# Project Worldwide - Revised

1/22/2026

## App Idea

The app is a crowd-sourced data collection system tracking the growth of Volcán de Fuego in Guatemala. There will be a standing post for users to place their phones in on a nearby mountain. This will allow users to snap a photo at a set angle to upload to the web-app. The uploaded photos can then be compiled into a timelapse for the public to see and watch the volcano's growth over time. The photos will also be used by Dr. Waite's team to analyze the growth of the volcano over time. The website will also provide some information about the volcano and the hazards it poses to the public.

The app will be split into four webpages: a landing & informational page, an image upload page, a static timelapse page, and an admin page for Dr. Waite to view all the photos. The separation of functionality onto different web pages will reduce the strain on the user's thin bandwidth near the volcano.

In addition, this project has a few stretch goals, prioritized in the following order.

1. Images submitted will be run though a filtering algorithm to remove unwanted or incorrectly formatted images. Invalid photos will be moved to a quarantine folder
2. After submitting an image, the user will receive a timelapse with their image at the end in the form of a GIF. This timelapse will be premade before user-upload to allow for quicker turnaround time.
3. An admin access page will be provided to allow easy viewing of the photos collected

## Users

- Dr. Waite & Team
    - A group of geological experts who will use the photos to determine the growth of Volcan de Fuego over the course of several years
    - Expected to be reasonably proficient in technology
- Members of The Public
    - One off users who will upload a photo to the web-app and view timelapses.

- Expected to be primarily adults
- High concentration of Spanish and English speakers
- Assuming average tech literacy, although may vary wildly
- Almost all will have phones to use, should understand

## Major Workflows

General workflow:

1. User opens the website via QR code or by entering a URL. There will be an option at the top for displaying the page in either Spanish or English.
2. The website opens to the main landing page with the volcano information and a place to upload photos.
3. Users will follow instructions on the landing page to set up their device on the provided stand.
4. Clicking "upload photo" will ask the user to access the camera, clicking yes will bring them to another page where they can take the photo and upload it automatically.
5. After successful upload, the same page will display a timelapse featuring the user's photo with the option to download the timelapse and/or return to the main landing page.

Admin workflow:

1. The user logs in to the admin gui using their credentials.
2. A file system will be displayed including the folder of "approved" photos and a folder of "quarantined" photos, all with metadata/timestamps.
3. Admin users will be able to delete, move, and download these photos per their discretion.
4. There will be an option to logout and/or return to the main landing page for normal users.

## Views

1. Landing Page
    a. Contains important information about the volcano (English AND Spanish available)
    b. Contains safety information, like hazards
    c. Contains a link to a nearby volcano monitoring site for live information about the volcano
2. Photo Upload Page

    a. Used to upload a taken photo to the database
    b. When uploaded, will redirect to the Timelapse Page with a timelapse including the user's upload
    c. Controls the user's camera for more consistent camera shots (stretch goal)
3. Timelapse Page
    a. Returns a timelapse to the user to view
    b. Includes their most recently uploaded photo at the end of the timelapse if directed from the upload page
    c. Includes options to change the time range of the timelapse
4. Admin Page
    a. All images available to view, organized by year and month
    b. Allows admins to manage photos that are in the database
    c. Batch download for large amounts of photos (stretch goal)

## Data

- Photos of Volcán de Fuego
- Timestamps for each photo

## Anticipated Challenges

- Automatic sorting/filtering of photos
- Generating timelapse with images lined up
- Translation of the website to Spanish for main user base