Sift

Team Members

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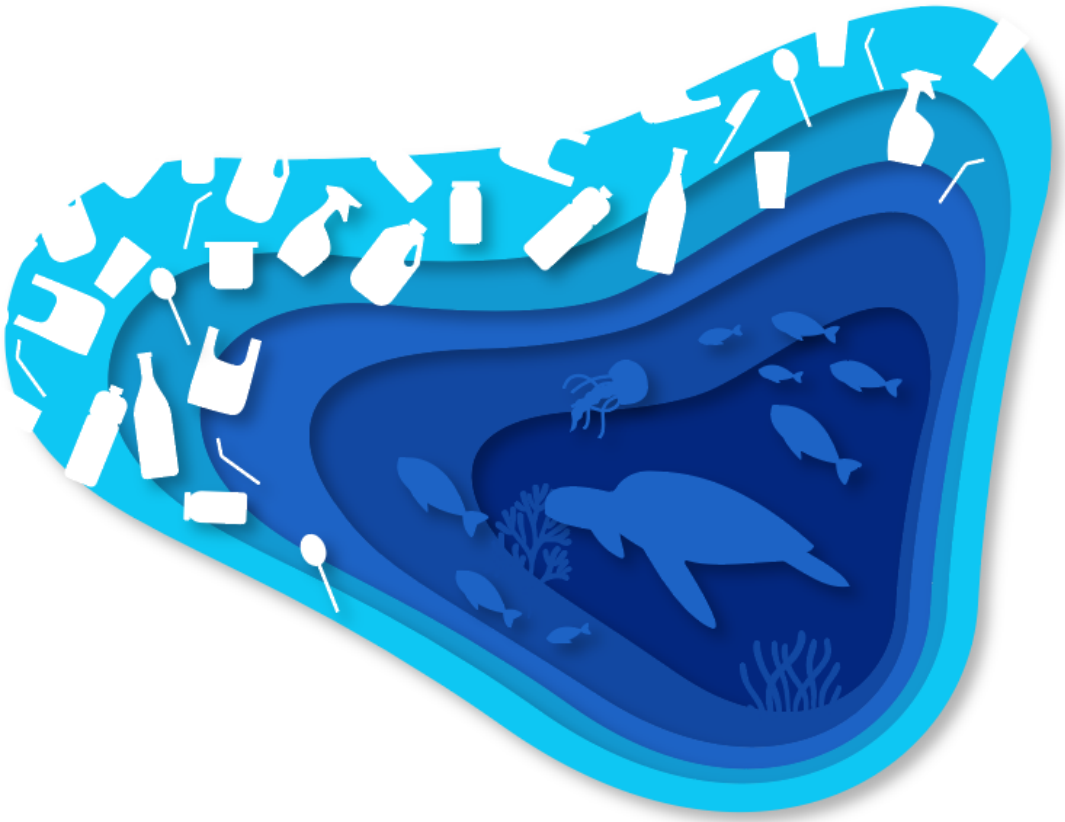

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Project Overview

Overview

Sift is an educational waste management mobile application that allows users to scan an object with their camera to receive precise information on how to recycle it properly. Sift uses Artificial Intelligence that can recognize different materials and tell the user which material can be recycled. Sift also has a search functionality that enables users to search by the name of the item and get directions to the recycling centers.

Problem

The pain point that many people experience is that they are not sure how to recycle items correctly, and that they also do not have time to do proper research. This makes Sift a handy solution. There aren't any apps on the Play Store that allow the user to scan the object and get information on how to recycle it correctly.

Solution

The pain point that many people experience is that they are not sure how to recycle items correctly, and that they also do not have time to do proper research. This makes Sift a handy solution. There aren't any apps on the Play Store that allow the user to scan the object and get information on how to recycle it correctly.

Sift

What industry will your project be in? MedTech/BioTech/EduTech… and why? What pain point will it solve for the user(s), and why would they use it?

