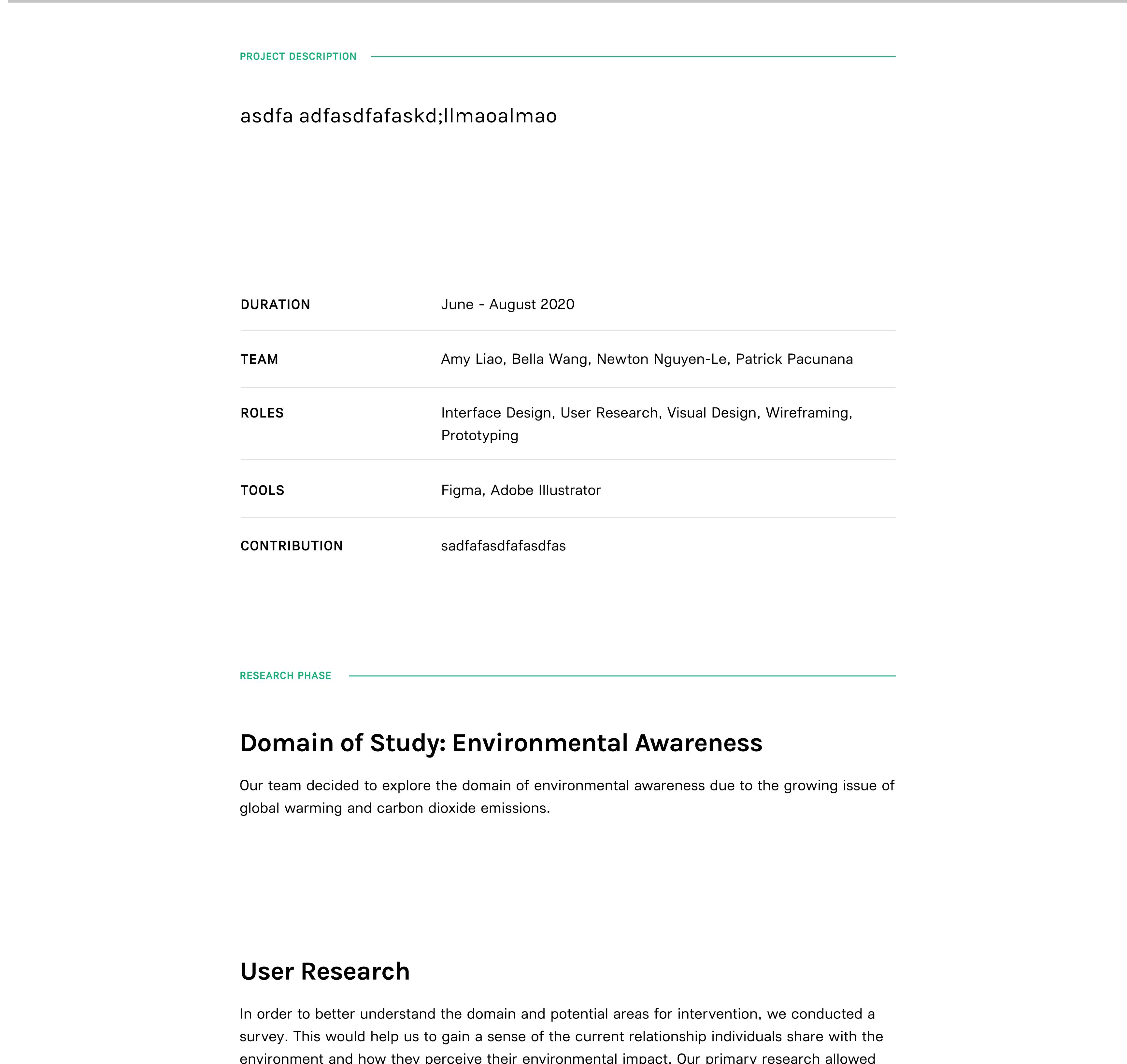


Verdant

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PROJECT DESCRIPTION

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DURATION	June - August 2020
TEAM	Amy Liao, Bella Wang, Newton Nguyen-Le, Patrick Pacunana
ROLES	Interface Design, User Research, Visual Design, Wireframing, Prototyping
TOOLS	Figma, Adobe Illustrator
CONTRIBUTION	sadfafasdfsadasfas

RESEARCH PHASE

Domain of Study: Environmental Awareness

Our team decided to explore the domain of environmental awareness due to the growing issue of global warming and carbon dioxide emissions.

User Research

In order to better understand the domain and potential areas for intervention, we conducted a survey. This would help us to gain a sense of the current relationship individuals share with the environment and how they perceive their environmental impact. Our primary research allowed us to gather diverse responses from over 50 participants with ages ranging from 18-61 years old.

Audience: Who is in this domain?

We discovered that young adults have been increasingly conscious in their actions in relation to the environmental impact. As a result, we are targeting the age group of 20-30.

