LeafRx: Houseplant Care Assistant

Daniele Cusentino

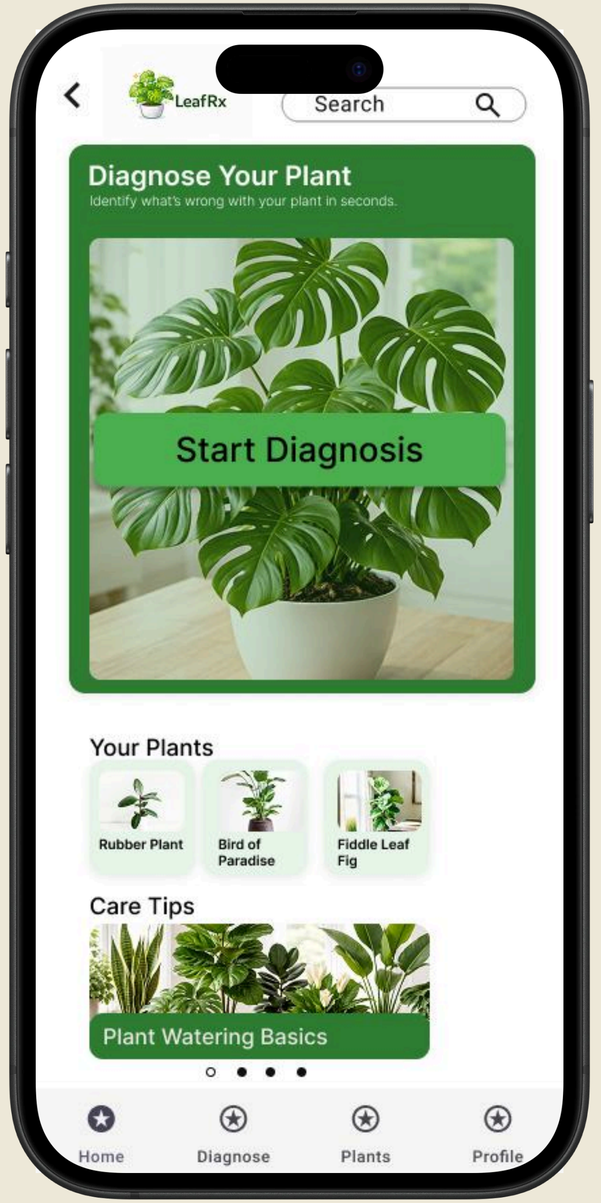
Project Overview

The Product

A mobile and responsive web app designed to help plant owners identify plant health issues and care for their plants with confidence. The app uses a simple, guided diagnosis flow to turn complex plant problems into clear, actionable care steps. It's built for beginner to intermediate plant owners who want quick, easy-to-understand guidance without needing expert knowledge.

Project Duration

January 2026 — April 2026



Project Overview

The Problem

Plant owners often struggle to identify what's wrong with their plants and how to fix it. Existing resources can be overwhelming, too technical or not tailored to beginners.

The Goal

Design a simple, user-friendly app that helps users quickly diagnose plant issues and provides clear, actionable care guidance. The goal is to make plant care more accessible and build user confidence.

Project Overview

My Role

UX Designer (end-to-end)

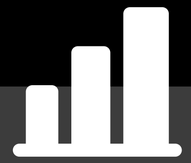
Responsibilities

Conducted user research; created personas, empathy maps, and journey maps; defined information architecture; designed wireframes and prototypes; and conducted usability testing to inform iterations

Understanding the User

- User Research Summary
- User Research Pain Points
- Personas
- Problem Statements
- User Journey Maps

User Research Summary



I conducted qualitative user research through interviews with four houseplant owners with varying experience levels, ranging from beginners to plant enthusiasts.

- My initial assumption was that most plant owners struggle primarily with remembering care routines such as watering schedules.
- However, after conducting the interviews, I discovered that the bigger challenge is diagnosing plant problems when symptoms appear.
- Participants frequently reported confusion caused by conflicting advice online and unclear plant care terminology.
- The research revealed that users want simple, trustworthy guidance that quickly explains what is wrong with their plant and how to fix it.

User Research Pain Points

① DIFFICULTY DIAGNOSING PROBLEMS

Many users struggle to identify what is wrong with their plants when symptoms appear. This insight suggests the design should focus on making plant problem diagnosis simple and easy to understand.

② CONFLICTING INFORMATION ONLINE

Users frequently encounter inconsistent or contradictory advice when researching plant care online. The design should provide clear, trustworthy guidance so users feel confident in the solution they receive.

③ COMPLEX OR CONFUSING TERMINOLOGY

Plant care resources often use terminology that beginners do not understand. Moving forward, the design should prioritize plain language and visual explanations that are easy for beginners to follow.

④ LIMITED TIME FOR PLANT CARE RESEARCH

Some users, especially busy professionals, do not have time to read long articles to diagnose plant issues. The design should prioritize quick answers and streamlined steps that help users solve problems efficiently.

Persona: Joe Ramirez

Problem Statement

Joe Ramirez is a beginner plant owner who needs a simple way to diagnose plant problems because conflicting advice online makes it difficult for him to know what is actually wrong with his plants.

Joe Ramirez: Beginner Plant Owner

Age: 29
Education: BA in Comms
Hometown: Columbus
Family: Girlfriend; Cat
Occupation: Marketing Coordinator

"I just want someone to tell me what's wrong with my plant without making me feel like I need a botany degree."

Goals

- Keep his plants alive and healthy
- Make his apartment feel comfortable and green
- Learn plant care without feeling overwhelmed

Frustrations

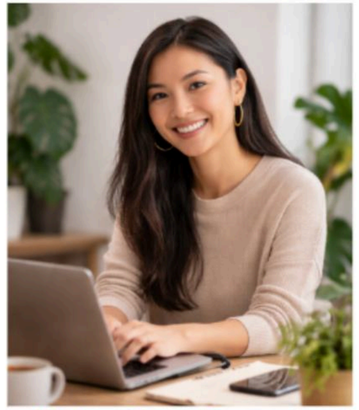
- Not knowing what's wrong when a plant looks unhealthy
- Conflicting advice online
- Plant care guides that assume prior knowledge
- Fear of accidentally killing plants

Joe recently bought a couple of houseplants to make his apartment feel more comfortable. When one of them starts turning yellow and drooping, he searches online for answers but finds conflicting advice that is hard to understand. Joe wants a simple way to identify what's wrong with his plant and get clear, beginner-friendly instructions so he can keep it healthy.

Persona: Kelsey Chen

Problem Statement

Kelsey Chen is a busy professional plant owner who needs quick and reliable plant care guidance because she doesn't have time to research long articles or compare conflicting advice when a plant starts looking unhealthy.



Kelsey Chen: Busy Professional Plant Owner

Age: 34
Education: BA in Business Admin
Hometown: Chicago
Family: Partner; Cat
Occupation: Marketing Project Manager in Tech

"I love having plants, but I don't want them to become another thing on my to-do list."

Goals

- Keep plants healthy with minimal effort
- Maintain a cozy apartment environment
- Learn enough plant care to feel confident

Frustrations

- Forgetting plant care routines
- Conflicting advice online
- Long or complicated plant care guides

Kelsey enjoys having plants in her apartment but has limited time to research plant care. When one of her plants starts looking unhealthy, she searches online but finds long articles and unclear advice. She wants a quick and simple way to diagnose the problem and fix it without spending a lot of time figuring it out.

User Journey Maps

Goal

Understand the user experience from noticing a plant problem to finding a solution.

Process

Journey maps helped visualize user actions, thoughts and emotions throughout the troubleshooting process.

Outcome

The maps revealed opportunities to reduce confusion and support users with clearer diagnosis tools and accessible plant care information.

Persona: Joe Ramirez

Goal: Identify what is wrong with his plant and fix it before it dies.

ACTION	Notice the problem	Search for answers	Compare advice	Try a solution	Monitor the plant
TASK LIST	Tasks A. Sees yellow leaves or drooping plant B. Wonders if something is wrong C. Looks closely at the plant	Tasks A. Googles plant symptoms B. Reads articles or plant guides C. Checks images online	Tasks A. Finds multiple possible causes B. Tries to figure out which one applies C. Looks for more confirmation	Tasks A. Adjusts watering or lighting B. Follows advice from articles C. Hopes the plant improves	Tasks A. Watches for improvement B. Checks plant daily C. Searches again if symptoms continue
EMOTIONS	Concerned, unsure	Confused, overwhelmed	Frustrated, uncertain	Hopeful, but unsure	Anxious, cautious
IMPROVEMENT OPPORTUNITIES	Help users quickly recognize common plant symptoms.	Provide clear, beginner-friendly explanations.	Offer a simple diagnosis tool to narrow down possible problems.	Provide clear step-by-step care instructions.	Provide follow-up guidance and progress tracking.

Persona: Kelsey Chen

Goal: Quickly figure out what's wrong with her plant and fix it with minimal effort.

ACTION	Notice the problem	Quick search	Evaluate advice	Apply solution	Check results
TASK LIST	Tasks A. Sees drooping or discolored leaves B. Realizes plant might be unhealthy C. Makes mental note to check later.	Tasks A. Searches Google on her phone B. Skims a few articles C. Looks for quick answers	Tasks A. Compares multiple suggestions B. Decides which one seems most likely C. Stops researching due to time constraints	Tasks A. Adjusts watering or lighting B. Moves the plant C. Hopes it works	Tasks A. Looks at plant a few days later B. Checks if it improved C. Searches again if it did not
EMOTIONS	Concerned but busy	Impatient, slightly frustrated	Uncertain, rushed	Hopeful but distracted	Relieved or frustrated
IMPROVEMENT OPPORTUNITIES	Help users quickly capture the issue (photo or quick scan).	Provide quick, easy-to-understand answers.	Deliver fast, reliable recommendations.	Provide quick action steps users can follow immediately.	Provide reminders or follow-up care guidance.

