab all about the project.

User Personas

OWNERS

Soledad De Guzman

65 years old, landlady, tech comfortability: moderate

Owns a residential area in a subdivision, a co-owner of a farm lot, another two-storey residential house, and a commercial property located in a high-traffic foodstrip.

Goals & Motivation

- Foster a harmonious relationship with tenant to protect the property and its condition to maximize its life.
- Easy access to information about properties

Pain Points

- Small damages are difficult to prove whether they existed before or after tenant occupancy, leading to disputes
- Managing multiple properties makes it hard to keep track

Josué Menjivar

61 years old, teacher & apartment owner, tech comfortability: very high

Josué is a teacher and design instructor who values design and, having experienced homelessness, now provides safe, clean, and affordable apartments for his tenants.

Goals & Motivation

- Provide an app that lets renters easily and discreetly report issues (typing instead of speaking)
- Track repair and service details in one place for management
- Help owners stay organized and respond quickly to emergencies they can't control

Pain Points

- Difficult to maintain detailed repair history and property condition records across multiple apartments
- Lacks a systematic way to document property state before and after each tenancy
- No centralized system to track property condition changes over time for better management

TENANTS

Renz Carlo Mangilit

28 years old, programmer, tech comfortability: very high

Tech power user who sometimes enjoys going on vacation with friends, renting hotel rooms or airbnbs. A lot of experience in rentals and travel, both local and overseas.

Goals & Motivation

- Don't want to worry about getting charged just because he forgot to report damage upon arrival to the bnb.
- Wants a mobile app that would do all the work to remove his worries. (i.e. document the state of the room as proof)

Pain Points

- Difficult to create reliable proof of rental condition that protects against unfair damage charges
- Lacks organized documentation system to reference if disputes arise after checkout

Chinatsu Osuki

29 years old, nail artist, tech comfortability: moderate

Chinatsu is a nail artist who spends most of her time working with clients in her local community. She doesn't travel often, but when she does, she prefers staying in stylish Airbnb or hotels.

