SolarHub
UX Case Study

Create New Account
Full Name
Email Address
Password
Confirm Password
Sign Up
Already have account? Login
Congratulations ! You have just earned $50.
Invite Another
Share
Technician on their way
10 Mins
Estimated Time
Welcome Back

Omar Rahiman
NEVER SETTLE ON INNOVATION

Problem Statement

Solar panel owners **need a reliable all-in-one hub to manage installation, monitor performance, track technicians,** and **maintain trusted service with consistent support and qualified leads.**

Objectives & Goals

Streamline Service Management: Centralize installation, maintenance, and technician tracking for seamless service.

Ensure Trust and Reliability: Offer vetted technicians and transparent service histories for long-term confidence.

The Process

Discover

Discover

Ideate

Prototype

Business Challenges

- → Integrating multiple services into a single, user-friendly platform.
- → Maintaining real-time, accurate monitoring and tracking.
- → Creating an intuitive interface for non-technical users.
- → Scaling operations while preserving personalized service.
- → Ensuring a seamless, consistent experience across devices.

Product Users

Homeowners and small business owners in areas with frequent power outages or high energy costs (e.g., rural or sunny regions) who need an all-in-one hub to monitor solar performance, track maintenance, and resolve issues to ensure reliable, cost-effective power.

Quantitative Research

Texas has 41,000 MW of solar capacity, yet low residential adoption. An all-in-one app could simplify management and drive more homeowners to switch to solar.

Observations

7%
U.S. homeowners have installed solar panels on their home
-Pew Research

45%
of US households with internet access had at least one smart home device. This translates to about 63.43 million homes actively using smart home technology
- Statistica

28%
reported being seriously considering installation. This indicates a significant interest in solar energy among homeowners - Pew Research

17%
of the power mix is solar and wind compared to coal's 15% in 2024.
- The Guardian

35%
increase in 2024 from previous year on solar.
- Cleantechnica.com

User Needs

- → Users need an intuitive interface to easily navigate and access key features like monitoring, service, and learning.
- → Users want a single app to monitor solar output, book installations, repairs, and maintenance—without switching platforms.
- → Users need verified technicians with ratings, reviews, and transparent pricing to feel confident in booking.

Features & Functionalities

To resolve user needs

Brings answers to questions easier

Book service and installation with an expert at User's convenience

Make payment easier and provide multiple payment methods

Product User Challenges

- → Trust Issues with Providers: Users are uncertain about the quality of third-party service providers.
- → Technical Overload: Apps often present data in a technical format that's hard to understand for general users.
- → Complex Setup: The app setup process is complicated for non-tech-savvy users.
- → Unclear Maintenance Alerts: Maintenance and troubleshooting alerts are often too vague or complicated for users to follow.

Competitor Analysis

Enphase Enlighten

App from Enphase Energy for monitoring solar energy production and usage with Enphase hardware.

Features :

- → Only Enphase hardware Compatibility
- → Basic alerts

Tesla Solar App

Tesla's app for managing Tesla Solar Roof and Powerwall systems.

Features :

- → Real-Time Energy Monitoring
- → Payment Integration

Unique Features

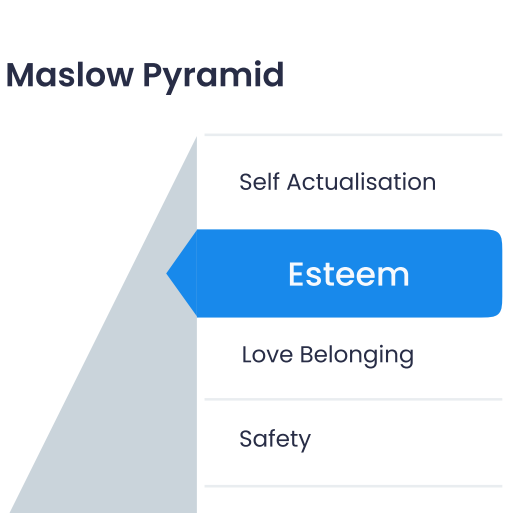
- → **Inclusive:** Not tied to one manufacturer's ecosystem.
- → **Customer-centric:** Designed for both homeowners and businesses.
- → **All-in-One:** Simplifies the entire lifecycle from installation to maintenance.

User Persona

Sarah Johnson
Marketing Analyst

About
34
Homeowner
Austin, TX
Employed

Maslow Pyramid


Self Actualisation
Esteem
Love Belonging
Safety
Physiological

Description

Sarah is an eco-conscious homeowner wanting an easy app to manage her solar system and savings.

Daily lifestyle

- Sarah checks energy savings and books maintenance.
- She receives performance notifications.
- In the evening, she discusses savings with her husband while managing bedtime.