Starting the Design

Paper Wireframes

Digital Wireframes

Low-fidelity Prototype

Usability Studies

Paper Wireframes

Goal

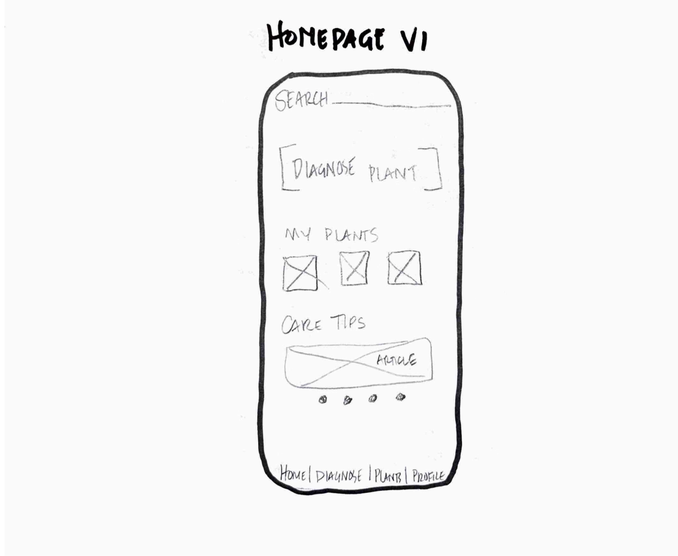
Explore layout ideas quickly before committing to a digital design.

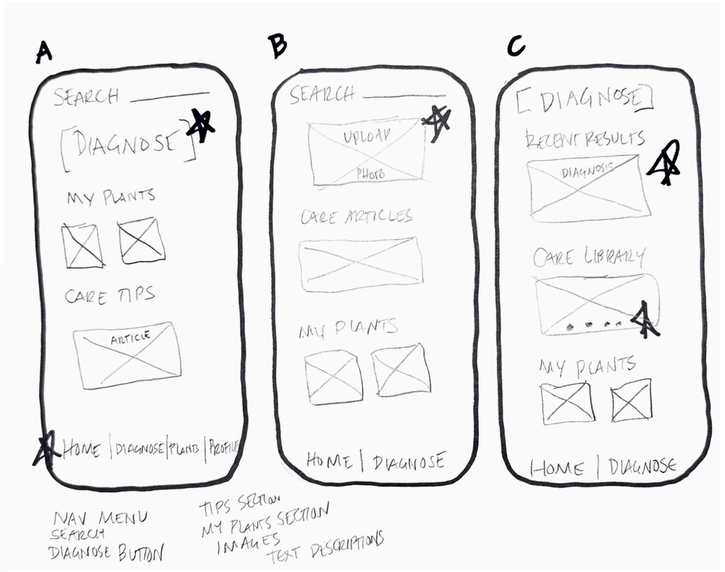
Process

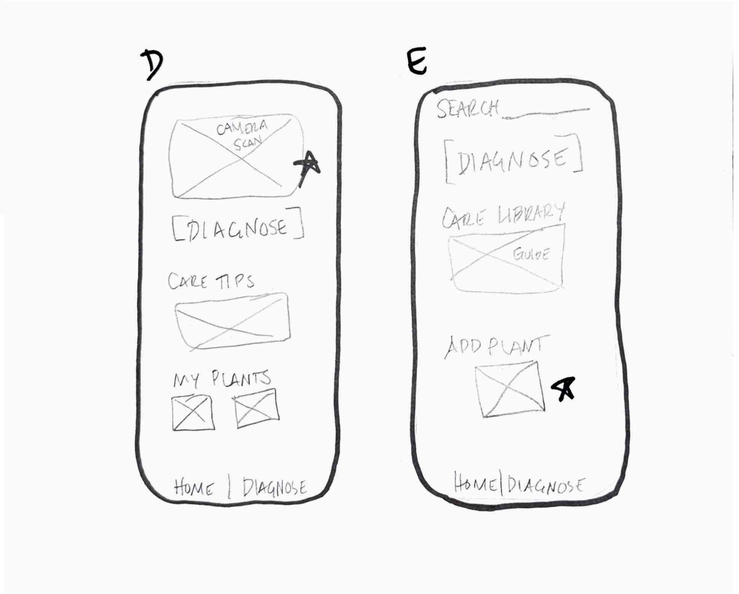
Paper wireframes allowed me to test different ways users might access the diagnosis feature, view their plants and find care tips.

Outcome

The final direction prioritized quick access to plant diagnosis while keeping supporting information easy to navigate.







Digital Wireframes

Goal

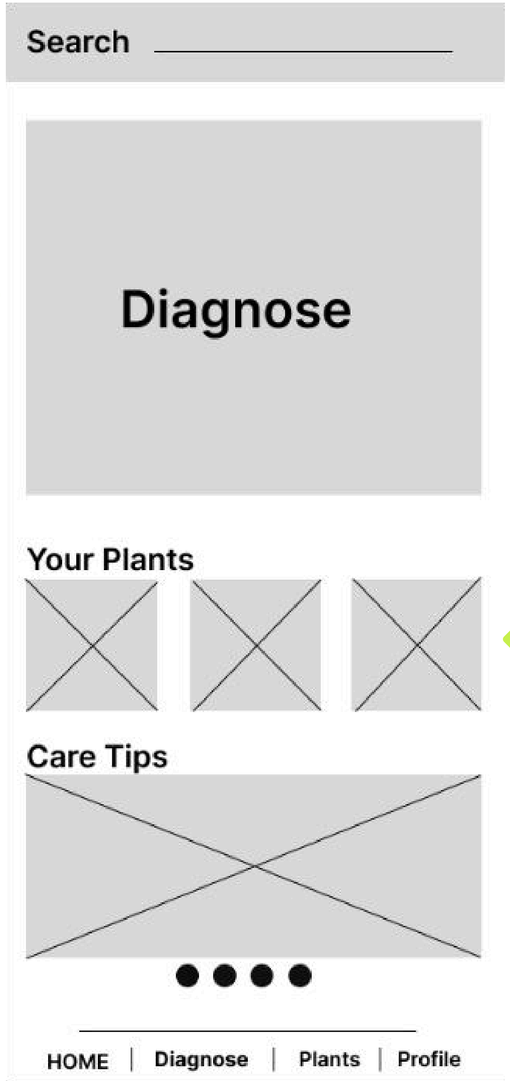
Create a simple starting point where users can quickly diagnose plant issues or access helpful plant care information.

Design Thinking

User interviews showed that plant owners often feel uncertain when something looks wrong with their plant and want quick answers. The home screen prioritizes the Diagnose feature so users can immediately start solving their problem.

The layout also allows users to access saved plants and care tips without navigating through multiple screens.

Create a simple starting point where users can quickly diagnose plant issues or access helpful plant care information.



Displays plants the user has saved in their personal collection. Users can quickly check care information for plants they already own without having to search again. This helps users track multiple plants and simplifies plant management.

Digital Wireframes

Goal

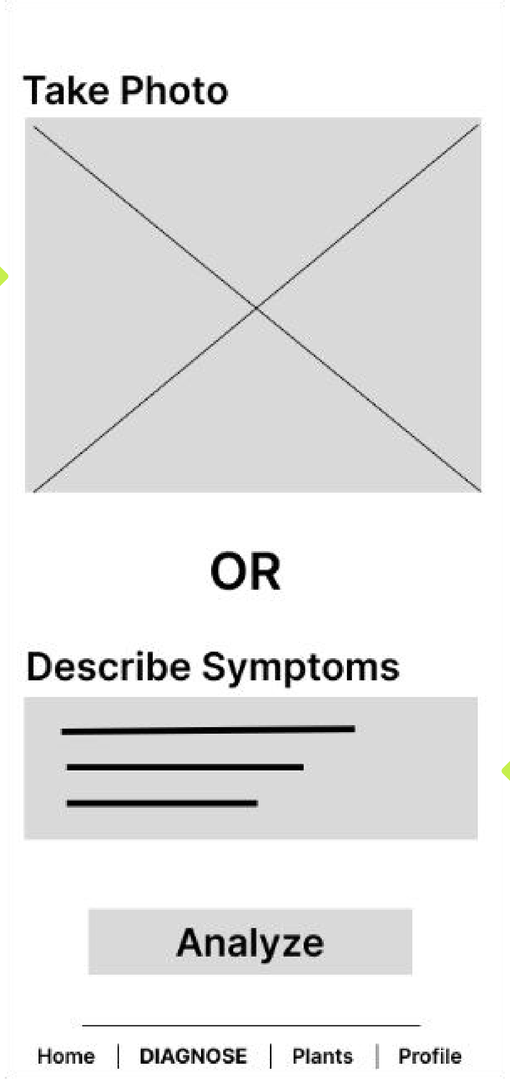
Allow users to diagnose plant problems through either image recognition or symptom description.

Design Thinking

Research showed that users approach plant troubleshooting differently. Some users prefer taking a photo, while others prefer describing symptoms they notice.

Providing both options makes the feature more flexible and accessible.

