$\mathbf{VR}_{Data_V} isualization Documentation$

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VR_Data_Visualization is a tool for loading files with 3D data (with X, Y, and Z columns) and viewing them in VR.

INSTALLATION

The following details how to install the `VR Data Visualization` package.

1) Clone the VR_data_visualization repository to your local machine

2) Open this project using Unity version 2020

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QUICKSTART

In the `player` script, go to the `Update()` method and then to the if statement that checks if the "Q" key has been pressed. There, you fill find the line:

```
string[] input_files = new[] { "" }
```

Inside the quotation marks, you can put the location of the file you want to load. Make sure the first line of the file starts with "# X Y Z". It must include "X Y Z" in the first row.

Next, go to Unity and click the `LoadDataPrefab`. Here, you can set graph options for loading your data. For data sets under 20,000 points, I would recommend having the `OBJECT_SCALE` set to 0.3 and `GRAPH_SCALE` at 100.

LOAD LARGE DATA SETS

Loading data sets over 100,000 points is not recommended using this application, but it is possible.

To do so, use the following formula:

```
((X / (0.03182)) / (4/3 * pi)) ^ (1/3)
```

Where X is the number of data points to determine the ideal graph scale to visualize that data. Then, go to the `LoadDataPrefab` and set the `GRAPH_SCALE` to equal the value of the result times 2.

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CONTRIBUTING

Contributing to this project is welcome! To do so, please open a PR in the `VR_Data_Visualization` repository with any code changes and describe the changes in the description section.