

Requirements and Use Cases

Team
FLOAT

Aaron So 17150137
Clarence(Junwei) Su 36387132
Ming Hin Matthew Lam 33056145
Rachel Yeo 30032122
Richard Xie 55786140
Samuel Farinas 17721144
Selina Suen 14022140

Motivation/Opportunity

Float will be an Android application where users can share personal stories and photos with the goal of raising awareness and donations for a selected charity. Unlike other social media applications, Float is centered around spreading images and stories to promote charitable causes.

Problem Statement

The problem of	With the current available resources, online methods of donation are disconnected and provide little connection to others and the charity itself. Donations made by a person are often individual and relatively non-interactive, forcing people to donate without a feeling of unity or end goal.
Affects	Those who are interested in donating to charity organizations, those who receive assistance from charity organizations and charity organizations themselves.
The impact of which is	People feel a disconnect between themselves and charities, thus making them less motivated to donate
A successful solution would be	Providing a platform that allows users to connect with other people and charity organizations. Usage of the platform would force people to band together and work towards the same end goal, providing a feeling of teamwork and group unity. This serves to make charity donations interactive, collaborative and an ultimately rewarding experience.

Product Position Statement

For	Android users, Charity organizations
Who	Wish to promote charity donations and share stories and pictures
Our System	Is an Android application utilizing an online server and database and location API
That	Allows users to upload personal images

	which other users can pass on, with the goal of an image spreading across regions to raise awareness and donations for selected charity campaigns
Unlike	Snapchat, instagram, gofundme, twitter, facebook
Our Product	Combines the idea of image sharing with crowdfunding and is focused on the idea of using social media to benefit others in a fun and interesting way

User Demographic

Users of Float will fall into two categories: Application Users and Charity organizations.

Application User:

Their primary goal for the software is to raise money for charities that matter to them, while also spreading personal pictures/stories.

Feature List:

Create a campaign <ul style="list-style-type: none"> - Upload an image and write a description - Choose a charity - Choose the goal distance for the campaign 	Users can create their own campaigns by following the listed steps <ul style="list-style-type: none"> - Our application must allow users to select an image from their phone and upload it. The user can then write a description for their image - The user can browse through the valid charity organizations before choosing one to support - The user also choose the distance goal of their campaign as well as the amount of money they want to pledge
Search for campaigns in your location	Users can browse all campaigns that have not expired and appear within their radius of view
Spread a campaign	A user can pass on an campaign in their current location radius and allow all other users within the radius to view the campaign
Donate to a campaign/charity	A user can donate money to any charities or campaigns that they see

Comment on a campaign	Users can leave comments/feedback in the comments section of each of the campaigns
------------------------------	--

Charity Organization User: charity organizations/representatives would use the app to submit their method of payment and confirm their legitimacy. They would expect an intuitive user interface to create a public charity profile and add payment details in a secure manner.

Feature List:

Upload charity icon	The charity can upload its icon for ease of recognition to the application user
Enter charity organization info	The charity can enter information regarding itself to discuss their cause, the use of donations, and its scope
Upload payment details	The charity can enter their payment details for receiving donations. This may include a PayPal account, bank account numbers, etc.

Constraints:

Payment	Payment methods may be limited, and user information must be properly stored and secured.
Android Platform	Only a fraction of smartphone users use Android phones
Information Storage	The application may not be able to store large volumes of information, as there are limited online database options within our price range.

Assumptions and Dependencies:

This project depends on the Google API, the online server and database, PayPal (and other payment APIs), social network app APIs, user permissions, the user having the necessary smartphone peripherals.

Regarding the Google API, we assume that:

- It is capable of mapping locations specified in coordinates or as an address.

Regarding the online server, we assume that:

- It is capable of handling connections/requests from multiple smartphones.

Regarding the database, we assume that:

- It has the means to prevent stalemates and unpredictable behaviour due to data race conditions.
- It can store large amounts of pictures and text.

Regarding PayPal (and other payment APIs), we assume that:

- It can process payments through the smartphone
- It can delay payments or issue refunds in the event that campaign does not reach its final destination

Regarding social network APIs, we assume that:

- It (they) provide a means to sign in a user through their social network account into the Float project.
- It is secure.