Allows users to photograph their plant so the app can analyze visual symptoms. This option is faster and easier for beginner users who may not know plant terminology.



Allows users to enter text describing issues such as yellow leaves, drooping or spots. Experienced plant owners may prefer explaining symptoms instead of using the camera. This also improves accessibility for users who cannot easily capture photos.

Low-fidelity Prototype

Users begin by diagnosing a plant issue from the home screen, either by uploading a photo or describing symptoms. After receiving a diagnosis, they can view treatment steps and take action. Additional features allow users to save plants, explore care tips and access educational content, with persistent navigation supporting easy movement throughout the app.

VIEW PROTOTYPE

Usability Study Findings

A usability study was conducted with five participants to evaluate how easily users could diagnose plant issues and find care guidance using the app. Participants represented a range of experience levels, technical comfort and accessibility needs. The study revealed strong usability in the core flow, along with key areas for improvement related to clarity, trust and feature value.

ROUND ONE FINDINGS

1. **Users did not understand the "Confidence Level"**
   Participants were unsure what the confidence score meant, which reduced trust in the diagnosis results.

2. **Users hesitated when choosing how to diagnose**
   Participants experienced decision friction between "Take Photo" and "Describe Symptoms" due to a lack of guidance.

3. **The core diagnosis flow was easy to complete**
   All participants were able to successfully navigate from diagnosis to treatment, indicating strong overall usability.

ROUND TWO FINDINGS

1. **Users prioritized quick, actionable treatment steps**
   Most participants focused on what to do next and skipped explanations or additional content.

2. **The value of "Save to Your Plants" was unclear**
   Participants either hesitated or ignored this feature because its purpose was not immediately obvious.

3. **Users needed more specific and detailed care instructions**
   Participants wanted clearer, more precise guidance to feel confident taking action.

Refining the Design

Mockups

High-fidelity Prototype

Accessibility Considerations

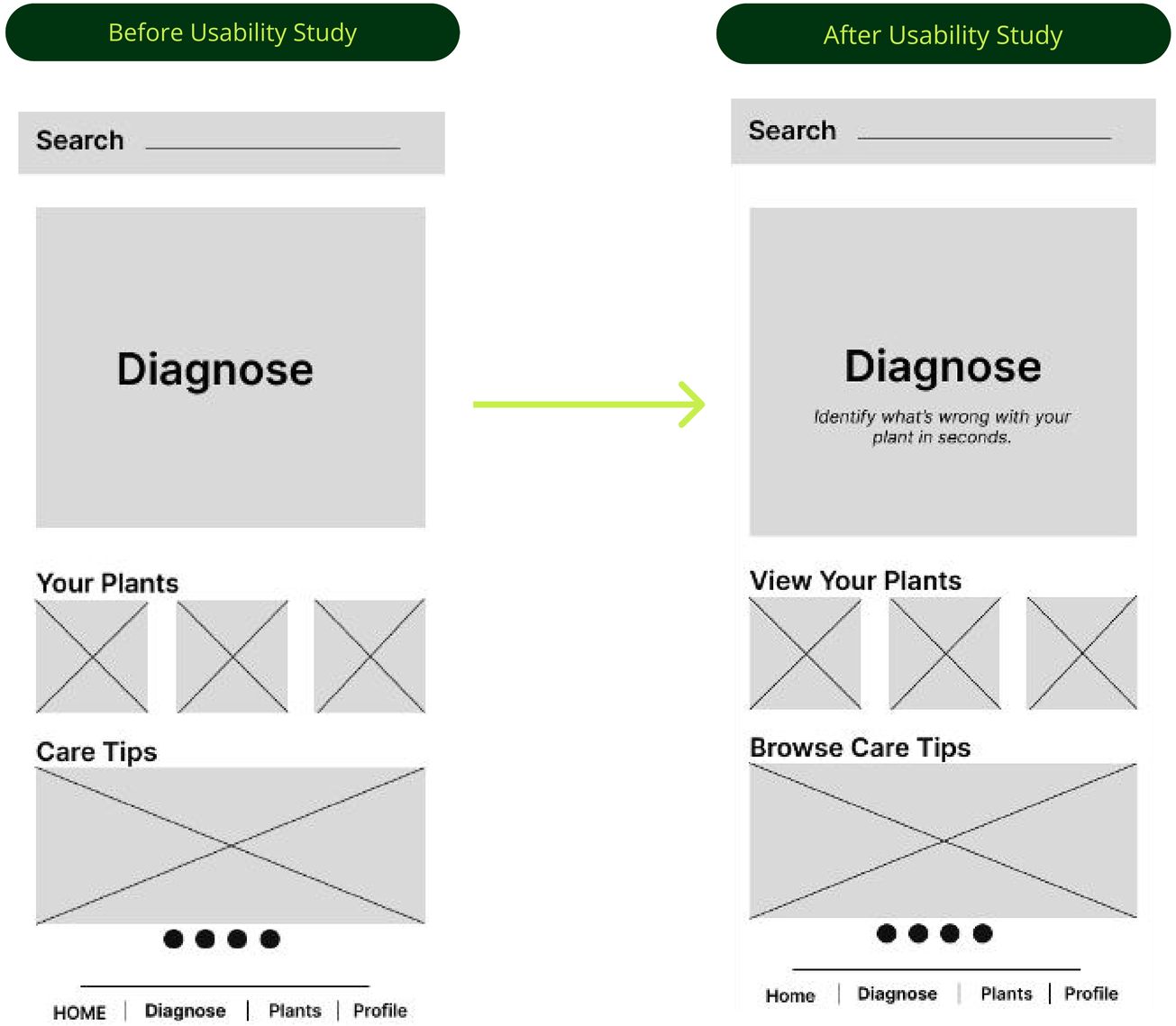
Mockups

Goal

Help users quickly diagnose plant issues without feeling stuck or unsure where to start.

Process Change

After usability feedback, I introduced two clear paths — taking a photo or describing symptoms — to reduce hesitation and support different user preferences.



Mockups

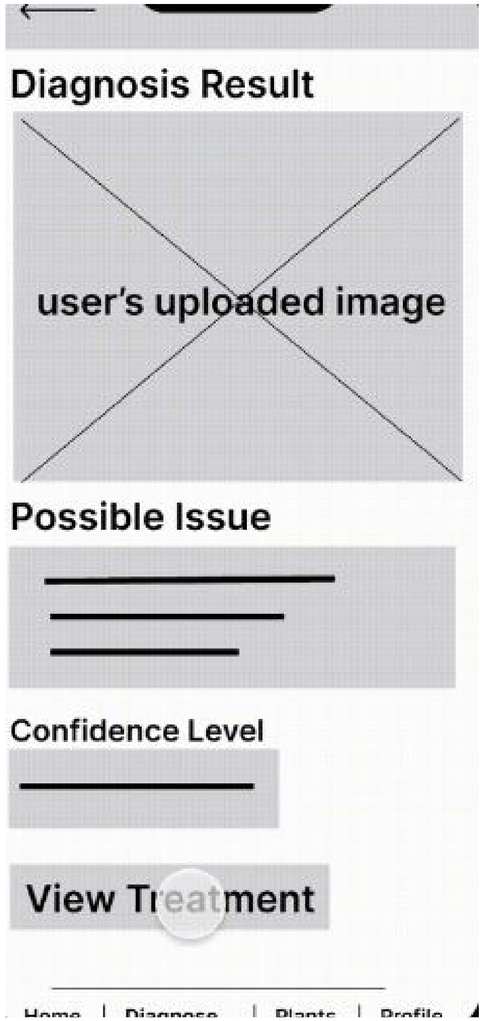
Goal

Build trust in the diagnosis and help users feel confident taking the next step.

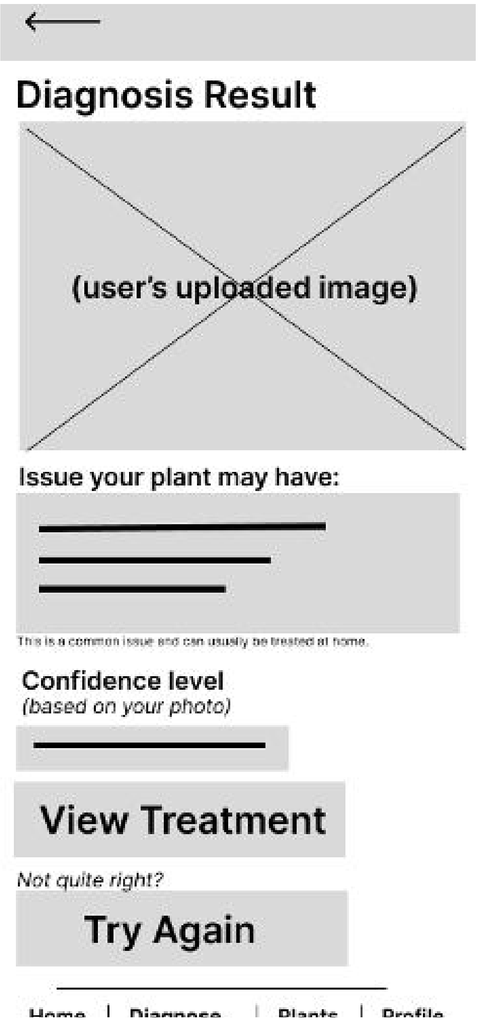
Process Change

Based on research, I added confidence indicators, reassurance messaging, and a clear primary action to reduce anxiety and guide users forward.

