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Hand-Off Plan

View Deployment

https://swayambhu-stories.cloudapps.unc.edu

Video Tutorials

Website Navigation - how to use the UI, side menu; how to walk around etc.

Code Walkthrough - explaining the code implementation and features of interest for future development

How to find 3d coordinates of a specific point on the model

How to Access Project / Set Up Locally

1. Clone potree-develop repo

```
git clone https://github.com/samrshi/swayambhu-523.git
```

2. Download all of the files and folders in this Google Drive folder

3. Place those files into `assets/`

```
assets/
- swayambhu-converted/
- a0.mp3
- prostrations.jpg
- v0.mp4
```

4. Run the following sequence of commands

```
npm i
npm run build
npm start
```

Notes

- The setup guide is also included in GitHub readme

- Push to **main** of the GitHub repo to automatically start a new build on the webpage

- Large files, such as new 3d models and videos, cannot be pushed to `assets` directly. Instead, see **Adding to the** `assets` **Directory** section of the readme

Technical Description

Carolina CloudApp with potree files. Professor Lauren Leve is the primary administrator but anyone can become an admin via these steps:

1. Everyone who wants to use the platform will need to sign up / agree to the ToS by going to: https://cloudapps.unc.edu/subscribe. This includes the professor, teammates, and anyone who's going to be involved from the administrative perspective for the project.

2. Follow this Carolina CloudApps guide to add members to the project

The webapp is self-sufficient and more annotations/models can be added by adding to html file and uploading a converted .las file to potree folder.

To edit annotations

1. Create a new annotation object, change the name *imageAnnotation* and the description html for different annotations. Remember to add it to scene.annotations at the end

```
{
    let imageAnnotation = new Potree.Annotation({
      position: [331466.170, 3066790.464, 1383.757],
      "cameraPosition": [331474.338, 3066783.461, 1383.500],
      "cameraTarget": [331466.170, 3066790.464, 1383.757],
      "title": "Prostration",
      "description": `
        <img src="assets/prostrations.jpg"
          name="prostrations"
          class="annotation-image"
          style="width:350px;" />
      `
    });
```

```
        scene.annotations.add(imageAnnotation);
}
```

2. Navigate the webpage and use the point marker to find the coordinates of the ideal position, cameraPosition and cameraTarget

    a. position: where the annotation is floating at

    b. cameraPosition: where the user is "standing" / where the camera is automatically set at after clicking on the annotation

    c. cameraTarget: where the camear automatically looks at after clicking on the annotation

3. Refresh the webpage. The annotation should be rendered now! If you don't see it, try standing closer to the cameraPosition because we hide the annotations if the distance between user's current position and the annotation's cameraPosition > 10. You can change this by setting the const value *annoVisibleDistance* at the top of the html file.

To change the 3d model

1. Make sure the new 3d model is in xyz coordinates with meter as the unit

2. Locate the comment //load temple model in the html file

3. Right under this comment line, change the relative path to point to your new 3d model. Or just replace the current metadata.json with the new one.

```
Potree.loadPointCloud("../pointclouds/data_converted/metadata.json", "temple", function (e) {...}
```

4. Check if the new 3d model is rendered correctly.

5. Update the annotations' positions correspondingly.

The code editor we used was VScode and the packages required is node.js and npm. A functional local version is already installed on Professor Leve's laptop.

This web application does not have any associated costs as long as Professor Leve is at UNC-Chapel Hill since it is hosted on UNC servers as a departmental website. If web app traffic exceeds Cloudapps capabilities, there is a potential cost associated with switching to another cloud host like AWS.

Potential Issues to discuss with clients

- Large increase of website traffic

- Uploading new .las file from LIDAR scan.

- Needing to add unexpected file types for annotations