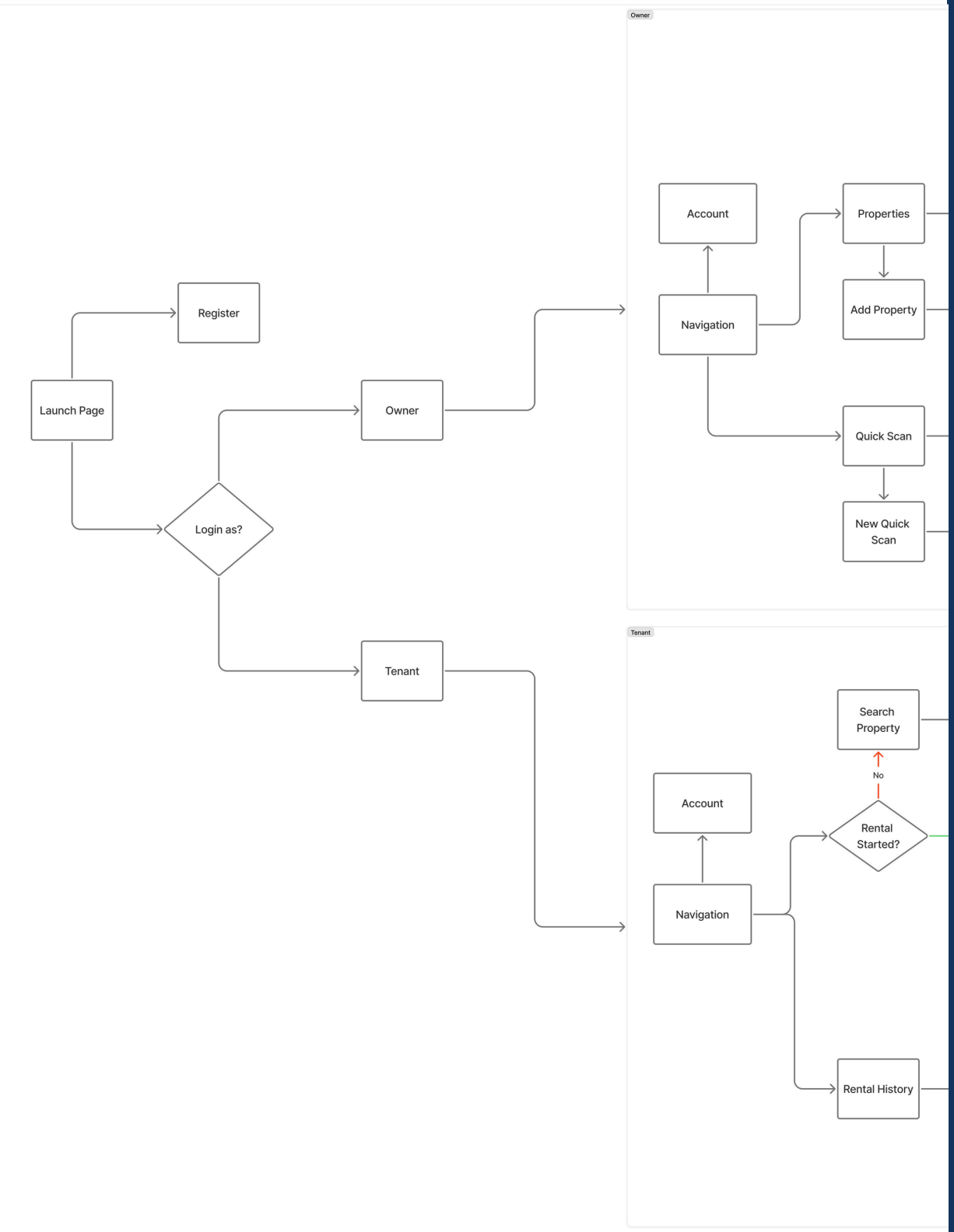
Goals & Motivation

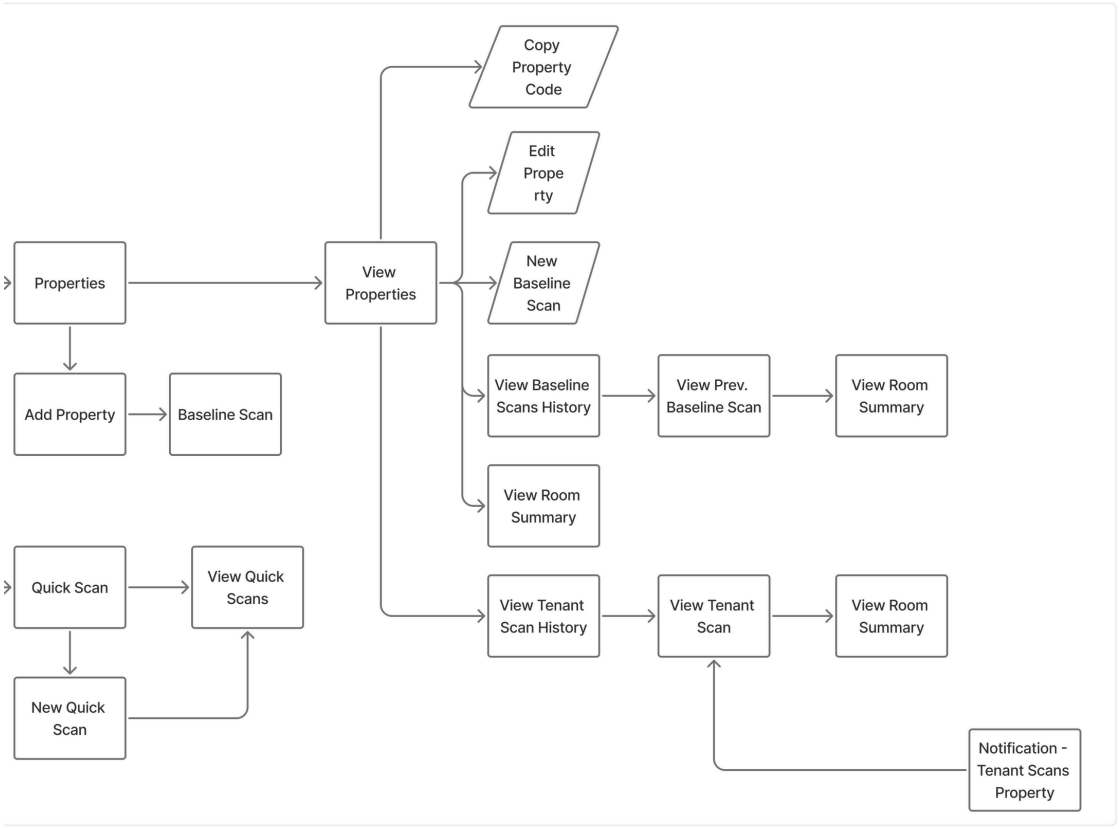
- Feel secure and in control during her stay
- Avoid being unfairly charged for damage she didn't cause