Sift is an educational waste management mobile application that allows users to scan an object with their camera to receive precise information on how to recycle it properly. Sift uses Artificial Intelligence that can recognize different materials and tell the user which material can be recycled. Sift also has a search functionality that enables users to search by the name of the item and get directions to the recycling centers. The pain point that many people experience is that they are not sure how to recycle items correctly, and that they also do not have time to do proper research. This makes Sift a handy solution. There aren't any apps on the Play Store that allow the user to scan the object and get information on how to recycle it correctly.

Project Main features (explain them)

Outline at least three main features of your platform that provide you user base with value, would they pay for it? Think about the hard project deliverables.

1. Allows users to take pictures of the item and suggest which bin to use.
2. Suggests nearby recycling centers.
3. Allows users to search for an item to see instructions on how to recycle it correctly and, if applicable, show nearby recycling centers.

Feature A: Image Recognition

How does this utilize the mobile device?

- This feature uses the mobile camera to take the picture of an object.

Why is this feature important to the user and application?

- This feature acts as an input mechanism for further processing. This image will be used to identify an object, and then the application logic will make suggestions accordingly. It is important for the user because they will be able to find out how to recycle a particular item with just one click, even if they are not sure what material that item is made of. (Saves time)

What problem is being solved?

- The problem being solved is lack of knowledge about how to recycle. It helps the user to broaden their knowledge and follow proper waste management techniques, so that less wait will go to landfill or to wrong bins.

How is it being solved?

- Users will get to know which bin they must use to throw away an item.

In what way will the user interact with this feature?

- Users will take a picture of an item, and the application will suggest which bin they should use to throw it away. In cases when an item can not be thrown to the regular bin, the user will see recycling centers where they will have to bring an item.

Why is this relevant to the user?

- It is relevant to the user because they want to decrease their carbon footprint.

Feature B: Recycling Center Locations

How does this utilize the mobile device?

- This feature uses the mobile's GPS to locate itself.

Why is this feature important to the user and application?

- This feature will show nearby recycling center locations where the users can recycle items.

What problem is being solved?

- Not knowing where the nearest and most relevant recycling stations are. Identify nearby and relevant recycling stations.

How is it being solved?

- If the item scanned/searched falls under the recycling category, the application will suggest to the user where to take it to get it recycled. The user can also search by applying filters such as glass, electronics etc.

In what way will the user interact with this feature?

- Users can click on the suggested recycling centers and see its complete address, contact details and distance from the current location.

Why is this relevant to the user?

- It is relevant to the user because they want to know where they can recycle items with the least amount of effort by researching these places.

Feature C: Search By Item Name

How does this utilize the mobile device?

- This feature will use an API for getting results on how to recycle different items. This is also a backup for the camera feature, if an item can not be recognized then the user will have to search manually.

Why is this feature important to the user and application?

- It is important for the application because there should be a way to get information about recycling without using a camera (for those users who do not have a camera, or if the object is not recognized).

What problem is being solved?

- Possible camera limitations making the item difficult to be recognized by the image.
- Users will get to know which bin they must use to throw away an item.

How is it being solved?

- By providing an alternative way to search for the item with correct and relevant information to the user.

In what way will the user interact with this feature?

- The user will input the words in the search field to get recycling instructions.

Why is this relevant to the user?

- Because they want to know how to recycle items correctly.

Cloud Feature

How will the cloud aspect be tied into the application?

- Google authentication.
- AWS Instance hosting for node server and marketing website
- AWS Rekognition.

Competitive Analysis

Competitors

Application	RecycleBC	Vancollect	Recycle Nation	iRecycle	Sift
Search by object	✓	✓	✓	✓	✓
Recycling depots nearby	✓	✗	✓	✓	✓
Recycling curiosities	✗	✗	✓	✗	✓
Scan	✗	✗	✗	✗	✓

User Persona

Maya Wilson

"We won't die from old age, we'll die from climate change."

Maya is a high-school student that loves hiking and spending time with her friends. She and her friends are deeply concerned with climate change and keep pushing for their parents to be more eco-conscious.