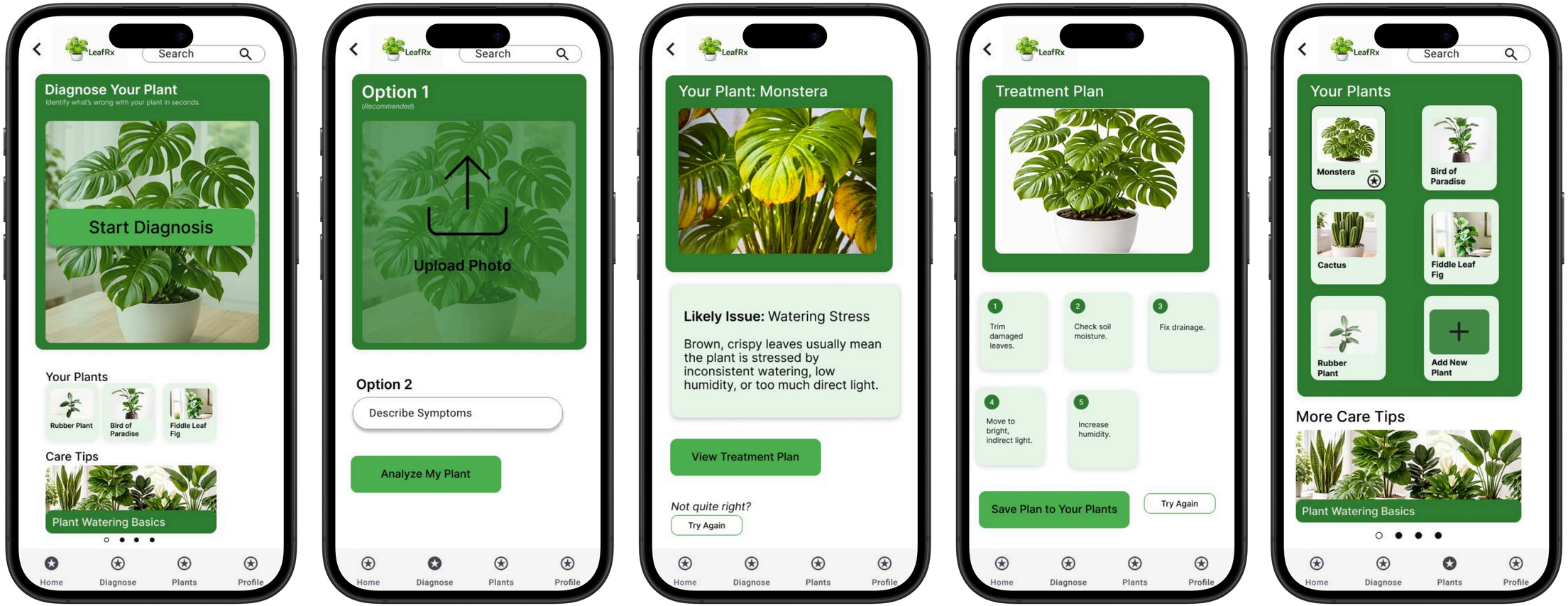
Before Usability Study



After Usability Study



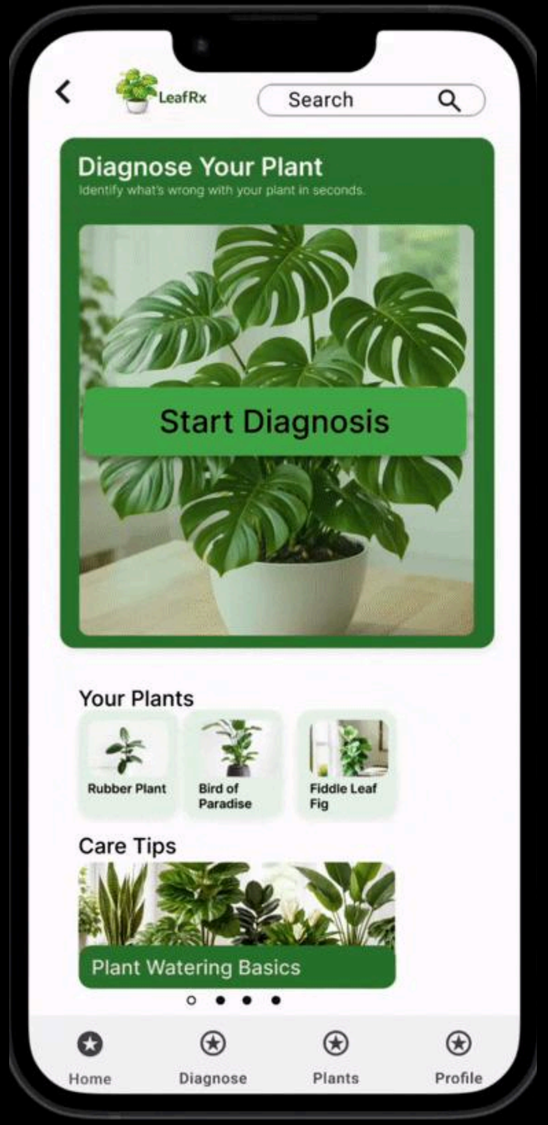
Final Mockups



High-fidelity Prototype

The final prototype demonstrates the complete LeafRx experience, allowing users to diagnose plant issues, review treatment guidance, and save care plans through a polished, accessible interface.

VIEW PROTOTYPE



Accessibility Considerations

1

I used clear, readable text with strong color contrast and simple layouts to make key content easier to scan. This helps users quickly understand diagnoses, care tips, and treatment steps without feeling overwhelmed.

2

I designed large buttons, generous spacing, and consistent navigation to support users with different motor abilities. These choices make it easier to tap actions like uploading a photo, viewing treatment steps, and saving plant information.

3

I paired visuals with supportive text and plain-language labels so users are not relying on images alone to understand plant health information. This improves accessibility for users with low vision, cognitive differences, or anyone new to plant care.

Going Forward

FINAL REFLECTIONS, FUTURE OPPORTUNITIES AND PROJECT TAKEAWAYS

Takeaways

Impact

Usability testing showed that users were able to navigate the app easily and felt more confident identifying plant issues. One participant noted that the app made plant care feel “much less overwhelming” and easier to understand.

What I Learned

I learned how to simplify complex problem spaces through thoughtful UX design and how critical user feedback is in shaping effective solutions. Iterating on designs based on real user insights helped me create a more intuitive and accessible experience.

Next Steps

①

Expand Usability Testing

Conduct additional usability studies with a broader range of users to identify more pain points and validate improvements. This would help ensure the app works well for different experience levels and accessibility needs.

②

Enhance Diagnosis Accuracy

Refine the diagnosis flow by incorporating more detailed inputs (e.g., symptoms, environment, plant type) to improve the accuracy and usefulness of recommendations.

③

Add Personalization Features

Introduce features like saved plants, care reminders, and tailored recommendations to create a more personalized and engaging user experience over time.

Let’s Connect

Thanks for taking a look at my work. I'd love to connect!

Feel free to reach out or check out more of my projects.

Daniele Cusentino
pfarrd@gmail.com
Portfolio Website
LinkedIn

Appendix

USER STORY

[Joe]

As a/an beginner houseplant owner
type of user

I want to Be able to diagnose plant problems confidently
action

so that I can fix them confidently.
benefit

USER STORY

[Kelsey]

As a/an busy professional that owns houseplants
type of user

I want to quickly be able to diagnose plant problems
action

so that I can avoid wasting time researching because I'm very busy.
benefit

Persona: Joe Ramirez

Goal: Identify what is wrong with his plant and fix it before it dies.

ACTION	Notice the problem	Search for answers	Compare advice	Try a solution	Monitor the plant
TASK LIST	Tasks A. Sees yellow leaves or drooping plant B. Wonders if something is wrong C. Looks closely at the plant	Tasks A. Googles plant symptoms B. Reads articles or plant guides C. Checks images online	Tasks A. Finds multiple possible causes B. Tries to figure out which one applies C. Looks for more confirmation	Tasks A. Adjusts watering or lighting B. Follows advice from articles C. Hopes the plant improves	Tasks A. Watches for improvement B. Checks plant daily C. Searches again if symptoms continue
EMOTIONS	Concerned, unsure	Confused, overwhelmed	Frustrated, uncertain	Hopeful, but unsure	Anxious, cautious
IMPROVEMENT OPPORTUNITIES	Help users quickly recognize common plant symptoms.	Provide clear, beginner-friendly explanations.	Offer a simple diagnosis tool to narrow down possible problems.	Provide clear step-by-step care instructions.	Provide follow-up guidance and progress tracking.

Persona: Kelsey Chen

Goal: Quickly figure out what's wrong with her plant and fix it with minimal effort.

ACTION	Notice the problem	Quick search	Evaluate advice	Apply solution	Check results
TASK LIST	Tasks A. Sees drooping or discolored leaves B. Realizes plant might be unhealthy C. Makes mental note to check later.	Tasks A. Searches Google on her phone B. Skims a few articles C. Looks for quick answers	Tasks A. Compares multiple suggestions B. Decides which one seems most likely C. Stops researching due to time constraints	Tasks A. Adjusts watering or lighting B. Moves the plant C. Hopes it works	Tasks A. Looks at plant a few days later B. Checks if it improved C. Searches again if it did not
EMOTIONS	Concerned but busy	Impatient, slightly frustrated	Uncertain, rushed	Hopeful but distracted	Relieved or frustrated
IMPROVEMENT OPPORTUNITIES	Help users quickly capture the issue (photo or quick scan).	Provide quick, easy-to-understand answers.	Deliver fast, reliable recommendations.	Provide quick action steps users can follow immediately.	Provide reminders or follow-up care guidance.