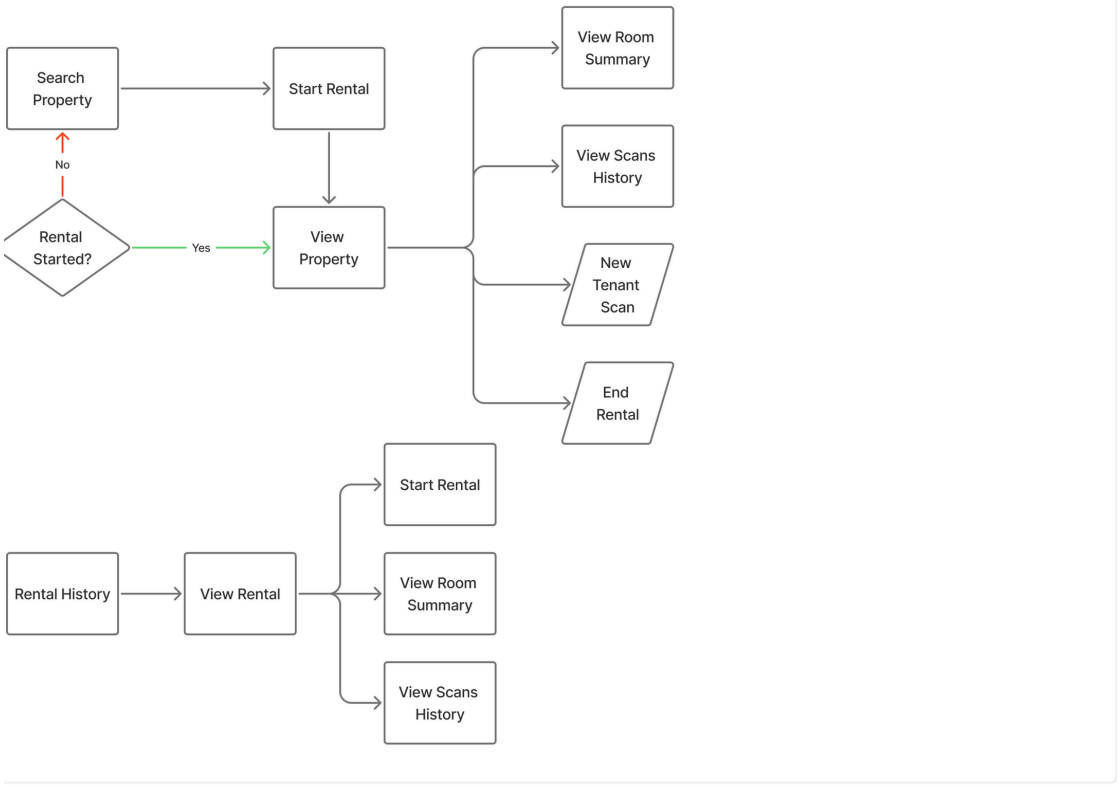
Pain Points

- Lacks a reliable way to document broken amenities upon arrival to avoid being blamed later
- Difficult to create clear visual evidence of property condition without technical expertise

