

GreenNest

Helps users to collectively contribute to a greener planet.

UX Design in Web & Mobile Applications (CSIS 3375 - Section 001)

Team Members:

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Proposed App idea for Prototype

The proposed mobile application *Green Nest* is a sustainable application which encourages the user to adopt eco-friendly habits, reduce the impact done by their day-to-day activities and collectively contribute to a better, greener planet.

The app will have the below key features.

1. **Carbon footprint tracker:** Calculates the carbon footprint generated by each of the user's daily activities.
2. **Progress reports:** With user updates, the application will calculate the carbon footprint and generate visual representations to monitor the improvements over time.
3. **Personalized eco tips:** The user is given personalized tips to adjust the habits for continuous improvement.
4. **Gamified Elements:** Users are given challenges to engage in individually and in groups to make sustainability more engaging and fun. Users will earn eco-badges/ streaks when they complete challenges.
5. **Event Catalog:** Enable the user with information of the related environmental community events nearby.

The proposed application is best suited for individuals who are interested in building a healthy planet.

The proposed app stands out as a novel solution for encouraging sustainable living by effectively blending personalized advice, community involvement, and significant progress monitoring. Unlike conventional eco-apps in the same domain, GreenNest provides customized eco-tips that align with user habits, enabling sustainable practices to be both feasible and impactful. Users can visually observe the concrete outcomes of their actions, which reinforces positive changes in behavior without relying on competitive features. Moreover, the app cultivates a spirit of shared responsibility by motivating users to engage in community-focused projects and local challenges. By presenting a comprehensive approach to sustainability in various aspects of everyday life, GreenNest changes sustainability from an overwhelming obligation into a fulfilling and manageable lifestyle, allowing users to make a meaningful contribution to environmental health.

The transformative experience of this mobile application lies in its effort to seamlessly integrate sustainable habits to the lifestyle of the user.

1. **Personalized sustainable journey:** The application provides tailored eco tips to help the user to easily blend sustainable habits into their lifestyle.
2. **Progress tracking:** Visual representations give the user an idea about the continuous progress over time to encourage them.

3. **Community Engagement:** Users are made aware of the community driven environmental events which will help them work collectively, share insights and foster a sense of belonging in a movement towards sustainability.
4. **Gamification:** The user will be awarded with eco badges based on the challenges completed.

We, as the designers, believe that the transformative experience which will be a collective effort of the above features, would make adopting sustainable habits a manageable and a less complex task.

Background Research

Market Competitor Apps GreenNest enters a growing market of sustainability-focused mobile applications, each with unique features catering to eco-conscious users. The following competitor apps provide insights into the strengths and gaps within the current market, offering valuable direction for GreenNest's differentiation strategy.

1. **JouleBug**
 - **Focus:** Gamifies eco-friendly actions such as recycling and energy conservation.
 - **Strengths:** Engages users with community leaderboards and reward-based systems, fostering friendly competition.
 - **Limitations:** Lacks deep personalisation and has a limited scope beyond general sustainability actions.
2. **Aerial**
 - **Focus:** Tracks carbon emissions by analysing travel habits and purchase history.
 - **Strengths:** Offers seamless integration with financial applications for automated tracking.
 - **Limitations:** Lacks community-driven features and gamification, making user engagement less interactive.
3. **Oroeco**
 - **Focus:** Provides detailed tracking of carbon footprint across spending, travel, and energy consumption.
 - **Strengths:** Offers comprehensive tracking for individuals and families.
 - **Limitations:** Data presentation can be overwhelming, with little emphasis on gamification for motivation.
4. **Greenly**
 - **Focus:** Estimates carbon footprint based on financial transactions.
 - **Strengths:** Provides actionable insights to help users reduce emissions.
 - **Limitations:** A narrow focus on financial data limits broader sustainability tracking.

Market Inspiration Apps:

To create a transformative user experience, GreenNest draws inspiration from apps that have successfully engaged users in behaviour change, motivation, and habit formation beyond sustainability. These applications serve as a reference for integrating innovative engagement techniques into the GreenNest platform.

1. Duolingo (Education & Gamification)

- **Inspiration:** Uses a highly engaging gamification model to encourage language learning.
- **Application to GreenNest:** Implementing streaks, levels, and badges to encourage sustainable behaviour.

2. Nike Run Club (Fitness & Progress Tracking)

- **Inspiration:** Provides real-time tracking, challenges, and personalized coaching for fitness goals.
- **Application to GreenNest:** Personalized eco-tips and challenges tailored to user behaviour and lifestyle.

3. Fitbit (Health & Habit Formation)

- **Inspiration:** Encourages habit formation through step tracking, daily goals, and achievements.
- **Application to GreenNest:** Encouraging eco-friendly habits with measurable milestones and reminders.

4. Reddit (Community Engagement)

- **Inspiration:** Encourages knowledge sharing and discussions through user-driven communities.
- **Application to GreenNest:** Creating an engaged community where users share experiences, challenges, and solutions.

How GreenNest Stands Out

GreenNest differentiates itself by integrating artificial intelligence to deliver personalized eco-tips and habit recommendations based on user preferences. Unlike competitors, it combines gamification, community collaboration, and actionable insights in a single platform, making sustainability efforts more engaging and rewarding. By rewarding users for challenges and enabling global and local collaborations, GreenNest transforms everyday choices into meaningful environmental contributions.

Through market research and inspiration from successful habit-forming apps, GreenNest aims to redefine sustainability engagement and empower users to make a lasting impact on the planet.