Pain points

- Hard to find reliable service providers.
- Confusing app interface.
- Complicated booking process for services.

> "I just want an easy way to manage my solar system and know I'm saving without all the hassle." - Sarah Johnson

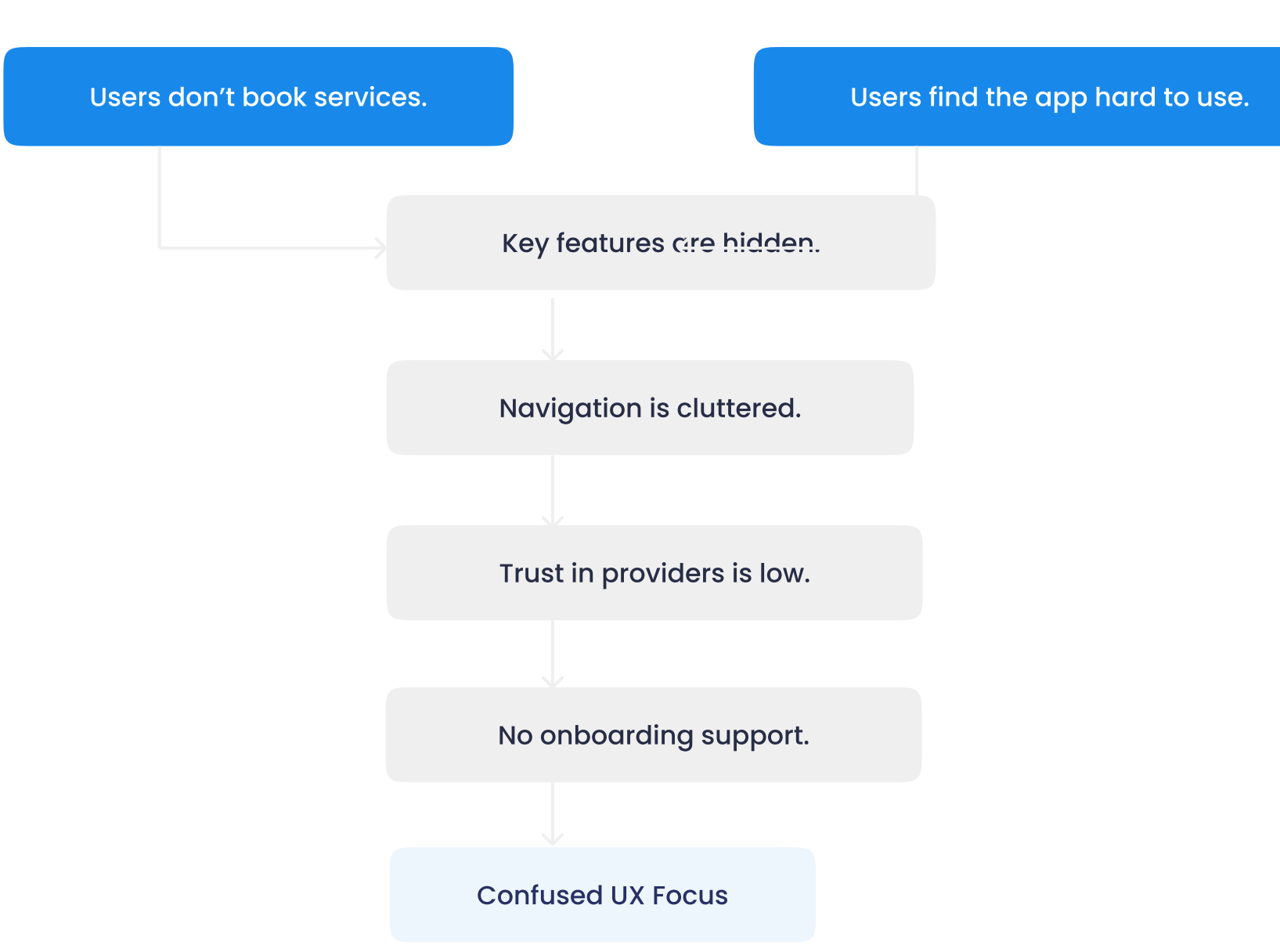
Task Mapping

	Step 1	Step 2	Step 3	Step 4
Task Tasks done on app from users.	Learn more about solar panels, repair and maintenance	Book an appointment for solar panel service	Track technicians to booking site	Pay the bill for the service
Environment	Home, Office, Mobile Access	Online platform, Mobile App	Mobile App, Web Portal	Mobile App, Dashboard View
Challenges	Overwhelming technical jargon, lack of clear information	Scheduling conflicts, availability, unclear costs	Uncertain arrival times, difficulty in contacting technicians	Unclear payment options, concerns over hidden fees
Emotions	Curious, seeking clarity	Hopeful for quick service, frustrated with long wait	Anxious about timing, wanting real-time updates	Relieved when simple, frustrated if complicated
Thoughts	"How do solar panels work, and what maintenance do I need?"	"When is the soonest I can get this fixed?"	"Are they going to be on time?"	"How much do I owe, and can I pay over time?"
