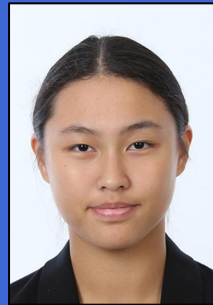# OVERVIEW

- **App Name:** EcoPlate

- **App Description:** Step into a greener future with this all-in-one app that empowers users to embrace sustainable living. Discover eco-friendly recipes, locate nearby farmers markets, and make informed choices by checking the eco-score of your food, all in one seamless platform.

- **Track:** Youth Individual

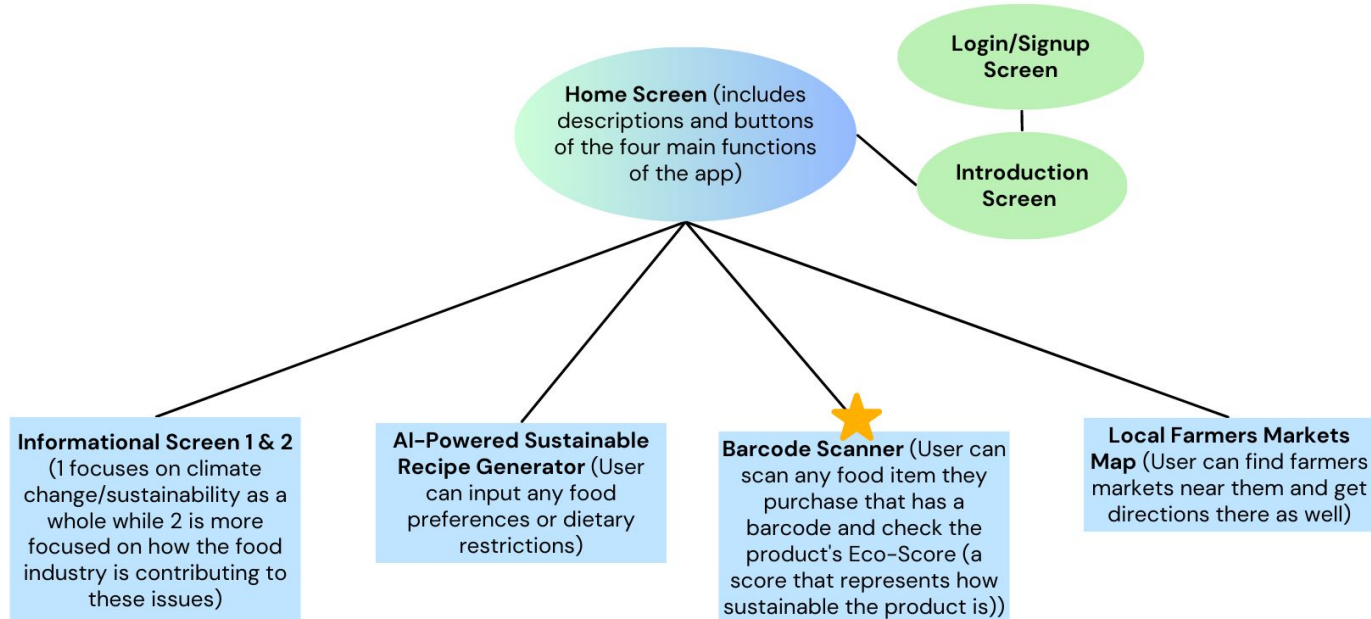- **Category:** Sustainability

THEME

Sustainable eating is rooted in the pressing need to address environmental, social, and health challenges stemming from traditional food systems. Unsustainable agricultural practices contribute significantly to greenhouse gas emissions, land degradation, and water pollution. Moreover, demand for resource-intensive animal-based diets strains global food supplies, exacerbates deforestation, and raises ethical concerns over animal welfare. Embracing sustainable eating habits protects our environment and is a pathway to fostering healthier individuals and communities for a thriving future. At the core of my mission lies the desire to be part of the solution, contributing to a more sustainable world for generations to come.