IF/THEN STATEMENT

If plant owners can quickly diagnose plant problems and receive clear, beginner-friendly care instructions in one place,

action

then they will feel more confident caring for their plants and will be more likely to successfully keep them healthy.

outcome

GOAL STATEMENT

Our mobile plant care app will let users quickly diagnose plant problems and receive simple care instructions

product (what) | perform specific actions (what)

which will affect beginner and busy plant owners

describe who the action will affect (who)

by helping them confidently care for their plants and keep them healthy.

describe how the action will positively affect users (why)

We will measure effectiveness by user feedback, task completion rates, and usability testing.

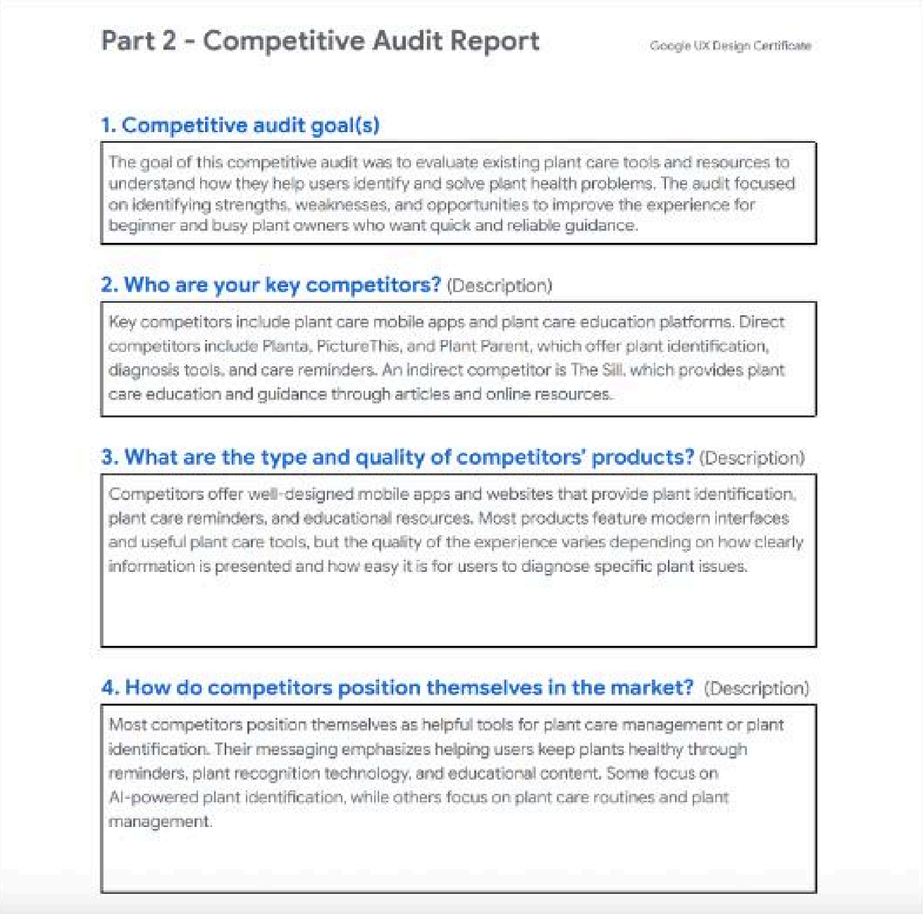
describe how you will measure the impact

Competitive Audit

Goal: Compare the user experience of each competitor's app/website

	General information								UX (rated needs work, okay, good, or outstanding)								
									First impressions		Interaction				Visual design	Content	
	Competitor type (direct or indirect)	Location(s)	Product offering	Price ($ - $$$)	Website (URL)	Business size (small, medium, large)	Target audience	Unique value proposition	Desktop website experience	App or mobile website experience	Features	Accessibility	User flow	Navigation	Brand identity	Tone	Descriptiveness
TBD (my app)	-	Cincinnati, Ohio														Clear, reassuring, and beginner-friendly	
Planta	Direct	Stockholm, Sweden	Planta is a mobile app developed by Planta AB that helps users care for indoor and outdoor plants through personalized, data-driven guidance. It has become one of the most popular plant-care tools, supporting millions of users worldwide with smart reminders and AI-assisted plant management features.	Free download with optional paid subscription for premium features	https://getplanta.com/	Mid-size mobile app company with millions of downloads and a global user base.	Beginner and intermediate houseplant owners who want help caring for their plants.	Helps users keep plants healthy through care reminders, plant identification, and step-by-step plant care guidance	N/A (mobile only)	**Good** + The app appears modern, friendly, and visually appealing with strong plant-focused imagery and clean design. - Its purpose—helping users care for their plants—is clear, but some features may feel overwhelming to new users during on boarding.	**Good** + Offers plant tracking, watering reminders, plant identification, and care guidance. - Some advanced diagnosis and care tools are locked behind a premium subscription.	**OK** + Uses clear icons and readable text with good color contrast. - Some smaller buttons and dense feature lists may make navigation more difficult for some users.	**Good** + Users are guided through onboarding to add plants and set care reminders, which helps personalize the experience. - New users may feel overwhelmed by this number of setup steps.	**Good** + Navigation is organized through tabs and menus, making most tools accessible. - Some features are nested within menus, which may require extra steps to locate them.	**Good** + Uses calming green tones, plant imagery, and a clean interface to create a nature-focused and approachable brand. The design feels modern and friendly, reinforcing the idea of plant care as a relaxing hobby. - While the design is clean and calming, the brand identity may feel similar to other plant care apps and does not strongly differentiate itself visually.	Friendly and supportive, presenting plant care as an approachable and relaxing hobby.	**Good** + Provides clear plant care guidance and structured reminders that help users maintain plant health. - Some detailed care explanations and diagnosis features are limited to premium users, which may reduce clarity for free users.
PictureThis	Direct	Dublin, Ireland	PictureThis is a mobile plant-identification and care app that uses AI to recognize plants from photos and provide care guidance. Available on iOS and Android, it targets gardeners, hikers, and houseplant owners who want quick identifications, disease diagnosis, and ongoing plant-care reminders.	Free download with optional paid subscription for premium features	https://www.picturethisai.com/	Large global plant identification platform with tens of millions of users.	Plant owners, gardeners, and hobbyists who want to identify plants and diagnose plant disease quickly.	Uses AI-powered photo recognition to instantly identify plants and diagnose plant health issues.	N/A (mobile only)	**Outstanding** + The interface is visually polished and immediately highlights the plant identification feature. - The value of taking a photo to identify a plant is clear, but the app heavily promotes premium features early in the experience.	**Good** + Focuses heavily on plant identification through photo recognition, along with disease diagnosis and care advice. - While the plant identification feature is strong, other plant care guidance features are less prominent and may require additional navigation to access.	**OK** + The photo-based interface supports visual interaction, which can help users quickly identify plants. - Some information is presented in dense text blocks that may be harder to scan.	**Good** + The process of taking a photo to identify a plant is simple and intuitive. - Frequent prompts to upgrade to premium may interrupt the experience.	**Good** + Navigation is straightforward, with the plant scanner prominently featured. - Some additional features are less visible and require exploring menus.	**Good** + Features vibrant plant photography and a modern interface that emphasizes technology and plant identification. The brand feels polished and tech-forward, highlighting the AI-powered plant recognition feature. - The strong emphasis on technology and premium features can make the experience feel more commercial than educational or supportive for beginner users.	Informative and tech-focused, emphasizing the power of AI to quickly identify plants and diagnose issues.	**OK** + Offers detailed plant identification and disease explanations after scanning a plant, helping users understand potential issues. - Some explanations rely on longer text descriptions that may be harder for beginners to quickly scan or understand.
Plant Parent	Direct	Hong Kong	Plant Parent is a mobile plant care assistant app focused on helping users keep houseplants healthy through smart reminders, AI-powered identification, and diagnostic tools. It's available on Android and iOS and targets both beginner and experienced "plant parents."	Free app with premium features/subscription	https://plantparental.com/	Mid-size mobile app focused on plant care management and diagnosis.	Plant owners who want help managing multiple plants and maintaining care routines.	Combines plant diagnosis tools, watering reminders, and personalized care schedules to help users manage plant health.	N/A (mobile only)	**Good** + The app presents itself as a comprehensive plant care assistant with a clean and organized interface. - The number of available tools may feel slightly complex for beginner users.	**Good** + Provides plant health diagnosis, care reminders, watering schedules, and plant management tools. - The app includes many plant management tools, which may feel overwhelming or unnecessary for beginner users who want quick answers.	**OK** + Uses clear visual design and icons. - Some screens contain a large amount of information that may feel overwhelming for beginners.	**OK** + Users are guided through adding plants and diagnosing problems. - The number of available tools may make the experience feel complex at first.	**OK** + Navigation is organized into sections such as plant care, diagnosis, and reminders. - Some tools require multiple steps to access.	**OK** + Uses soft colors, plant illustrations, and friendly design elements to create a supportive and helpful tone. The branding emphasizes being a plant "assistant" that helps users manage plant care. - The friendly design is approachable, but the branding may feel somewhat generic compared to other plant care apps.	Helpful and encouraging, positioning the app as a personal assistant for plant care.	**Good** + Provides structured plant care instructions and reminders that help guide users through plant maintenance. - The amount of information presented at once can feel overwhelming for users who want quick answers.
The Sill	Indirect	New York City	The Sill is an e-commerce website and plant-care resource focused on making houseplants approachable for beginners and city dwellers. It combines an online shop for indoor and outdoor plants with an extensive library of care guides, workshops, and virtual consultations to help	E-commerce website + plant care content hub	https://www.thesill.com/	Established plant retailer and lifestyle brand with physical stores and an online presence.	Beginner plant owners looking for easy-to-care-for plants and basic plant care education.	Provides accessible plant care education and curated beginner-friendly plants, making plant ownership feel approachable.	**Outstanding** + The website has a clean, lifestyle-focused design that feels welcoming and beginner-friendly. It clearly communicates plant education and shopping. - Troubleshooting plant issues requires navigating through multiple articles.	N/A (desktop only)	**OK** + Provides plant care guides, troubleshooting articles, and plant education resources alongside plant sales. - Plant troubleshooting information is spread across multiple articles, making it harder for users to quickly diagnose a specific plant issue.	**Good** + The website uses clean typography and strong visual hierarchy, making content easy to read. - Long articles may be harder to scan quickly for answers.	**OK** + Users typically search or browse articles to find plant care advice. - Troubleshooting information is available but may require reading multiple pages.	**Good** + Navigation is clear with organized categories for plant care and education. - Finding specific troubleshooting advice may take several steps.	**Outstanding** + The brand focuses on a lifestyle aesthetic with clean layouts, neutral colors, and high-quality plant photography. It communicates a beginner-friendly and stylish approach to plant ownership. - The lifestyle-focused branding prioritizes aesthetics and shopping, which can make troubleshooting plant problems less prominent.	Welcoming and lifestyle-oriented, encouraging plant ownership as part of a stylish and relaxing home environment.	**Good** + Plant care articles use approachable language and clear explanations that are beginner-friendly. - Users may need to read multiple articles to diagnose a specific plant issue, which can slow down the troubleshooting process.