BIO

Age:	16
Status:	Single
Location:	Victoria
Education:	High-School
Occupation:	Student

GOALS

- To do more to reverse climate change.
- To see her parents more involved with environmental causes.
- Want to see more places with different bins for recycling.

INTERESTS

- Planting trees
- Hiking
- Going to the beach with friends
- Volunteering in animal shelters

FRUSTRATIONS

- When her parents don't know where to throw something, they don't research and throw it in the general garbage.
- Too many kinds of plastic make recycling confusing.
- Doesn't know where the facilities to take waste are and doesn't have a way to get there.
- Feels that people talk a lot and don't act when it is necessary. She is worried about climate change and if it is still possible to stop and reverse its effects.

BRANDS

PERSONALITY

Introvert	○	○	○	○	○	●	○	Extrovert
Passive	○	○	○	○	○	○	●	Active
Conservative	○	○	○	○	○	●	○	Innovative
Curious	○	○	○	●	○	○	○	Cautious
Organized	○	●	○	○	○	○	○	Careless

TECH ENABLE

Mobile	●	○	○	○	○	○	○	Desktop
Casual User	○	○	○	○	●	○	○	Power User
Laggard	○	○	○	○	○	●	○	Early Adopter

Kathy Hudson

"Reuse the past, Recycle the present, Save the Future !"

Kathy is a housewife who enjoys spending her leisure time with her family. She loves nature and often goes camping. Also, she is very concerned about recycling to reduce waste management and contribute to a clean environment.

BIO

Age:	43
Status:	Married, 3children
Location:	Vancouver, B.c.
Education:	University
Occupation:	Housewife

INTERESTS

- Board Games
- Exercising
- Gardening
- Outing with family
- Socializing with people

BRANDS

GOALS

- To maintain a healthy lifestyle, spreading awareness about recycling.
- To contribute to a sustainable environment.
- To educate younger generations about the importance of recycling and how to do it correctly.

FRUSTRATIONS

- Not enough time for researching how to recycle items that she does not know.
- Her kids are not interested in recycling and she wants to have a fun and easy way to engage and educate them about recycling.
- While recycling industrial waste she does not know where the nearest recycling station is.

PERSONALITY

Introvert	○	○	○	○	●	○	○	Extrovert
Passive	○	○	○	○	○	●	○	Active
Conservative	○	○	○	○	○	○	●	Innovative
Curious	○	○	●	○	○	○	○	Cautious
Organized	●	○	○	○	○	○	○	Careless

TECH ENABLE

Mobile	○	●	○	○	○	○	○	Desktop
Casual User	○	●	○	○	○	○	○	Power User
Laggard	○	○	○	○	○	●	○	Early Adopter

Lucas Silva

" I would love to recycle correctly if I just knew how."

Lucas is an immigrant from Brazil who has recently moved to Canada, Burnaby to pursue a post bachelor degree in psychology. He finds recycling very challenging as he is not used to separating rubbish.

BIO

Age:	26
Status:	Single
Location:	Burnaby
Education:	Post Degree
Occupation:	Student

GOALS

- Having a degree and a good job at a company that is sustainable.
- Learning about Canadian culture and behaviour.
- Learn and understand how to recycle properly.

INTERESTS

- Gym
- Social gathering
- Cycling
- Poker
- Video game

FRUSTRATIONS

- Culture shock, so much information needed to learn and adapt to lifestyle.
- Doesn't have any on-boarding/ guidance in recycling activities.
- He does not know where to recycle his old printer and clothes that are too small for him.