PACT Framework

To ensure GreenNest effectively meets user needs, the PACT (People, Activities, Context, and Technology) framework is applied:

1. People:

- Environmentally conscious individuals looking to track and reduce their carbon footprint.
- Students, professionals, and families interested in sustainable living.
- Organizations promote eco-friendly habits among employees and communities.

2. Activity:

- Tracking carbon emissions from daily activities like travel, food consumption, and energy use.
- Participating in eco-friendly challenges and earning rewards.
- Engaging in community initiatives and sharing sustainability progress.
- Receiving AI-driven personalized eco-tips.

3. Context:

- A mobile-first experience designed for real-time tracking and habit formation.
- Social and environmental contexts influencing user behaviour and engagement.
- Integration with other apps (e.g., financial, fitness, and energy monitoring tools) for seamless tracking.

4. Technology:

- Artificial Intelligence for personalized eco-tips and habit recommendations.
- Gamification engine for challenges, rewards, and streak tracking.
- Cloud-based database for user activity storage and analytics.
- API integrations with financial apps, fitness trackers, and smart home devices.
- A community platform for social engagement and collaboration.

By considering these factors, GreenNest is positioned to deliver an engaging and impactful sustainability experience for its users.

Value Proposition

Green Nest is not just another application but an effort to make our home greener, happier. It is for everyone that's eco-conscious and will empower the user with guidance to reduce the negative impact to the environment in ways that keeps the user engaged.

Project Contract

This contract is made and entered into on the February 4, 2025, by and between the following team members:

1. Frederick Okornoe
2. Sachini Epa (Team Leader)
3. Theodora Amodu

The purpose of this contract is to outline the agreed-upon team workings, communication protocols, and other relevant aspects of the team schedule to ensure effective collaboration and productivity.

We, the undersigned team members, agree to the following terms:

1. We will hold two meetings per week. The meeting days and times will be determined based on the team's availability and will be communicated in advance. All team members are expected to attend these meetings unless there are extenuating circumstances, which must be communicated to the team in advance.
2. We will use Microsoft Teams and WhatsApp as our primary communication tools. All team-related discussions, updates, and decisions will be communicated via these platforms to ensure transparency and inclusivity. Team members are expected to check these platforms regularly and respond to messages promptly.
3. Each team member will be assigned specific roles and responsibilities based on their expertise and the team's needs. Team members are expected to fulfill their responsibilities diligently and contribute to the team's overall success.
4. Any conflicts or disagreements within the team will be addressed and resolved through open and respectful communication. If necessary, a neutral third-party mediator may be involved to facilitate the resolution process.
5. All team members are accountable for their actions and contributions to the team. We will conduct regular progress reviews to ensure that we are meeting our goals and addressing any challenges or issues promptly.
6. This contract may be amended or updated as needed, with the agreement of all team members. Any changes to the contract will be documented and communicated to the entire team.

By signing below, each team member acknowledges and agrees to the terms outlined in this contract:

Frederick Okornoe _____ F.O _____ Date: __08.02.2025_____

Sachini Epa _____ Sachini Epa _____ Date: __08.02.2025_____

Theodora Amodu _____ Theodora _____ Date: __08.02.2025_____

Optional Preliminary List of Features

Below are some features that will revolutionize the use of eco apps.

1. **Gamification and Reward Systems:** As mentioned earlier, users will be rewarded with tokens or badges that can be converted to credits that can be redeemable for discounts at partner eco-brands.

2. **Community and Collaboration:** Green nest is going to provide micro-communities where tips can be shared and also enable people to work together on group specific goals or targets.
3. **Personalized Recommendations:** App will analyze user behaviour and provide advice on how carbon footprint can be reduced.
4. **Location Based Features:** App will utilize GPS to provide specific data on air quality, transport options and recycling facilities
5. **Carbon footprint calculator:** An intuitive calculator to estimate carbon emissions from various activities like travel, food consumption, and energy use.

Work Logs for Students

Sachini Epa

Date	Number of Hours	Description of work done
Jan 22, 2025	1	Research on potential app ideas
Jan 23, 2025	1	Background search on the Green Nest app idea and its features.
Jan 26, 2025	1	Brainstorming session with the professor and discussion with the team to finalize an idea.
Feb 01, 2025	0.5	Google Meet meeting with the team members to plan the project proposal document.
Feb 03, 2025	0.5	Creating the github repository with the ReadMe file and adding collaborators.
Feb 05, 2025	0.5	Working on the project proposal – Proposed App idea for the prototype
Feb 06, 2025	0.75	Working on the project proposal – Proposed App idea for the prototype

Feb 07, 2025	0.5	Working on the project proposal – value proposition, title page and closing
Feb 08, 2025	1	Working on the project proposal - Refining the sections done by me

Theodore O. Amodu

Feb 01, 2025	0.5	Google Meet meeting with the team members to plan the project proposal document.
Feb 03, 2025	1	Researched for the Background research and PACT Framework
Feb 04, 2025	1.5	Worked on writing out the Background Research, the market competitor apps, the market inspiration
Feb 7, 2025	1.5	Worked on the PACT framework

Frederick Okornoe

Feb 01, 2025	0.5	Google Meet meeting with the team members to plan the project proposal document.
Feb 04, 2025	1	Drafted and developed contract for team
Feb 08, 2025	1	Worked on preliminary optional features for app

Closing and References

Green Nest is an effort to hold hands with eco-conscious individuals to make the planet healthier. By bringing personalization, challenges and community events together, it provides a user with a platform to take meaningful steps towards sustainability.

References

JouleBug, "JouleBug Sustainability App," [Online]. Available: <https://www.joulebug.com>. [Accessed: Feb. 8, 2025].

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