User Flow

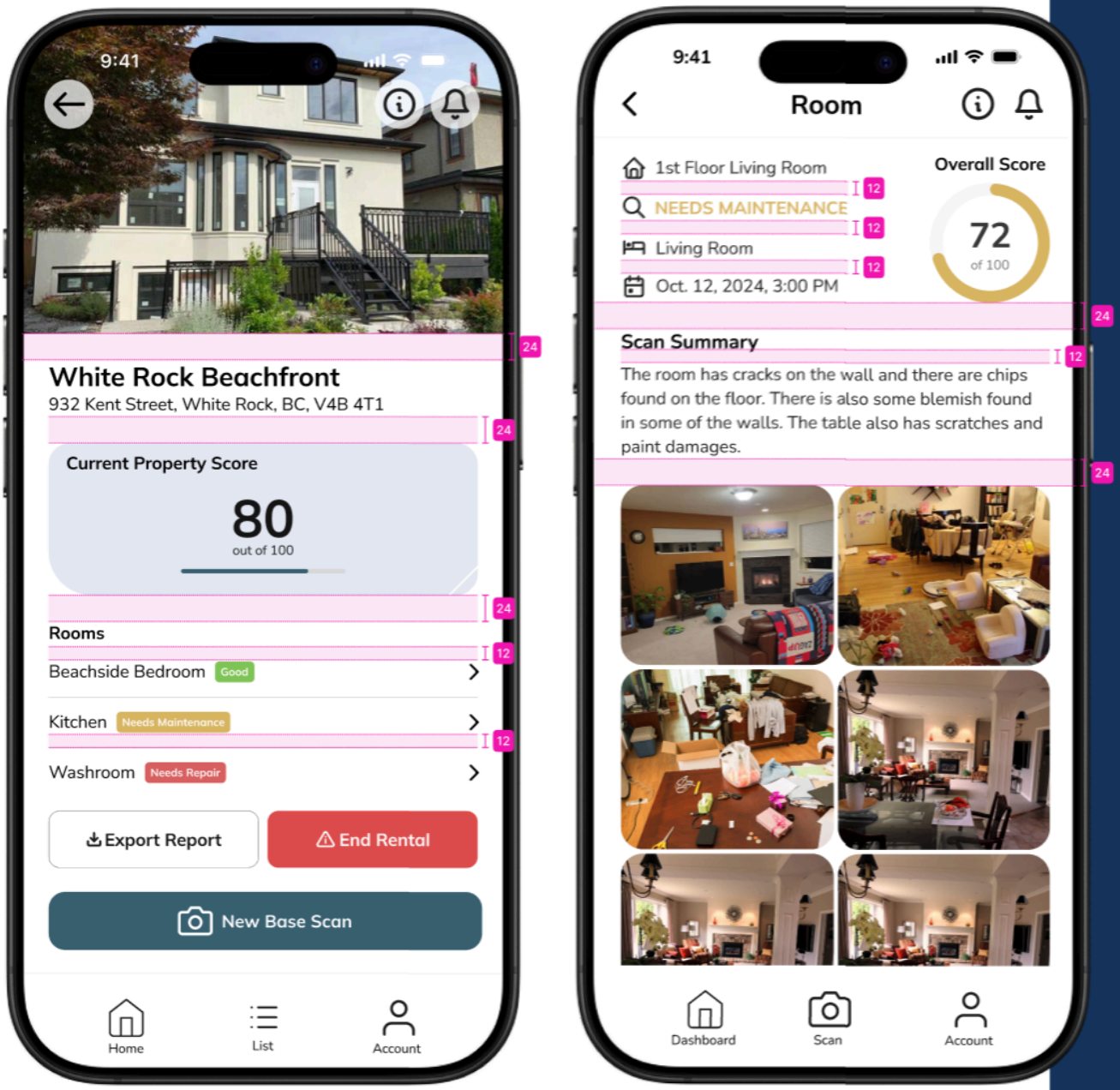

Owner
Account
Properties
Register
Navigation
Add Property
Launch Page
Owner
Quick Scan
Login as?
New Quick Scan
Tenant
Search Property
No
Account
Rental Started?
Navigation
Rental History


Copy Property Code
Edit Prope rty
Properties
View Properties
New Baseline Scan
Add Property
Baseline Scan
View Baseline Scans History
View Prev. Baseline Scan
View Room Summary
View Room Summary
Quick Scan
View Quick Scans
View Tenant Scan History
View Tenant Scan
View Room Summary
New Quick Scan
Notification - Tenant Scans Property


Search Property
Start Rental
View Room Summary
No
View Scans History
Rental Started?
Yes
View Property
New Tenant Scan
End Rental
Start Rental
Rental History
View Rental
View Room Summary
View Scans History

Wireframe

8-point grid system was used midway the wireframing phase, as the resources and time needed to kick-off styling and branding. This not only simplified and made wireframing hyper efficient, but also helped the FE team with more accurate implementations.



Branding

InSpec’s logo is a house being scanned. Early on in the design process, the team decided it should be a “house being scanned”.
Teko and Dark Blue were used to portray *professionalism* with an orange accent based on the *warmth* of homes, bed-and-board, and rentals. Silhouettes are also created to make the logo appear in dark backgrounds.

Prototypes



App Icon



Silhouettes



Typography

HEADER TEXT

Aa

Mulish

Header

Early on in the project, the team had already started sketching the early wireframes on Figma, which helped all the way until High Fidelity Prototype.