SCREEN MAP/OVERVIEW

EcoPlate

Home Screen (includes descriptions and buttons of the four main functions of the app)

Login/Signup Screen

Introduction Screen

Informational Screen 1 & 2 (1 focuses on climate change/sustainability as a whole while 2 is more focused on how the food industry is contributing to these issues)

AI-Powered Sustainable Recipe Generator (User can input any food preferences or dietary restrictions)

Barcode Scanner (User can scan any food item they purchase that has a barcode and check the product's Eco-Score (a score that represents how sustainable the product is))

Local Farmers Markets Map (User can find farmers markets near them and get directions there as well)
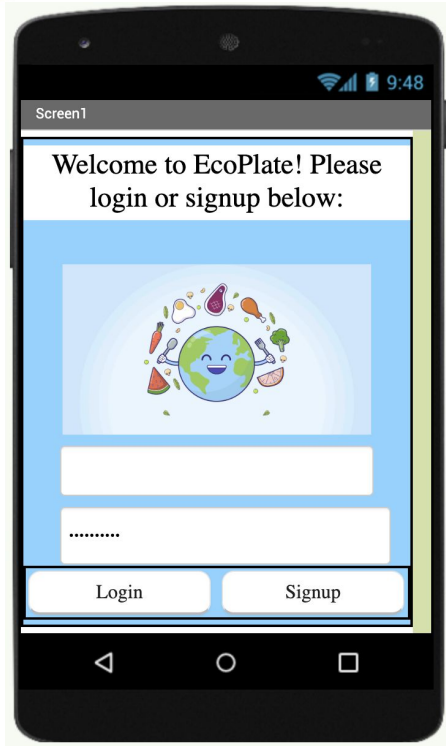
TECHNOLOGY USED

- Firebase DB
- ChatGPT
- Location Sensor
- Navigation
- Barcode Scanner
- Clock

INSTRUCTIONS: LOGIN & MORE

Screen1

Welcome to EcoPlate! Please login or signup below:

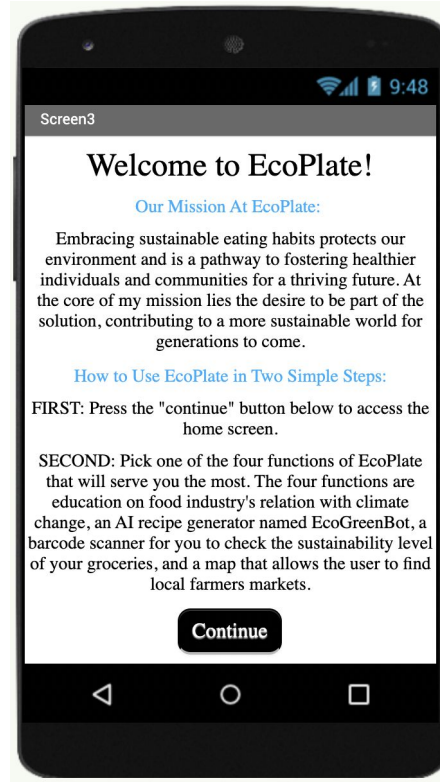| Login | Signup |

Login & Signup Screen:

Login or signup using a username and password. When logged in successfully, the app will automatically take the user to the Home Screen.
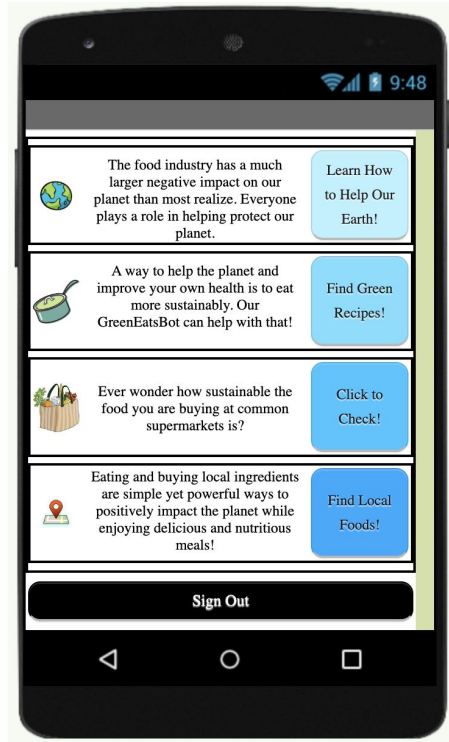

Screen3

Welcome to EcoPlate!

Our Mission At EcoPlate:

Embracing sustainable eating habits protects our environment and is a pathway to fostering healthier individuals and communities for a thriving future. At the core of my mission lies the desire to be part of the solution, contributing to a more sustainable world for generations to come.

How to Use EcoPlate in Two Simple Steps:

FIRST: Press the "continue" button below to access the home screen.

SECOND: Pick one of the four functions of EcoPlate that will serve you the most. The four functions are education on food industry's relation with climate change, an AI recipe generator named EcoGreenBot, a barcode scanner for you to check the sustainability level of your groceries, and a map that allows the user to find local farmers markets.

Continue

Welcome Screen:

This screen details EcoPlate's goal/mission and explains to the user how to proceed in the app (simplified user guide).

The food industry has a much larger negative impact on our planet than most realize. Everyone plays a role in helping protect our planet.