Urgency Level	High	Medium	High	High
Design Opportunity	Provide condensed info creating easy to navigate UX	Increase click-through-rate by making booking accessible	Bring confidence to User seeing active tracking of progress	Provide easy to apply discounts and purchasing

Eisen Hover Matrix

	Urgent	Not Urgent
Important	• Simplify setup for non-tech users • Make data and metrics more user-friendly. • Improve service booking integration • Ensure data security and privacy.	• Build trust through provider reviews. • Add customization for notifications. • Expand hardware compatibility. • Provide clear guides for troubleshooting.
Not Important	• Fix performance issues (bugs). • Address user complaints about app errors. • Resolve minor UI issues impacting use.	• Update help center content. • Refine branding and design elements. • Improve app logo (non-critical).

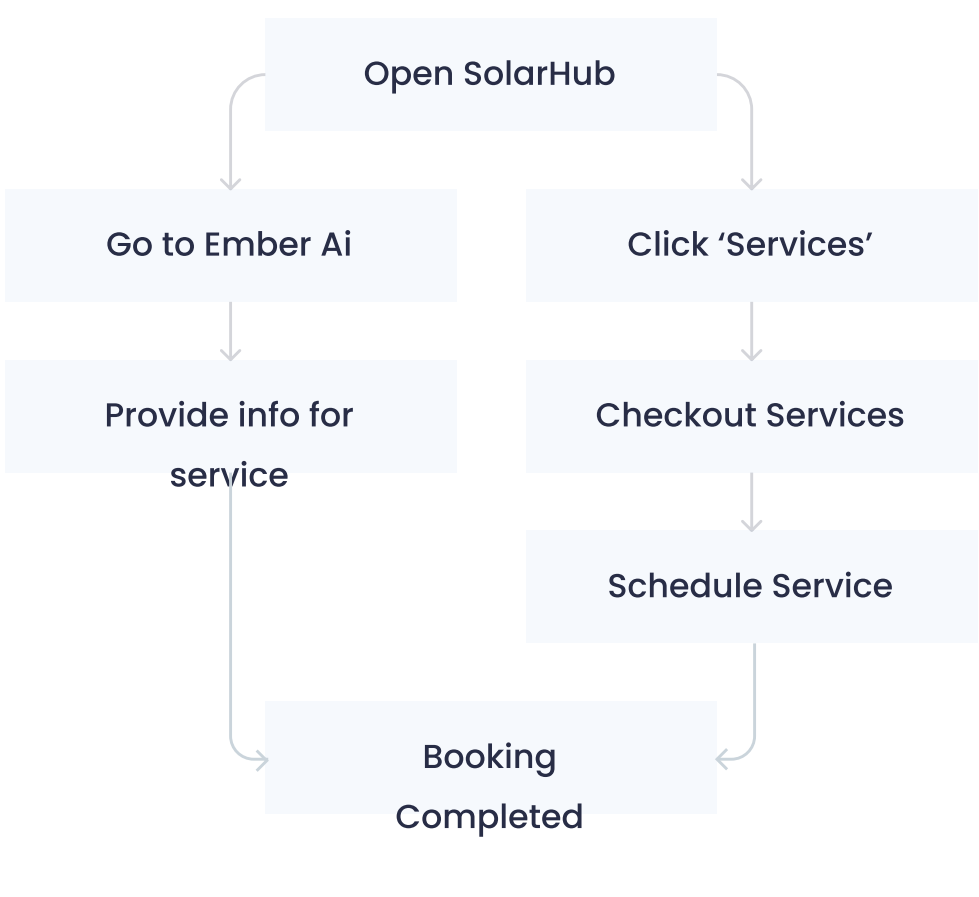
5 Why Analysis of SolarHub 1.0 (NOW RESOLVED)


Users don't book services.
Users find the app hard to use.
Key features are hidden.
Navigation is cluttered.
Trust in providers is low.
No onboarding support.
Confused UX Focus