Usage	Size	Weight	Family
Data	32px	Bold	Mulish
Data 2	24px	Bold	Mulish
Header	24px	Bold	Mulish

BODY TEXT

Aa

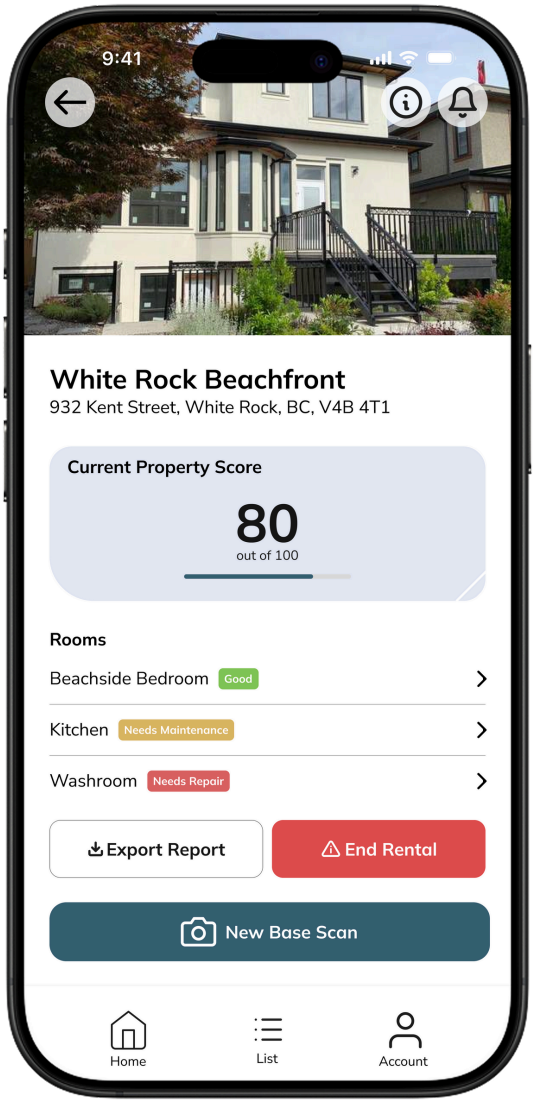
Nunito Sans
Body

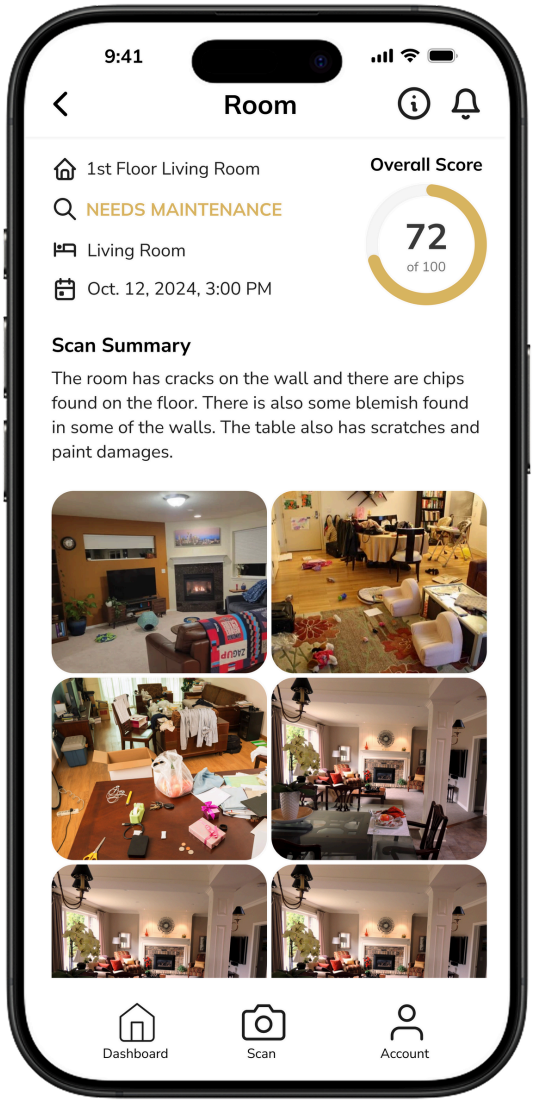
Early on in the project, the team had already started sketching the early wireframes on Figma, which helped all the way until High Fidelity Prototype.