BRANDS

Walmart

SAFEWAY

Tim Hortons

PERSONALITY

Introvert	○	○	○	○	○	○	●	Extrovert
Passive	○	○	○	○	○	○	●	Active
Conservative	○	○	○	○	○	●	○	Innovative
Curious	○	●	○	○	○	○	○	Cautious
Organized	○	●	○	○	○	○	○	Careless

TECH ENABLE

Mobile	●	○	○	○	○	○	○	Desktop
Casual User	○	○	○	●	○	○	○	Power User
Laggard	○	○	○	○	○	●	○	Early Adopter

Project Milestones

Design Plan

Week 1	Finalising Project Idea / Design Brief / Project Proposal V1
Week 2	Competitors Research / Rough user flow / Feature Planning and Scope
Week 3	Personas/ User Story / Branding Guideline / Moodboard
Week 4	Wireframes / Logo Design / Feature Flow Complete
Week 5	UI Kit V1 / Icons Style / Features Locked / Project Proposal V2
Week 6	High Fidelity Mockups / UI Kit V2 / Planning for Promotional Website
Week 7	Usability Testing / High Fidelity for Promotional Website V1
Week 8	Project Proposal V3 / High Fidelity for Promotional Website V2
Week 9	Promotional Materials V1 / User Testing (Bug Bash) / Presentation Plan V1
Week 10	Presentation Plan V2 / User Testing (Bug Bash) / Promotional Materials V2
Week 11	Final Presentation Plan / Final design files /
Week 12	Final Presentation

Development Plan

Week 1	Finalising Project Idea / Platform Plan / Create Basic DevOps Environment
Week 2	Competitors Research / Select Platforms And Frameworks
Week 3	Feature List / Data Base Structure V1 / Testing APIs
Week 4	Data Base Structure V2 / Testing APIs / Components Structure
Week 5	Features Distribution / Training AWS Rekognition Model
Week 6	API Token with Authentification / Functioning Prototype (Apha Build)
Week 7	Functioning Prototype (Apha Build) / Bug Report And Prioritizing Tasks
Week 8	User Testing (Bug bash) / Beta Building / Promo Website Buildign V1
Week 9	Beta Building Finalization / Code Freeze / Promo Website Buildign V2
Week 10	Presentation Plan V2 / User Testing (Bug bash)
Week 11	Final Presentation Plan / Final Dev Documentation
Week 12	Final Presentation

UI Kit, Wireframes, Mockups

Color Palette

Primary Colour

#19327D

Secondary Colour

#097984

Gradient Colour

#093467 #20C5D4

Background Colour

#F3F4F8

Typography

H1 - Lato Bold 30pt

H2 - Lato SemiBold 20pt

H3 - Lato SemiBold 18pt

body text - Lato Regular 16pt

links - Lato Black Italic Underlined 16pt

UI Kit

Primary Active

Button Button

Secondary Active

Button Button

Dissable

Button Button

Check box

Search

Search by address or postal code...