Taskflows

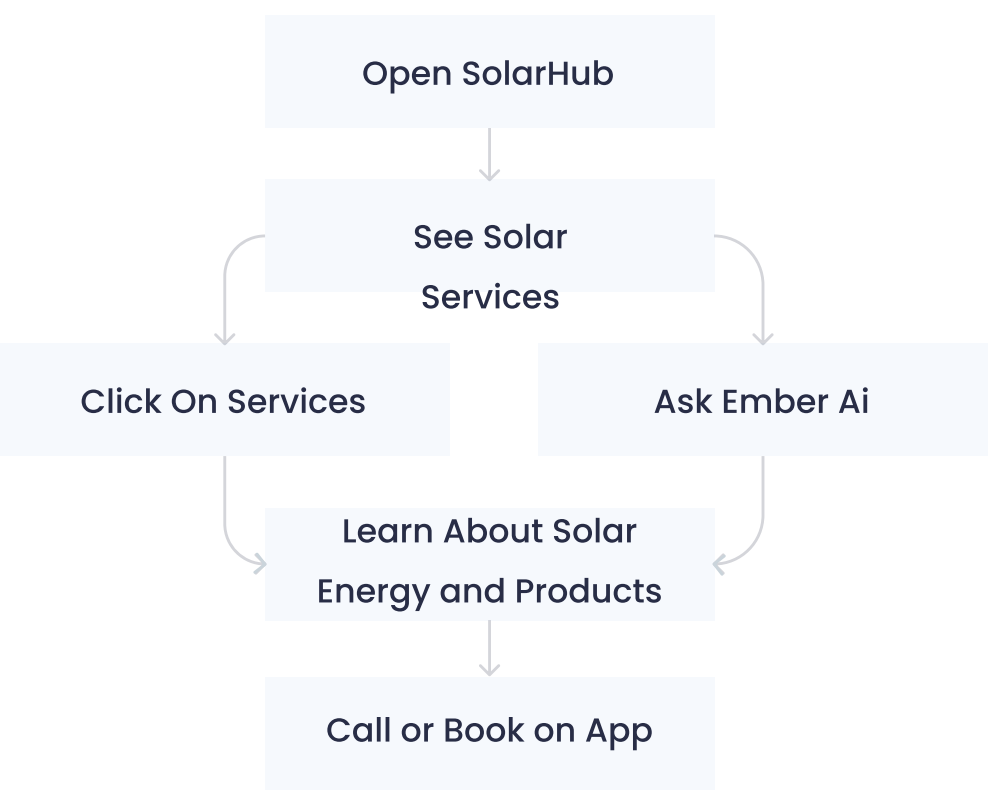
Scenario 1 :

Get a broken solar panel fixed quickly by a verified technician.

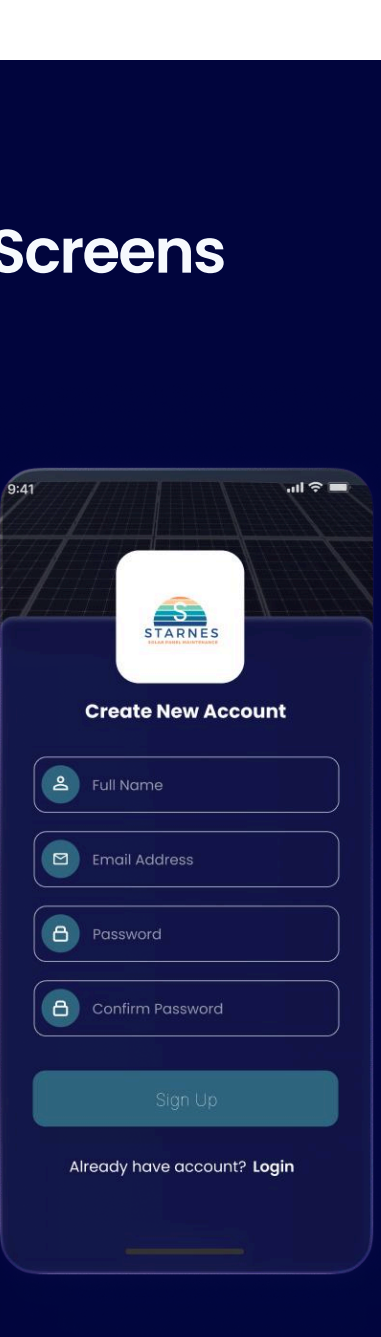

Open SolarHub
Go to Ember Ai
Click 'Services'
Provide info for service
Checkout Services
Schedule Service
Booking Completed

Scenario 2 :