Learn How to Help Our Earth!

A way to help the planet and improve your own health is to eat more sustainably. Our GreenEatsBot can help with that!

Find Green Recipes!

Ever wonder how sustainable the food you are buying at common supermarkets is?

Click to Check!

Eating and buying local ingredients are simple yet powerful ways to positively impact the planet while enjoying delicious and nutritious meals!
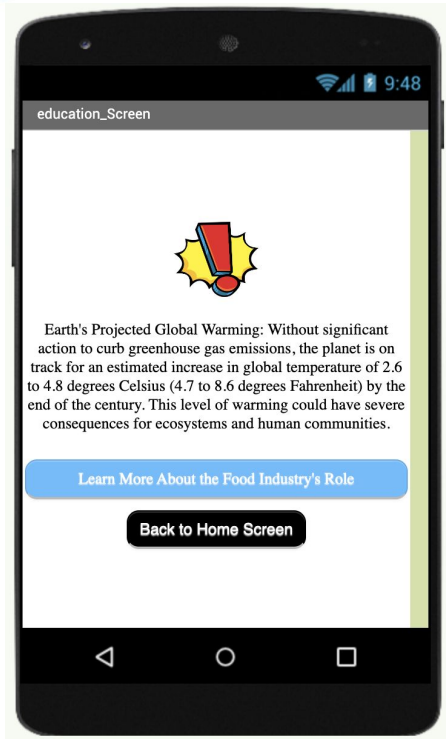
Find Local Foods!

Sign Out

Home Screen:

The user will be given a choice between four main functions of the app (education, recipe generator, barcode scanner, and map of local farmers markets) and their descriptions.

INSTRUCTIONS: INFORMATION

Informational Screen 1:

This screen details the general background and news for climate change/greenhouse gas emissions for the user to read.

Informational Screen 2:

This screen details the specific ways the food industry is contributing to the global crisis of rising temperatures. It also depicts what parts of someone's lifestyle determine the size of their carbon footprint.
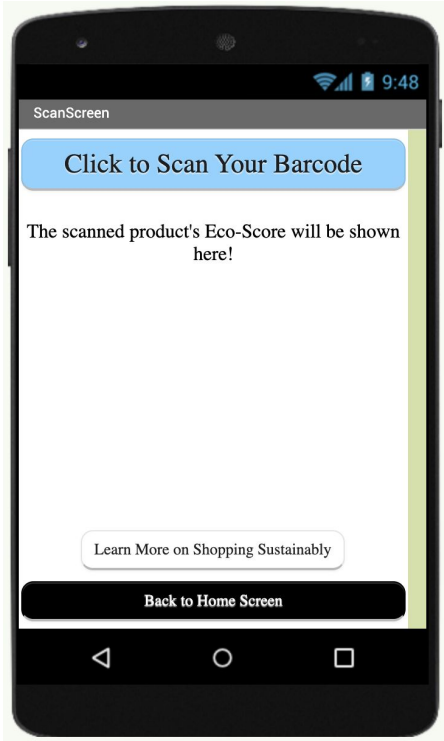
INSTRUCTIONS: RECIPES (AI)

Recipe Screen:

This screen utilizes Chat GPT to generate sustainable personalized recipes for the user. The user can simply ask for a recipe in the textbox and press "Ask!" to input it, and GreenEatsBot will provide a recipe tailored to the user's request.

ScanScreen

Click to Scan Your Barcode

The scanned product's Eco-Score will be shown here!

Learn More on Shopping Sustainably

Back to Home Screen

Barcode Scanner Screen:

This screen allows the user to scan a grocery item's barcode to find out the product's Eco-Score, a measure of how sustainable a food item is (how much negative environmental impact will it do).
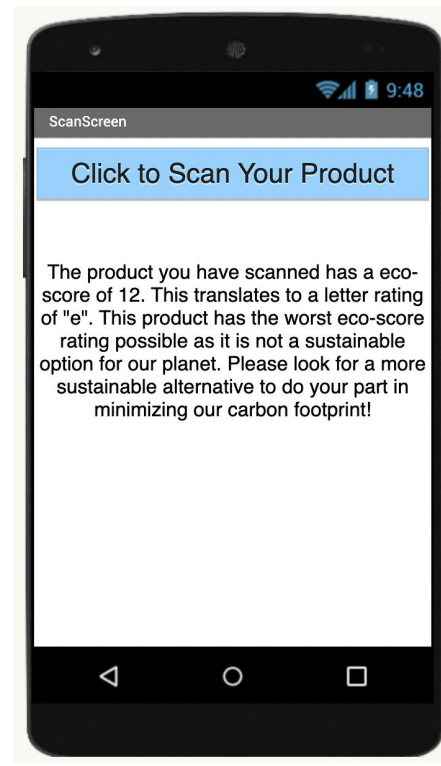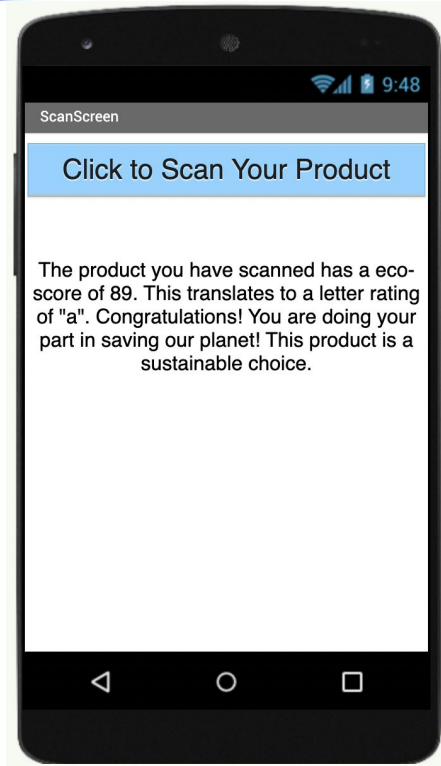
LearnShopSustain_Screen

Sustainable Shopping Habits

To shop sustainably, consider the following practices:

1. Reduce Meat Consumption: Cut down on meat and opt for more plant-based meals as they have a lower environmental impact.

2. Green Certifications: Look for products with organic and sustainable certifications.

3. Avoid Over-packaging: Opt for products with minimal packaging/ones that can be recycled.

4. Shop in Bulk: Purchase items in bulk to reduce single-use packaging waste.

5. Grow Your Own: If possible, grow some of your own food at home, even if it's just herbs or small vegetables.

Back

Sustainable Shopping:

This screen educates the user on some habits they should practice when grocery-shopping in order to keep low or reduce their carbon emissions.
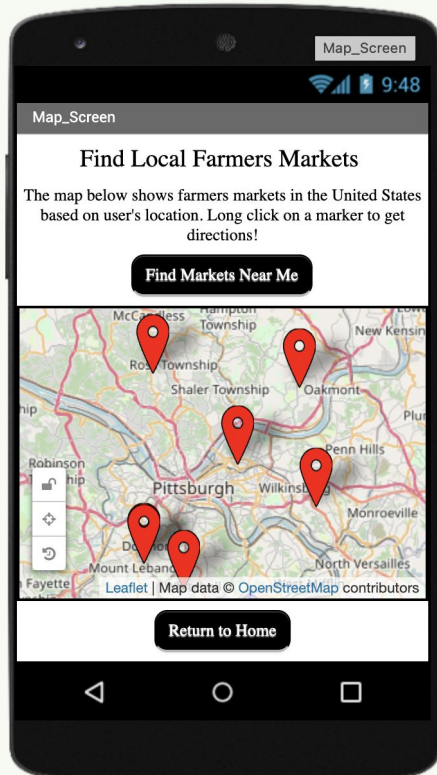
EXAMPLE RESULTS FOR SCANNER

ScanScreen

Click to Scan Your Product

The product you have scanned has a eco-score of 89. This translates to a letter rating of "a". Congratulations! You are doing your part in saving our planet! This product is a sustainable choice.

Example: result for a sustainable product

ScanScreen

Click to Scan Your Product

The product you have scanned has a eco-score of 12. This translates to a letter rating of "e". This product has the worst eco-score rating possible as it is not a sustainable option for our planet. Please look for a more sustainable alternative to do your part in minimizing our carbon footprint!

Example: result for an unsustainable product

INSTRUCTIONS: MAP

Map Screen:

This screen uses a location sensor to pan to the user's location. The markers on this map pinpoint farmers markets near the user (user location will be shown through a light blue circle). If the user clicks on the markers, a information box containing the market's name and address will pop up. Also, when the user long clicks on a marker, directions to that market will pop-up.

LIMITATIONS

EcoPlates does not have complete list of farmers markets in the United States and the recipes generated through AI have not been tested (the dish might now be perfect because there is no way of knowing whether the recipes actually exist or not). Lastly, the barcode scanner food database is not complete. Some barcodes scanned might not have a corresponding Eco-Score or the object might not be even registered in the database.

ACKNOWLEDGEMENTS

- Dr. Yu Meng: (Provided guidance from beginning to end, including the review of the project proposal and feedback)