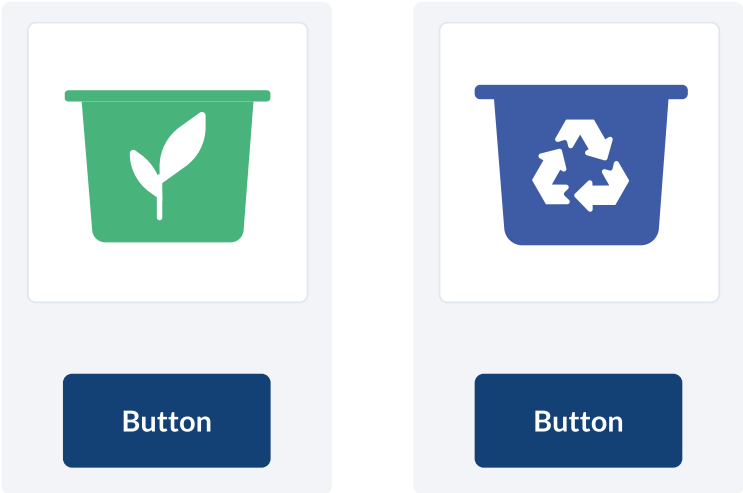
Navigation Inactive

Home Search Scan Location Profile

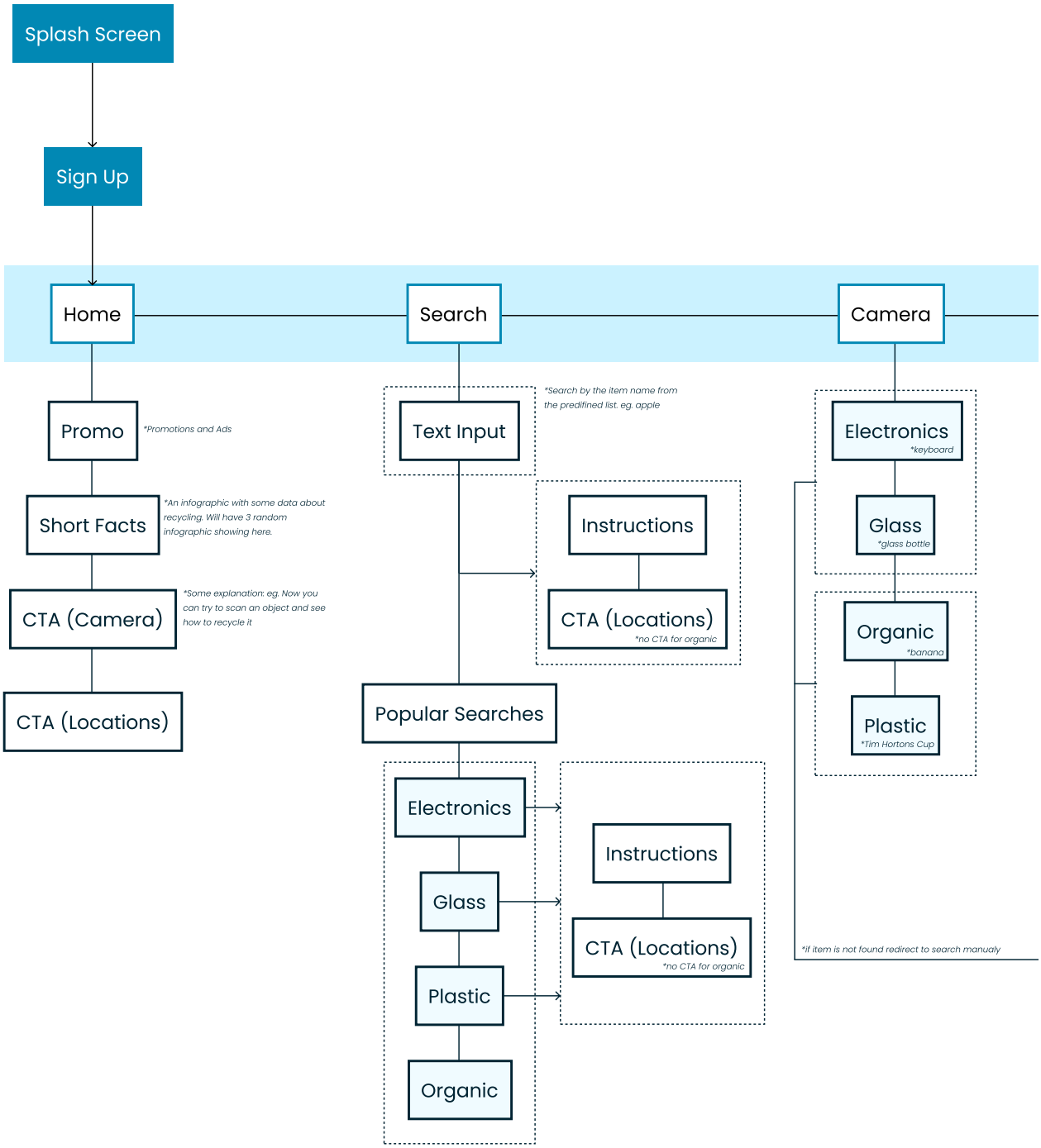
Navigation Active

Home Search Scan Location Profile

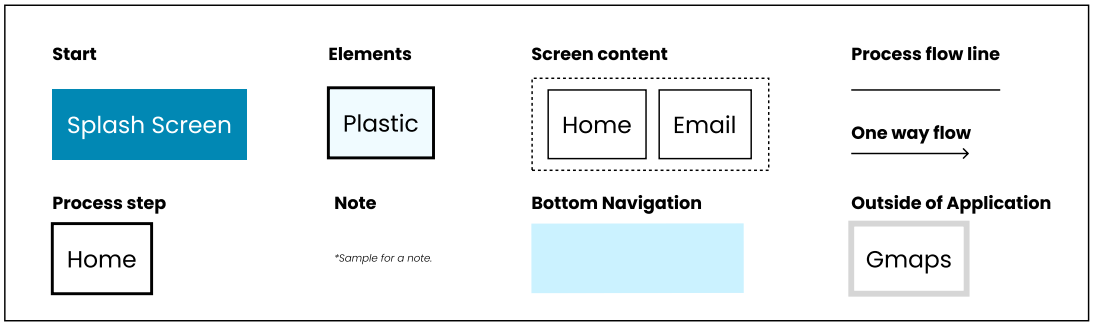
UI Kit

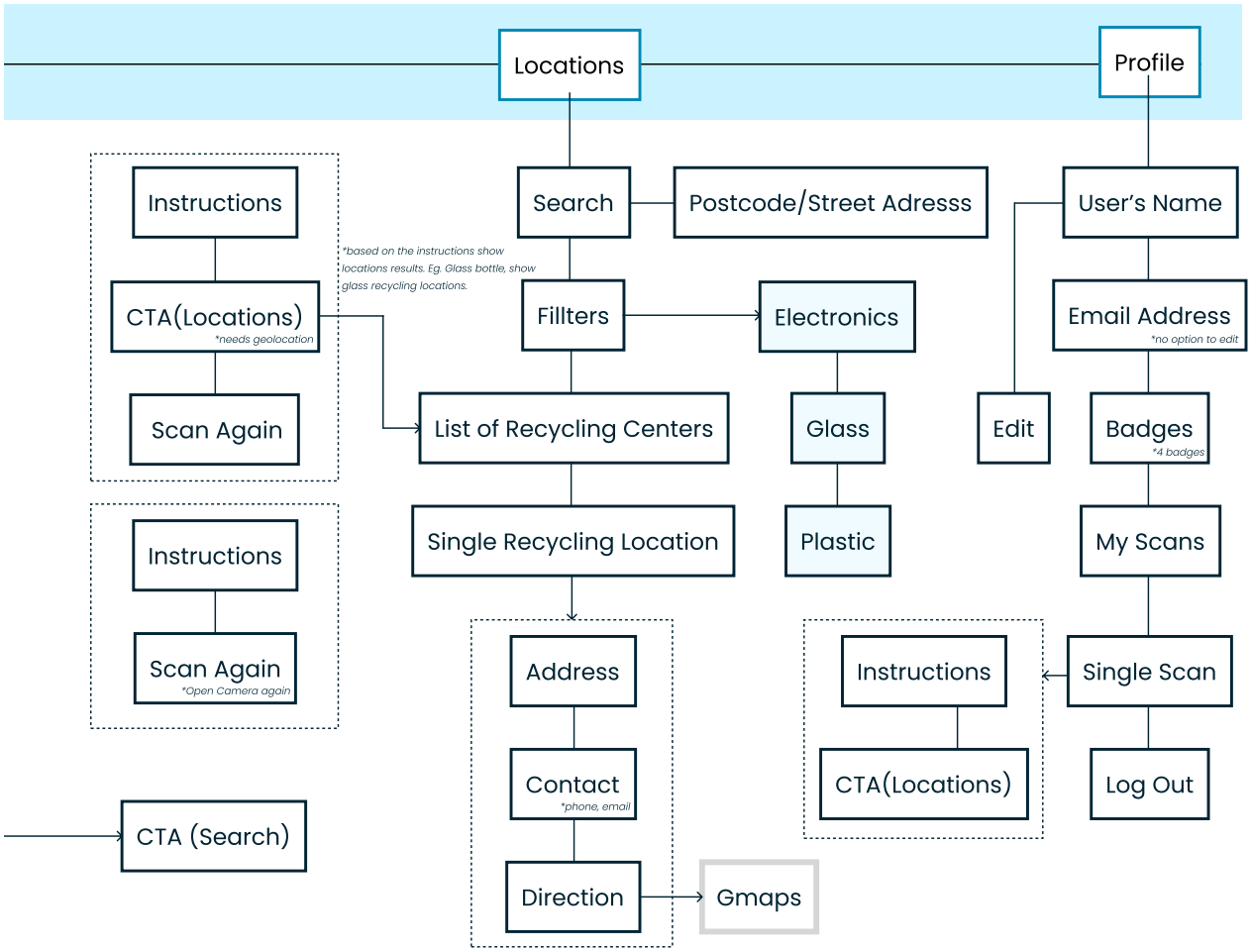


User Flow


Splash Screen
Sign Up
Home
Search
Camera
Promo
*Promotions and Ads
Short Facts
*An infographic with some data about recycling. Will have 3 random infographic showing here.
CTA (Camera)
*Some explanation: eg. Now you can try to scan an object and see how to recycle it
CTA (Locations)
Text Input
*Search by the item name from the predifined list. eg. apple
Instructions
CTA (Locations)
*no CTA for organic
Popular Searches
Electronics
Glass
Plastic
Organic
Instructions
CTA (Locations)
*no CTA for organic
Electronics
*keyboard
Glass
*glass bottle
Organic
*banana
Plastic
*Tim Hortons Cup
*if item is not found redirect to search manualy

Legend


Start
Splash Screen
Elements
Plastic
Screen content
Home
Email
Process flow line
One way flow
Process step
Home
Note
*Sample for a note.
Bottom Navigation
Outside of Application
Gmaps


Locations
Profile
Instructions
CTA(Locations)
*needs geolocation
Scan Again
*based on the instructions show locations results. Eg. Glass bottle, show glass recycling locations.
Search
Postcode/Street Adresss
Fillters
Electronics
List of Recycling Centers