Competitive Audit Report



Part 2 - Competitive Audit Report

Google UX Design Certificate

1. Competitive audit goal(s)

The goal of this competitive audit was to evaluate existing plant care tools and resources to understand how they help users identify and solve plant health problems. The audit focused on identifying strengths, weaknesses, and opportunities to improve the experience for beginner and busy plant owners who want quick and reliable guidance.

2. Who are your key competitors? (Description)

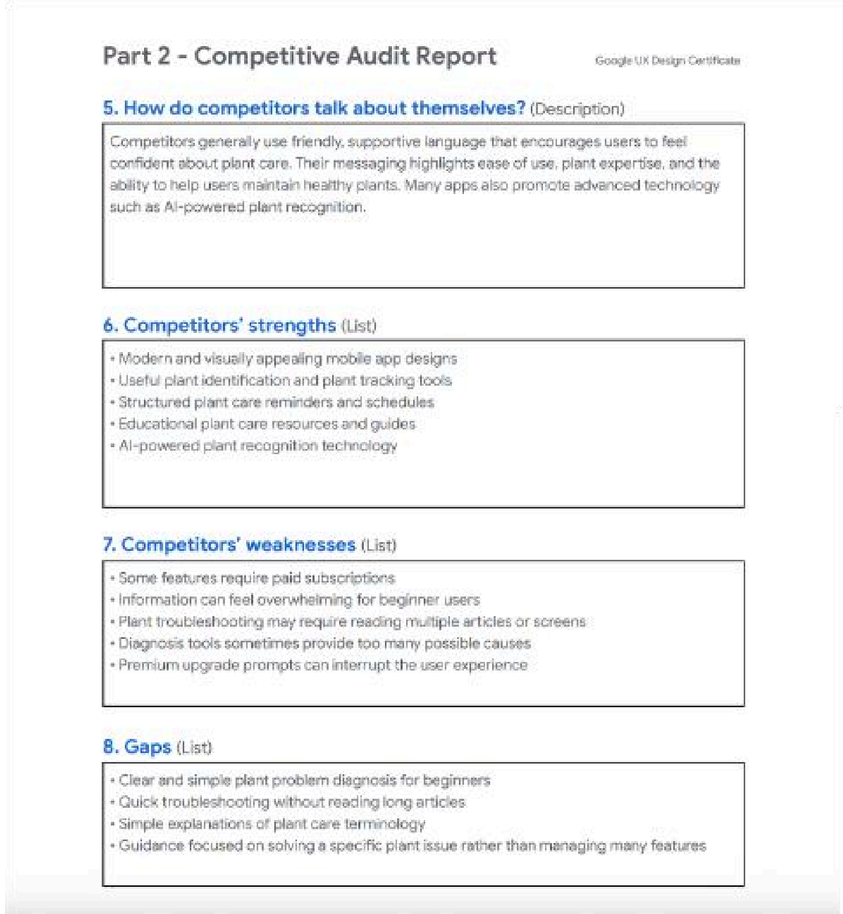
Key competitors include plant care mobile apps and plant care education platforms. Direct competitors include Planta, PictureThis, and Plant Parent, which offer plant identification, diagnosis tools, and care reminders. An indirect competitor is The Sill, which provides plant care education and guidance through articles and online resources.

3. What are the type and quality of competitors' products? (Description)

Competitors offer well-designed mobile apps and websites that provide plant identification, plant care reminders, and educational resources. Most products feature modern interfaces and useful plant care tools, but the quality of the experience varies depending on how clearly information is presented and how easy it is for users to diagnose specific plant issues.

4. How do competitors position themselves in the market? (Description)

Most competitors position themselves as helpful tools for plant care management or plant identification. Their messaging emphasizes helping users keep plants healthy through reminders, plant recognition technology, and educational content. Some focus on AI-powered plant identification, while others focus on plant care routines and plant management.



Part 2 - Competitive Audit Report

Google UX Design Certificate

5. How do competitors talk about themselves? (Description)

Competitors generally use friendly, supportive language that encourages users to feel confident about plant care. Their messaging highlights ease of use, plant expertise, and the ability to help users maintain healthy plants. Many apps also promote advanced technology such as AI-powered plant recognition.

6. Competitors' strengths (List)

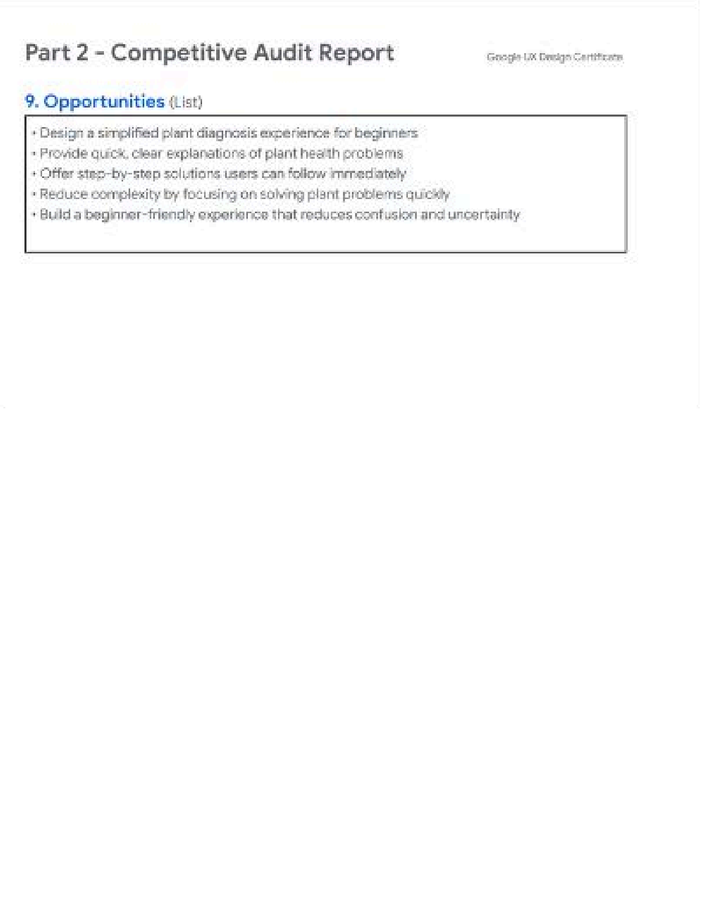
- Modern and visually appealing mobile app designs
- Useful plant identification and plant tracking tools
- Structured plant care reminders and schedules
- Educational plant care resources and guides
- AI-powered plant recognition technology

7. Competitors' weaknesses (List)

- Some features require paid subscriptions
- Information can feel overwhelming for beginner users
- Plant troubleshooting may require reading multiple articles or screens
- Diagnosis tools sometimes provide too many possible causes
- Premium upgrade prompts can interrupt the user experience

8. Gaps (List)

- Clear and simple plant problem diagnosis for beginners
- Quick troubleshooting without reading long articles
- Simple explanations of plant care terminology
- Guidance focused on solving a specific plant issue rather than managing many features



