Research
What is the behavior(s) you are trying to capture? What are your users physically doing?

*Taking aerial images with ballons, kites and drones*
*Learning about place*
*Learning how a geographic area changes overtime*
*Collaborating with others in relation to a particular place*
*Looking at maps*
*Flying ballons, kites and drones*
Challenges

**UAV** (Unmanned Aerial Vehicle) owners lack a way to store, share and search aerial images and aerial videos on universal/standard index.

*Google Satellite software provides users with satellite imagery overlaid on top of map data, however, Google satellite is proprietary software that Google solely controls, owns and maintains.*

*Those that are interested in creating map/aerial image overlays have no way to combine their overlays with other data for a given area.*

*My app will enable users to store, search and share aerial images and aerial videos on latitude and longitude points.*

*My app will be open source; the data for my app will be user generated or be obtained from free and open free sources.*

*My app will combine map/aerial image overlays with other data sources by matching on latitude and longitude.*
Users will be able to learn, explore and see new things about specific places in space.

The design of my app will empower users to collaborate and share insights about a particular geographic place.

The experience that users will using my app will inspire collect data and contribute multiple sets of aerial images over time.
**Who would use it**
People interested in aerial imagery will use this, as well as people doing research about a particular place.

**How will they use it**
Users will upload their aerial images into the website and enter in the lat/long of where the photos were taken. The web application will stitch the images together and overlay them on top of a map. Additionally, users will have the option to add video, annotations or other data about that relate to that particular geographic area. At the same time, users will be able to go to the website and view a map area of particular location; the map presented will contain the overlaid UAV images, as well as any other data that is available.

**What is the need for this?**
People want and need to know about the places around them; aerial photography, map layers and other data can give a user a detailed sense of place.

**What do they currently do?**
Currently, users can use a product called mapknitter to stitch together aerial images and make map overlays, but the interface is very limiting. Users also currently upload their UAV videos to youtube.
Where will you find this UI?

*On the internet (through a url)*
What are the screen size(s) for this? Indicate the pixel size(s).

Desktop/Laptop size: 1080px
Create a set of three personas* for different users.

Chris, the former campus cutie

AGE
24

Hobby
Hiking, Backpacking

Familiarity with Technology
19

Personality type:
Explorer

Passion: environmental justice

Chris recently graduated from college. He is a very outdoorsy and adventurous guy. He likes to climb trees, go hiking and generally be outside and explore the world around him. He loves to travel and has strong feelings about global warming and recycling.
### Persona 2

**Create a set of three personas for different users.**

<table>
<thead>
<tr>
<th>AGE</th>
<th>Hobby</th>
<th>Familiarity with Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>Drone Enthusiast</td>
<td>22</td>
</tr>
</tbody>
</table>

**Sam, the semi-retired engineer**

- **Personality type**: methodical tinkerer
- **Passion**: working on personal projects

Sam worked for 20 years at General Electric where he was a member of a team of engineers that helped to design and build wind turbines. A year ago, Sam was laid off from his job at GE with partial retirement benefits. In the meantime, Sam was able to find part time work as an energy consultant but still has a lot of free time on his hands. Throughout his life, Sam has enjoyed tinkering on various mechanical personal projects. Last year, Sam's wife bought him a drone kit for Christmas. After he built and starting flying his initial drone, Sam was hooked on drones! He currently owns a total of 5 drones in various shapes and sizes; he's bought 3 and has built out 2 more.
Tina, the tech-savy teacher

Tina is a 3rd grader science teacher in Portland Oregon. Tina likes to teach her students science by having her students explore the world around them. Specifically, she likes to take her classes on meaningful field trips where they can see and experience natural phenomenon that they have learned about in class. Additionally, Tina feels that computers can also foster student learning. Tina tries to assign her students homework that takes them interesting science related websites.
Write a scenario that describes what a user would do with the app. This scenario will then be used to create user flow and app screens. Use simple directions.

0. A user wants to know more about the course of medium-sized creek that runs through a nearby area.
1. Users will strap a camera to a balloon, kite, or drone.
2. Next, they will go out to a location of their choosing and send their UAV into the air.
3. While in the air, the camera attached to the balloon, kite or drone will take photos of the area around the creek below.
4. The user will use their phone to note the latitude and longitude of where the photos were taken.
5. The User will upload their aerial photos to the Website (the application stitches the photos together and overlays them on a map)
6. The user also uploads several photographs and a video that they took of the location from the ground
7. The user reviews the map overlays to learn more about the flows of the nearby creek
User flow for Sam, the Semi-Retired Engineer

1. Sign in
2. Upload aerial images from drone
3. Upload YouTube video from ground
4. Upload photos from ground
5. Sign in
6. Search for place on lat/long
7. View another user's map by place
8. Select visible map layers
9. Annotate + comment on map
10. View map
11. Search for place or annotations/tags
12. Share map
13. Annotate tag
What type of experience do you want to provide for your user?

This app will promote a sense of exploration and expanseness. The goal of this app will be to show people new perspectives of the earth that are neither taken from the ground nor from satellites. These new perspectives will hopefully increase users' awareness of place in relation to space.
Utilize the ‘Experience’ page (slide #13 of this document) and create a formal collage of two polar opposites. What will the overall ‘feeling’ be? Remove the ‘content and the users.’ E.g., if you were going to have a dinner party, would your home be organized? What would that feel like? Would it be cozy? How would you make it that? Take this feeling and apply it to the container/framework of your UI. What is the design shell? Don’t design it yet, just create a collage of what it could look like. Is it angry? Then create a collage of anger, using formal elements (e.g., sharp lines, tension in composition). Then contrast that for your second collage. Create a collage that communicates happy, again using the same principles of form and composition.

Do not use images or words (i.e., photographs or words for collage).