Glass
Plastic
Single Recycling Location
Instructions
Scan Again
*Open Camera again
Address
Contact
*phone, email
Direction
Gmaps
CTA (Search)
User's Name
Email Address
*no option to edit
Edit
Badges
*4 badges
My Scans
Single Scan
Log Out
Instructions
CTA(Locations)

Diana Malynovska

Project Manager & UX/UI Designer

I am a deadline-driven UX/UI Designer focused on overseeing projects from concept through final delivery. Resourceful and hardworking with vendor sourcing expertise and empowering leadership skills illustrated over 3 years of working in the industry.

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Munish Bhambra

UI/UX Designer

A focused designer to gain insights into visual creativity and how to take elements and arrange them to work well together. Collaborative, passionate and inventive creator accustomed to performing in deadline-driven environments with an emphasis on working within requirements.

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Thiago Siqueira

Lead Developer/Front-end Developer

Experienced leader, skilled engineer and customer experience focused developer. I love learning new technologies, I adapt myself to any work environment and I have excellent social skills.

Lately, I have been working with data-driven react web applications and react native apps.

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Amandeep Singh

Full-Stack Developer

Possess six years of professional experience facilitating custom web applications development, deployment, monitoring and maintenance. Worked on a wide range of products/projects to solve business problems using agile and devops models.

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Viet Tuong Pham

Lead Designer & UX/UI Designer

I have been in the Design field for the past 8 years in many design aspects and I used to work as an Industrial Designer. I am currently studying at Langara College in a Post-Degree program as a Web and Mobile App designer. I am looking forward to being a UX/UI Designer after my graduation from Langara.

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Abhijeet Singh

Full-Stack Developer

I create engaging experiences for my audience by building pixel-perfect and performant products. From writing the first line of code to custom-tailoring the user experience, I believe in working across the entire spectrum of a project.

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Ana Carolina Arado Oliveira

UX/UI Designer

I have a background in Architecture, including the design principles it shares with web design. My main interest is on user-centric design, and the creation of accessible and rich user experience.

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