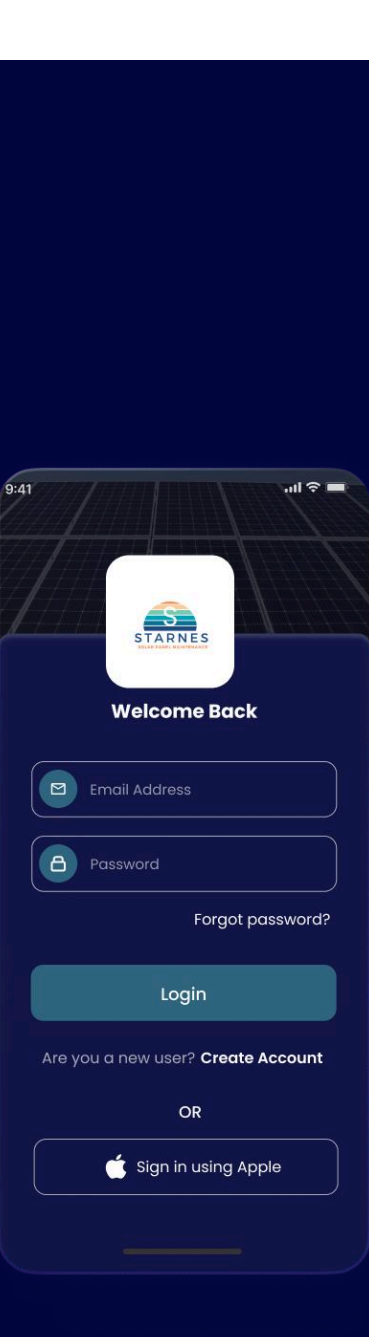
Explore solar energy to decide if it's right for their home or business.


Open SolarHub
See Solar Services
Click On Services
Ask Ember Ai
Learn About Solar Energy and Products
Call or Book on App

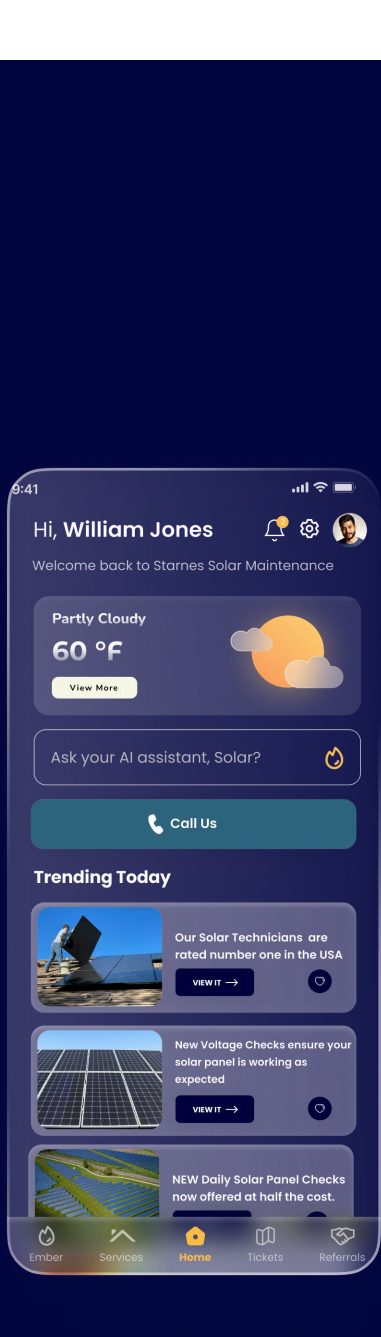
Screens


STARNES
Create New Account
Full Name
Email Address
Password
Confirm Password
Sign Up
Already have account? Login

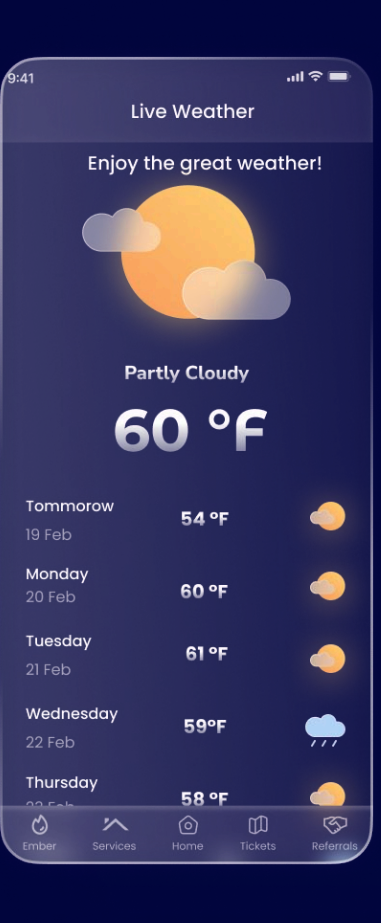
Onboarding


STARNES
Welcome Back
Email Address
Password
Forgot password?
Login
Are you a new user? Create Account
OR
Sign in using Apple