Regarding user permissions, we assume that:

- The user allows the app to access to the GPS, internet (through wifi or data), and camera.

Regarding smartphone peripherals, we assume that:

- The smartphone is capable of using the GPS, connecting to the internet, and taking pictures.

Use Cases:

Use Case 1: Application user uploads an image

1.1: The application user selects an image to upload

1.2: The application user writes a description for the chosen image

1.3: The application user selects a charity campaign to support

1.4: The application user sets a goal for the travelling distance of their image, and how much money they want to pledge

Preconditions:

1.1 The user must choose an existing image from their gallery, or take a picture from their phone camera

1.2 The user must have uploaded an image (after 1.1)

1.3 The charity should be legitimate

1.4 The goal distance must be both reasonably large and reasonably small

Postconditions

1.1 The selected image will show up on the campaign, which can be viewed by other users within the upload radius

1.2 The written description will show up on the campaign

1.3 The charity's logo appears on the campaign

1.4 The campaign's goal distance, distance already traveled and pledge amount will be visible on the campaign

Main Success Scenario

- 1.1 The user indicates they would like to upload an image. They select one from their gallery. It appears on the returning screen with the campaign creation page.
- 1.2 The user enters in text below the image. He/she clicks the save button, the text appear in a read-only form in the campaign page.
- 1.3 The user selects the charities tab. He/she scrolls through a list of organizations. He taps on one. He returns to the previous page with the organization listed in the campaign page.
- 1.4 The user selects a text box and enters the distance they want the campaign to travel for it to be deemed a success. If the distance is invalid, the user is prompted for a different distance. The user confirms his selection with a button. He/she returns to the campaign. The user selects a text box. The user enters a currency amount into the box. He/she then clicks to confirm the amount. He/she returns to the campaign page.

Use Case 2: Application user spreads a campaign

- 2.1 The user browses campaigns in their location
- 2.2 The user selects a campaign within their location that they wish to support
- 2.3 The user chooses if they wish to donate to a campaign

Preconditions:

- 2.1 The campaigns can only show up if the user is within the campaign's spread
- 2.2 Only active campaigns are shown
- 2.3 The user must provide a payment option if they choose to donate to a campaign

Postconditions:

- 2.1 Once spread by the user, the campaign is shared with the user's radius
- 2.2 The money donated by the user is added to the campaign's total donations

Main Success Scenario

- 2.1 The user indicates that they want to view campaigns, and are redirected to an interactive map
- 2.3 Using the map, they can browse available campaigns in their area (indicated by pins on the map)
- 2.4 Selecting any of the campaigns will bring up a short description of the campaign as well as its associated photo.
- 2.5 While a campaign is open, the user can choose one of three options: spread the campaign, spread the campaign and donate, or exit back to the map
- 2.6 If the user decides to exit back to the map, they return to browsing the campaigns (2.3). If they spread the campaign, they are also given the option of adding a comment before being returned to the map homepage. If the user chooses to donate, they are brought to page where they can choose the amount they want to donate, as well as set their payment preferences.
- 2.7 Once finished, the user is then returned to the map homepage

Use Case 3: Application user views their account details

3.1 The user clicks on the "Account Details" button on the application

Precondition

3.1 The user has an existing, valid account and is logged in

Postcondition

3.1 Any modifications the user has made in their account is saved in their account details

3.2 The user is brought to a new page where they can view all their account information

Main success scenario:

3.1 The application will bring the user to a new page

3.2 The page will contain the most up-to-date information about the user's account

3.2.2 The displayed information includes: the campaigns the user has contributed to, campaigns they have started, the total amount of money they have donated and to which charities, and the option to change their information or delete their account.