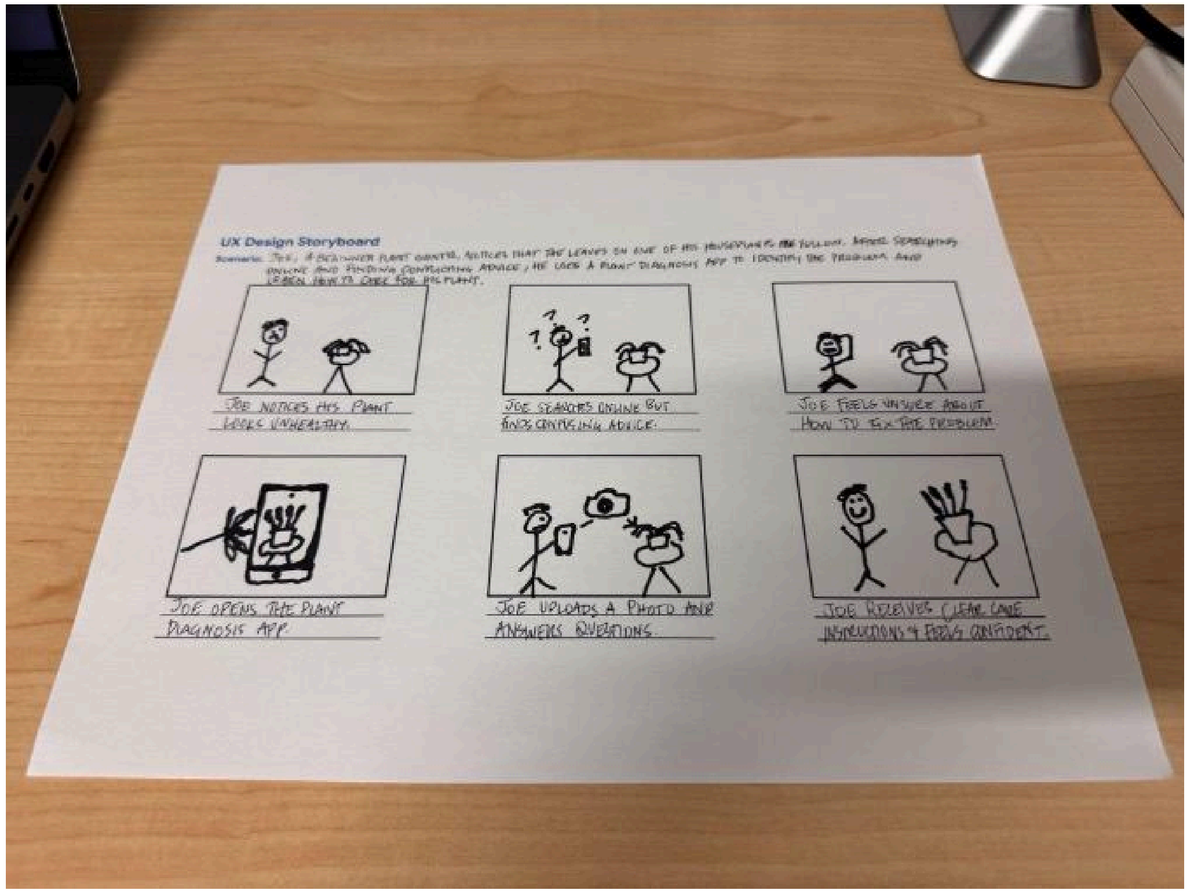
Part 2 - Competitive Audit Report

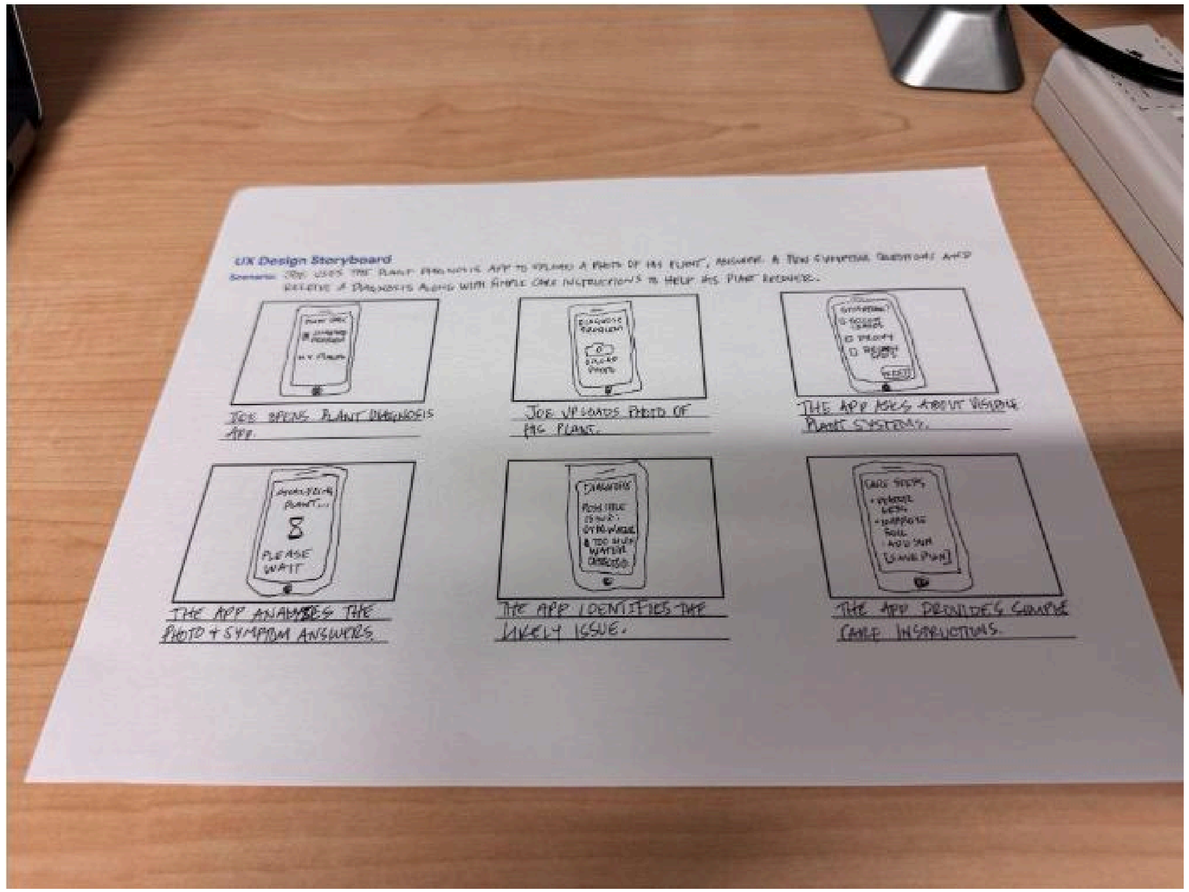
Google UX Design Certificate

9. Opportunities (List)

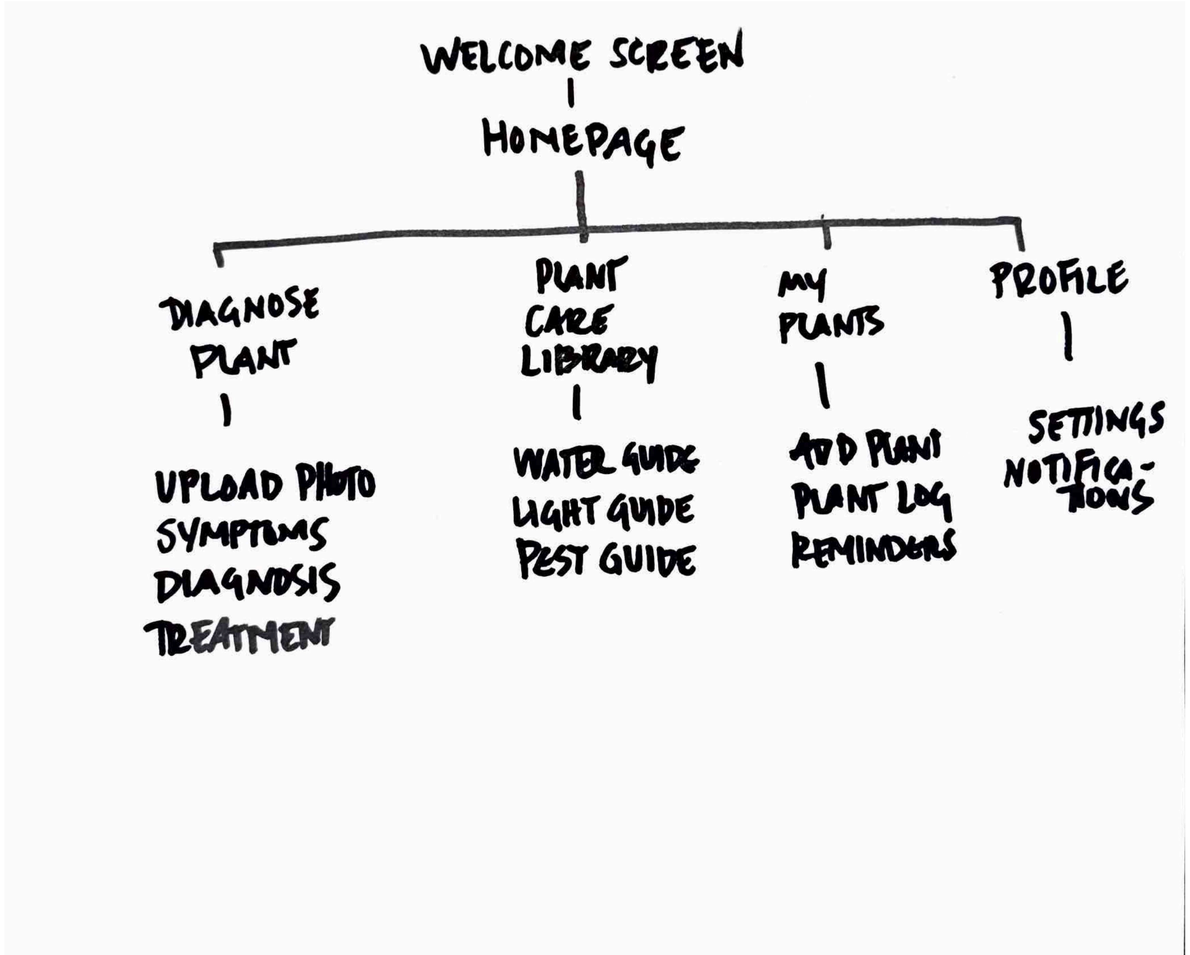
- Design a simplified plant diagnosis experience for beginners
- Provide quick, clear explanations of plant health problems
- Offer step-by-step solutions users can follow immediately
- Reduce complexity by focusing on solving plant problems quickly
- Build a beginner-friendly experience that reduces confusion and uncertainty