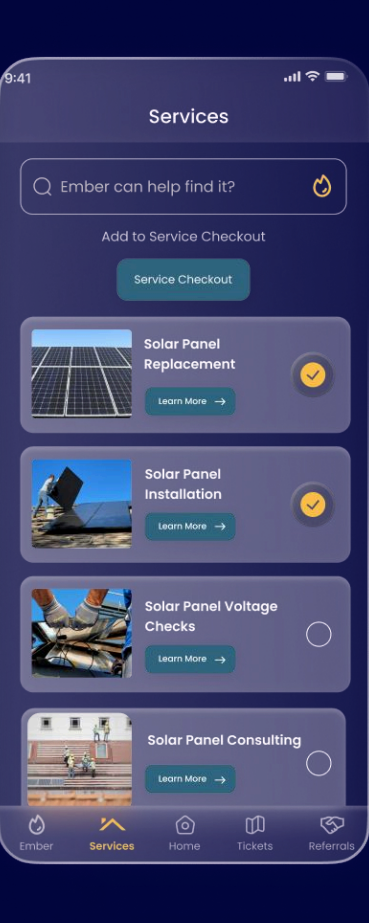
Login


Hi, William Jones
Welcome back to Starnes Solar Maintenance
Partly Cloudy
60 °F
View More
Ask your AI assistant, Solar?
Call Us
Trending Today

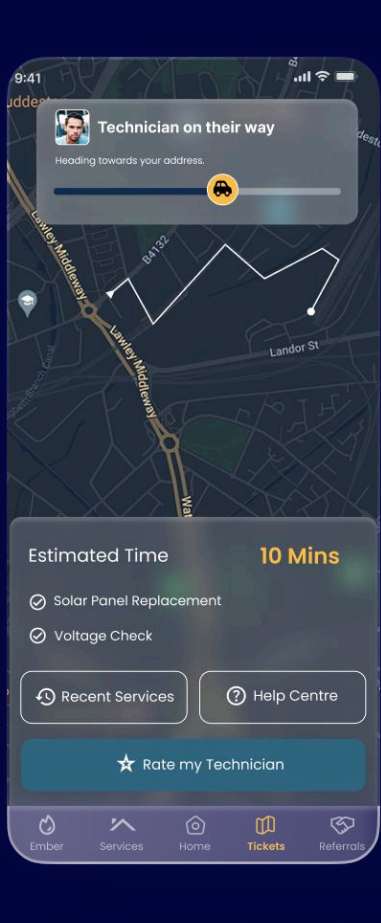
Home Screen


Live Weather
Enjoy the great weather!
Partly Cloudy
60 °F
Tomorrow
54 °F
Monday
60 °F
Tuesday
61 °F
Wednesday
59°F
Thursday

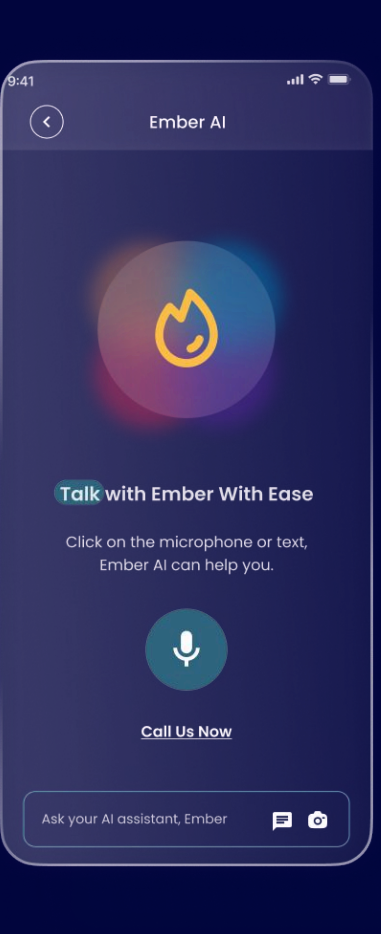
Live Weather Alerts


Services
Ember can help find it?
Add to Service Checkout
Service Checkout
Solar Panel Replacement
Solar Panel Installation
Solar Panel Voltage Checks
Solar Panel Consulting