Insights: What are their common goals?

They are willing to change their lifestyle and want to take action to prevent further damage to the environment but are limited by their living conditions.

Key Insights

01 Carbon footprint is more than transportation emissions

When thinking of carbon footprints, individuals tend to associate their transportation methods with how positive or negative their impact is. However, there are other factors, such as purchases, that must be taken into consideration when calculating one's overall carbon dioxide emission.

02 Eager but unaware

A common theme amongst the respondents was their willingness to change their lifestyle and take action to prevent further damage to the environment. However, they were unsure of exactly how their life currently impacts the Earth and what measures they should take to live more environmentally friendly.

Framing our Design Approach

Taking insights gained from our research, we narrowed our scope to focus on personal carbon dioxide emissions. With this clear direction, we established an end goal of ensuring that the design would be able to inform users of their carbon dioxide emissions in efforts to help reduce their personal carbon footprint. As a result, we as a team proposed the question:

Design Focus: How may we encourage individuals to engage in a lifestyle that is more environmentally-friendly?

DESIGN PROCESS

Initial Proposal

After a rapid brainstorming session, our group decided to move forward with a carbon footprint tracking application. From the research and insights collected, we gathered data to create a persona that would better represent our potential users. In order to envision how our persona would interact with this type of system, we formulated a journey map to see potential touchpoints that we could use to drive the design of our application.

User Persona: Alison Watkins

Alison is a young professional who often drives to places even though transit options are available. However, she is becoming more conscious regarding her actions and their impact on the environment. As a result, she needs a way to monitor her current carbon footprint to see how she can implement changes in her life.

Goals:

- Understand how her lifestyle impacts the environment
- See her carbon footprint with a clear representation
- Document her progress towards environmentally friendly actions

Motivations:

- Reduce her average carbon dioxide emissions
- Encourage herself to be aware of her current habits
- See her improvements of CO2 emissions over a period of time

Experience Map: Carbon Footprint Tracking

The experience map details Alison's journey through the application:

- I drive my car to buy some groceries today.
- I open the application.
- I log the details about my commute and purchases.
- I see how much CO2 I emitted from the activity.
- I compare my weekly impacts my weekly average.
- I look at all my friends' carbon dioxide emissions.

Design Iterations

After formulating the persona's journey map, the team split up to iterate several versions of the application through wireframing and mapping out wireflows. I worked heavily on the profile page and data visualization of the user's carbon emissions.

First Iteration: Initial wireframes for the Profile and Weekly/Monthly pages.

Second Iteration: Improved wireframes with clearer data visualization and user interaction points.

Third Iteration: Finalized wireframes showing a polished user interface with detailed data breakdowns and user feedback annotations.

DESIGN SOLUTION

Overview

Verdant's purpose is to inform users of their carbon dioxide emissions in efforts to help reduce their personal carbon footprint.

Watch our pitch video below or [experience Verdant here](#).

video

DESIGN SOLUTION

User Testing

Before being able to finalize the design, we conducted user testing to gather insights and feedback on the core workflows of our application. This was done by video interview (Zoom) with 14 participants using screen sharing to observe how they explored the application as a first time user to monitor how they naturally reacted with the design. Additionally, users were given key tasks to complete within the application. The user-testing allowed us to discover any concerns or thoughts that users had with our designs.

01 Lack of context

Users were given a large amount of data and unlabeled numbers that they were unable to understand. They were also confused whether the values should be interpreted as positive or negative since they were given no basis of comparison or recommended value.

02 Too many features

Our initial design did not feel as cohesive due us introducing many possible user flows without one clear end goal. For this reason, the core feature of tracking user's carbon dioxide emissions felt incomplete. We would need to reduce clutter of information to put more focus on improving the experience of logging emission activities.

03 Options were restricting

For logging transportation emissions, there were not enough options provided in regards to how people travel, whether it be through carpooling, driving more than one vehicle, or using a motorcycle as opposed to using a regular vehicle.

[View our detailed user testing insights report](#)

Profile Findings-O1:

Alison attempted to interact with the application's interface, specifically focusing on the carbon footprint visualization and data representation.

Annotations highlight:

- Attempted to interact with these icons as an interaction cue.
- Overwhelmed by the data provided, unsure what the number meant, and confused by the icons.
- Attempted to click on the box to view more but no interaction followed.
- Liked the in-depth breakdown of their emissions and their history, but felt too hidden from the main interface.
- The colours were helpful in differentiating the categories.
- Appreciated the encouraging reminders that could help with their day-to-day activities.

Design Solution:

After user testing, the design was refined to address the identified issues:

- First Iteration:** Initial wireframes for the Profile and Weekly/Monthly pages.
- Second Iteration:** Improved wireframes with clearer data visualization and user interaction points.
- Third Iteration:** Finalized wireframes showing a polished user interface with detailed data breakdowns and user feedback annotations.