Storyboards: Big Picture and Close-up





Information Architecture



Research Study Plan

UX Research Study — Houseplant Diagnosis App

Google UX Design Certificate

Introduction

- **Title:** Research plan for a plant care diagnosis app.
- **Author:** Daniele Cusentino, UX designer, pfarrd@gmail.com
- **Stakeholders:**
- **Daniele Cusentino** — UX designer/researcher
  Plans and conducts the research, analyzes findings, and applies insights to the design.
- **Plant app users** — beginner and intermediate plant owners
  Provide feedback on needs, behaviors, pain points, and expectations.
- **Course peers/reviewers** — project stakeholders
  Review the work and provide feedback during the certification process.
- **Product team** — business/design stakeholders
  Use research findings to improve usability, clarity, and user satisfaction.
- **Date:** 03/18/26
- **Project background:** This study supports the design of a mobile plant care app that helps users identify problems with their plants, understand possible causes, and get guidance on what to do next. Many plant owners, especially beginners, feel uncertain when a plant starts showing signs of stress such as yellow leaves, browning, drooping, or spots. They often search online for answers, but the information can feel overwhelming, inconsistent, or difficult to apply.

  The goal of this research is to understand how users currently diagnose plant problems, what information they need in those moments, and what makes a plant-care experience feel simple, trustworthy, and useful. The findings will help guide decisions about navigation, content, task flow, and key features in the app.

  Research goals:
- Understand how plant owners currently identify and respond to plant problems
- Learn what frustrations users experience when searching for plant-care answers
- Identify what information users need most during a diagnosis flow
- Determine whether the app's navigation and features feel clear and useful
- Gather insights that will improve the app's usability and overall experience

Research questions

- How do plant owners currently figure out what is wrong with their plants?
- What challenges do users face when trying to diagnose a plant problem?
- What information do users need in order to feel confident about next steps?
- How easy is it for users to move through the app to find diagnosis and care guidance?
- What features or content would make a plant care app feel most helpful and trustworthy?

Key Performance Indicators (KPIs)

- Time on task to complete a plant diagnosis
- Task completion rate
- Error rate during navigation or diagnosis steps
- Drop-off points in the diagnosis flow
- User confidence in the recommended next step
- Satisfaction rating after completing a task

Methodology

This study will use a qualitative research approach focused on understanding user needs, behaviors, and pain points. Research will begin with interviews to learn how plant owners currently identify and manage plant issues. Usability testing will then be conducted using paper or digital wireframes to evaluate how easily users can move through the app and complete key tasks, such as identifying a plant problem and finding care recommendations.

The data collected will include participant responses, observed behaviors, task success, and areas of confusion or hesitation. Findings will be organized into patterns and themes that can be used to improve the design. Because this is an early-stage concept, the study will focus more on usability insights and user expectations than on large-scale quantitative measurement.

Participants

The study will include 5 participants who own or care for houseplants. Participants will primarily be beginner to intermediate plant owners who have experience trying to diagnose plant issues using online resources such as Google, apps, or social media.

Participants will represent a range of backgrounds, including different ages, levels of comfort with technology, and plant-care experience. At least one participant will use accessibility features such as larger text or a screen reader to help identify usability challenges and ensure the app is inclusive. Because the app relies on visual diagnosis (photos of plants), accessibility considerations such as clear labeling, readable text, and alternative ways to input symptoms are especially important.

- Adults ages 18+
- Own 1–3 houseplants
- Have experienced a plant problem such as yellowing, browning, drooping, or pests
- Have used Google, social media, or apps to look for plant help before
- Person that uses accessibility features (large text or screen reader)

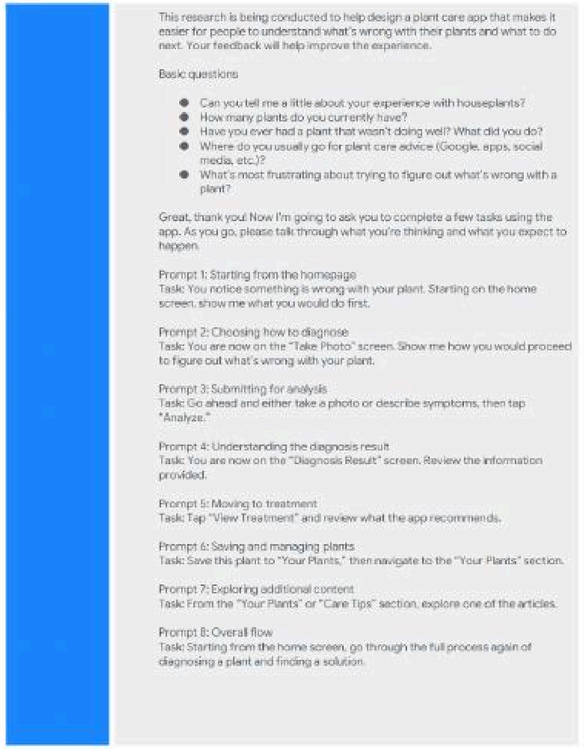
Script

Before we begin, do I have your consent to record this session for research purposes?

I want you to know that this is not a test, and there are no right or wrong answers. We're testing the app. Not you!

Feel free to share your thoughts out loud as you go. If something is confusing or frustrating, that's really helpful for me to know.

If you have questions at any point, just ask.



This research is being conducted to help design a plant care app that makes it easier for people to understand what's wrong with their plants and what to do next. Your feedback will help improve the experience.

Basic questions

- Can you tell me a little about your experience with houseplants?
- How many plants do you currently have?
- Have you ever had a plant that wasn't doing well? What did you do?
- Where do you usually go for plant care advice (Google, apps, social media, etc.)?
- What's most frustrating about trying to figure out what's wrong with a plant?

Great, thank you! Now I'm going to ask you to complete a few tasks using the app. As you go, please talk through what you're thinking and what you expect to happen.

Prompt 1: Starting from the homepage
Task: You notice something is wrong with your plant. Starting on the home screen, show me what you would do first.

Prompt 2: Choosing how to diagnose
Task: You are now on the "Take Photo" screen. Show me how you would proceed to figure out what's wrong with your plant.

Prompt 3: Submitting for analysis
Task: Go ahead and either take a photo or describe symptoms, then tap "Analyze."

Prompt 4: Understanding the diagnosis result
Task: You are now on the "Diagnosis Result" screen. Review the information provided.

Prompt 5: Moving to treatment
Task: Tap "View Treatment" and review what the app recommends.

Prompt 6: Saving and managing plants
Task: Save this plant to "Your Plants," then navigate to the "Your Plants" section.

Prompt 7: Exploring additional content
Task: From the "Your Plants" or "Care Tips" section, explore one of the articles.

Prompt 8: Overall flow
Task: Starting from the home screen, go through the full process again of diagnosing a plant and finding a solution.

Pattern Identification

Pattern Identification

Google UX Design Certificate

1. It was observed that 5 out of 5 participants either ignored or did not understand the "Confidence Level" on the diagnosis screen. This means that the label and concept of "Confidence Level" is unclear and does not effectively communicate meaning to users.

2. It was observed that 4 out of 5 participants hesitated when choosing between "Take Photo" and "Describe Symptoms". This means that users experience decision friction when multiple diagnosis options are presented without clear guidance.

3. It was observed that 5 out of 5 participants successfully completed the diagnosis flow and accessed treatment recommendations. This means that the overall navigation and core flow of the app is intuitive and easy to use.

4. It was observed that 5 out of 5 participants questioned or did not understand the value of "Save to Your Plants," and 2 participants ignored it entirely. This means that the purpose and value of saving a plant is not clear to users.

5. It was observed that 4 out of 5 participants wanted more specific or detailed treatment instructions. This means that (insert theme based on that observation).

6. It was observed that 3 out of 5 participants skipped or minimally engaged with Care Tips and educational content. This means that secondary content is less important during task-focused moments and may not be effectively prioritized.

Insight Identification

Insight Identification

Google UX Design Certificate

1. Based on the theme that: users do not understand or engage with the “Confidence Level”, an insight is: users need clear, plain-language explanations in order to trust and understand diagnosis results.
2. Based on the theme that: users hesitate when choosing between diagnosis methods, an insight is: users need guidance or default recommendations to reduce decision-making effort at key moments.
3. Based on the theme that: users can easily complete the diagnosis flow, an insight is: a simple, linear flow supports fast and successful task completion, even for users with different experience levels.
4. Based on the theme that: users do not see value in saving plants, an insight is: features that do not clearly support the user’s immediate goal are often ignored or misunderstood.
5. Based on the theme that: users want more detailed treatment instructions, an insight is: users need specific, actionable guidance to feel confident taking care of their plants.