Usage	Size	Weight	Family
Section Header	**16px**	**Bold**	**Nunito Sans**
Body	16px	Regular	Nunito Sans
Subtext	12px	Regular	Nunito Sans

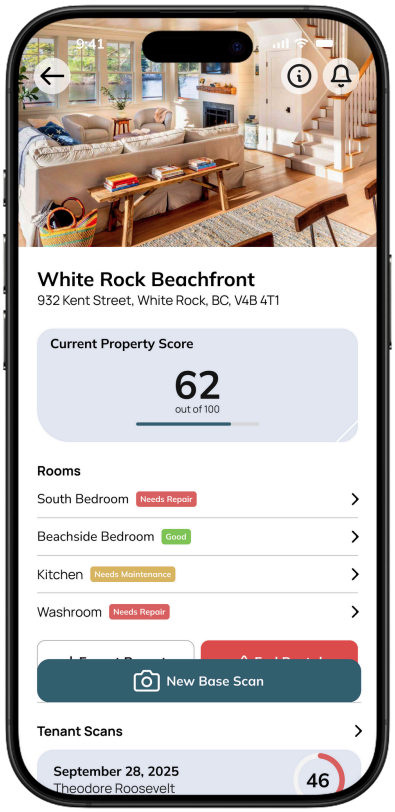
UI Mockups

The final design of the app uses colours as minimal as possible due to the much need for it to show status in some pages. The team thinks this helps maintain the user focus on important details.

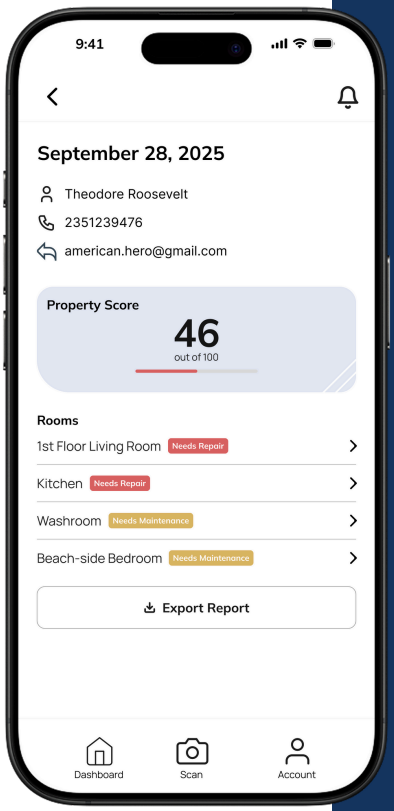




DESIGN OVERVIEW







Our Team



Pocholo Renzo D.G. Lamagna

Project Manager / Full Stack Developer

I have five years of experience as a Quality Engineer Team Lead R&D liaison for our department, these has allowed me to organize information and manage the team. While managing the deployment of backend, I've also acted as the de facto designer for our team and coordinated closely with the FE Team to ensure the design is up to a standard.

/pocholo-renzo-lamagna

github.com/AstralHunt



Preeti Rawat

Leader Developer / Full Stack Developer

I have three years of experience in web development specializing in front-end and back-end technologies and focus on building efficient, user-friendly applications. I've set up the project's backend and frontend environments and guided technical decisions and work closely with the team to maintain code quality and ensure timely delivery.

/preetirawat-dev

github.com/RawatPreeti



Mayank Abrol

AI Engineer / Frontend Developer

I have a background in Business and Management, this lets me approach technical challenges with a strategic mindset, balancing functionality with user experience. Coordinating closely with the PM, my responsibility was to design and maintain the app's core feature, the AI Damage Detection while also handling some major frontend workflows.

/mayank-abrol

github.com/mayankabrol1



Johnsen Darelle Dela Cruz

Frontend Developer

I was tasked to solely focus my react-native skills into the app's client-side, coordinating closely with the other FE team members and the design wireframes in finalizing the app. I've also designed presentation and have provided efforts in all other documentations. This project has helped me improve my skills while working closely with my teammates.

/johnsen-darelle-dela-cruz github.com/JamonSTG



Kento Nakajima

Frontend Developer

I'm a Frontend Developer with the InSpec team. I had no prior industry experience before this, but I've gained full-stack development skills through hands-on practice. I've contributed all across the front end pages and also designed and lead the implementation of the onboarding all over the app. My experience here has given me confidence in real-world web development.

/kento-nakajima github.com/Kento0315

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