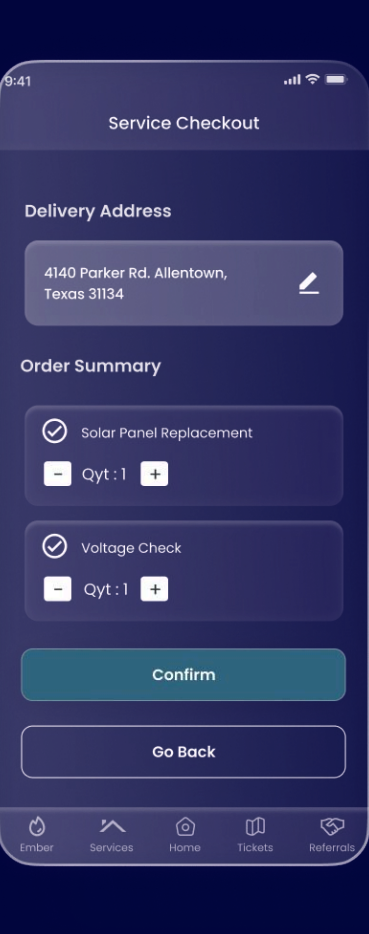
Service Screen


Technician on their way
Estimated Time
10 Mins
Solar Panel Replacement
Voltage Check
Recent Services
Help Centre
Rate my Technician

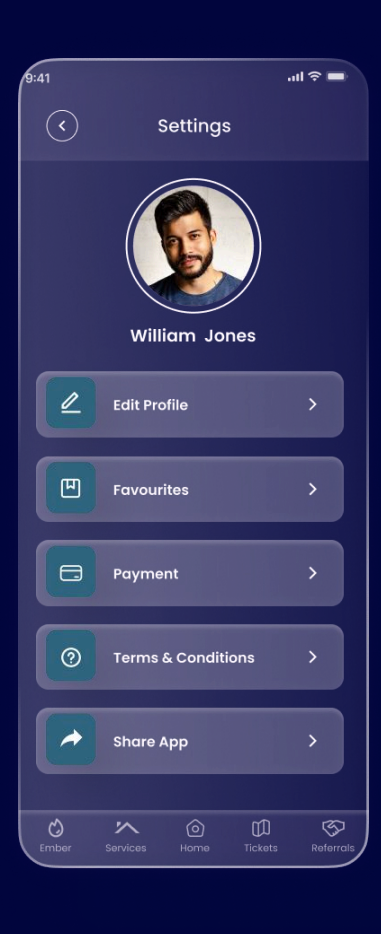
Tracking


Ember AI
Talk with Ember With Ease
Click on the microphone or text, Ember AI can help you.
Call Us Now
Ask your AI assistant, Ember

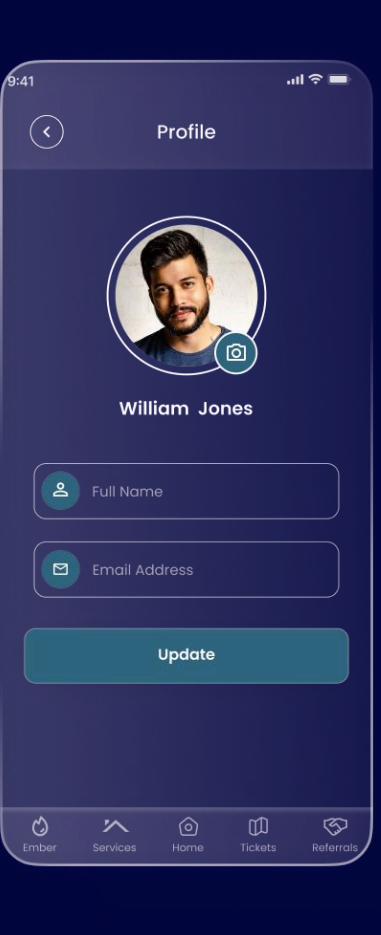
Ember AI Support


Service Checkout
Delivery Address
4140 Parker Rd. Allentown, Texas 31134
Order Summary
Solar Panel Replacement
Qyt : 1
Voltage Check
Qyt : 1
Confirm
Go Back

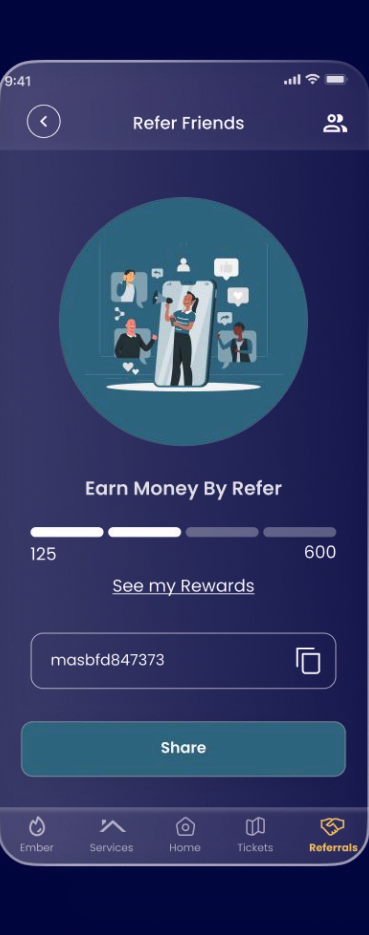
Checkout


Settings
William Jones
Edit Profile
Favourites
Payment
Terms & Conditions
Share App