Use Case 4: User clicks on a campaign point on the map

4.1 The user opens the application and is brought to the map-view of all the campaigns

4.2 The user clicks on a visible pointer on the map

Precondition:

4.1 The pointer on the map indicates a campaign

4.2 The campaign points shown have not expired

Postcondition:

4.1 The user is brought to a new page containing the details of the campaign once they click on a point

4.1.1 The option to spread and donate to the campaign will only be available if the campaign the user clicked on is within his/her radius

4.2 Clicking on another campaign point on the map brings users to a different campaign

4.3 Changing locations will give users a different set of campaign points on the map

Main success scenario:

4.1 The application brings the user to a new page

4.2 The page will contain the campaign image, description, and the option of spreading and donating to the campaign

4.3 If the user decides to do neither, they can go back

4.4 Upon going back, the user is brought back to the map-view of all the campaigns again

Use Case 5: User opens the application for the first time

Precondition:

5.1 The user has the application successfully installed on their Android phone

Postcondition:

5.1 The user can use all features of the application

Main success scenario:

5.1 The user clicks on the application icon on their phone

5.2 The application opens

5.3 The user is prompted to login using Facebook

5.4 Upon successful login, the user is brought to the main page of the application containing a map-view of all the campaigns in their area

Use Case 6: User quits the application

Precondition:

6.1 The user has opened the application successful

Main success scenario:

6.1 The user closes the application on their phone

6.2 The application will save any changes made by the user before the application closed

6.3 When the user opens the application again, their changes have been saved

Use Case 7: User decides to donate to a campaign

7.1 The user is in the campaign's home page. They click the donate icon and are brought to a separate page

Precondition:

7.1 The user has chosen a campaign from the map and is currently in the campaign's home page

Main success scenario:

7.1 In this page, they are prompted for the amount of money they would like to donate, as well as their payment information

7.2 The payment is deemed as accepted or declined. If the payment is accepted, a receipt is saved in the user's profile and the user is returned to the campaign's home page. If the payment is declined, the user is given the option to try again or to cancel the transaction.

Use Case 8: The user views the database of campaigns that succeeded

Precondition:

8.1 The campaigns in the list are valid and have expired

8.2 The campaigns in the list have reached their distance goal before expiry

8.3 The amount of pledge money for the campaign has been collected and given to the selected charity

Postcondition:

8.1 The user is brought to a new page

8.2 The new page gives users a view of all the campaigns that have succeeded on Float

Main success scenario:

8.1 The user begins on the homepage of the app. They click the icon indicating they would like to view past campaigns

8.2 They are then given the option to view campaigns that succeeded or campaigns that failed.

8.3 If they choose campaigns that succeeded, they are brought to a new page which contains a list of all campaigns that have succeeded as well as a short description. This description contains: the amount of money the campaign raised, the number of users who contributed to the campaign, the charity the campaign was aimed at, the user who started the campaign, the length of time it took to complete the campaign and the distance the campaign traveled.

Use Case 9: The user views the database of campaigns that have failed

9.1 The user begins on the homepage of the app. They click the icon indicating they would like to view past campaigns

Precondition:

9.1 The campaign existed in the past, and the timer for the campaign has run out

9.2 The campaigns no longer appears on the map and users are not able to spread or donate to the campaigns

Main success scenario:

9.1 They are then given the option to view campaigns that succeeded or campaigns that failed.

9.2 If they choose campaigns that failed, they are brought to a new page which contains a list of all campaigns that have failed as well as a short description for each of them. This description contains: the amount of money the campaign raised (if any), the number of users who contributed to the campaign, the charity the campaign was aimed at, the user who started the campaign, the length of time the campaign lasted for and the distance the campaign traveled.

Use Case 10: The user switches from a map-view to list-view of the campaigns

Precondition:

9.1 The user is on the main page of the application in map-view

9.2 The user has indicated they want to switch to list-view by pressing the list-view button

Postcondition:

10.1 The user interface of the application changes from a map-based view of all the campaigns in a user's area to a list-based view of all the campaigns in a user's area

Main success scenario:

10.1 The interface changes from a map-view of all the campaigns in the area into a list-view of all the campaigns in the area

10.2 The user can scroll through the names of all the campaigns in their area

10.3 By clicking on a name, the user is brought to a new page containing the full details of the campaign

Use Case 11: The user uploads a profile picture

Preconditions:

11.1 The user must have successfully logged in to the application

11.2 The user has an image they wish to upload as their profile picture on their Android phone

Postconditions:

11.1

Main success scenario:

11.1 The user selects the image they wish to upload as their profile picture

11.2 All other users can now view the user's profile picture through the user's icon

11.3 If the user has indicated a preferred privacy setting, then only certain users may view the user's profile picture

11.4 Users who are not apart of the user's preferred viewing list will see the user's icon as a default image