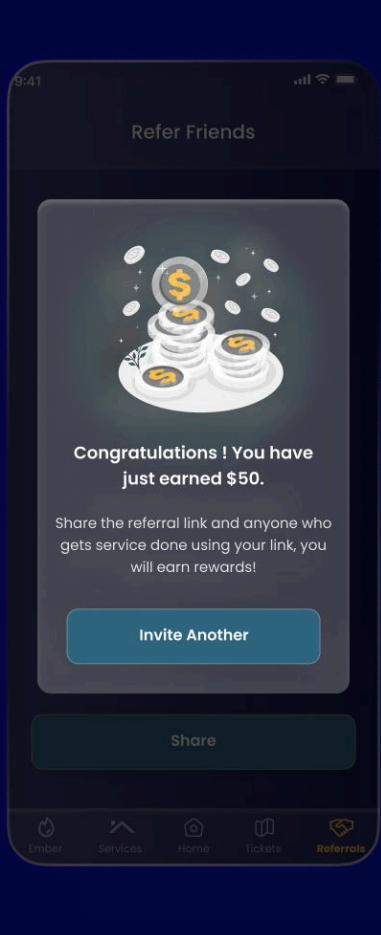
Settings


Profile
William Jones
Full Name
Email Address
Update

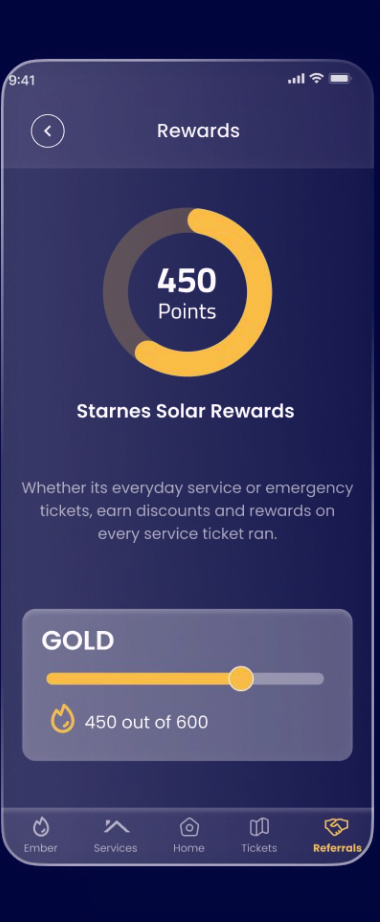
Profile


Refer Friends
Earn Money By Refer
125
600
See my Rewards
masbfd847373
Share

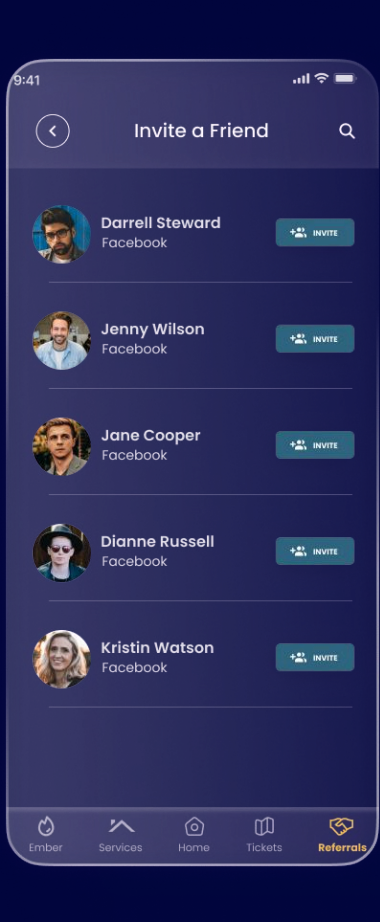
Referrals


Refer Friends
Congratulations ! You have just earned $50.
Share the referral link and anyone who gets service done using your link, you will earn rewards!
Invite Another
Share

Referral Success


Rewards
450
Points
Starnes Solar Rewards
Whether its everyday service or emergency tickets, earn discounts and rewards on every service ticket ran.
GOLD
450 out of 600

Rewards


Invite a Friend
Darrell Steward
Facebook
Jenny Wilson
Facebook
Jane Cooper
Facebook
Dianne Russell
Facebook
Kristin Watson
Facebook
INVITE

Invite to App