

## **OpenGL 3D Model**

### **Installation Guide:**

Step 1: Open up the dist folder on the github

Step 2: If you do not have Microsoft Visual C++ 2015 installed

- Click on vc\_redist.x64 and follow the steps to install it

Step 3: Click on the 3D-Model-Generator.exe to run the application

### **User Manual**

#### **Main Terminal:**

- Hello: Outputs hello to greet the user.

- Editor: Runs the main program

- Quit: Quits out of the terminal

#### **Editor:**

##### **Selection:**

- Click on a push button to select the side of the cube you would like to manipulate.

- Bottom right push button is to select the whole entire cube to manipulate with tools.

- Load Image will open a file browser to choose an image for that side of the cube.

##### **Projection Drop Down Menu:**

- None: Displays no extra projects to compare the sides with,

- Left & Right: Displays projection of the left and right images to compare the top and bottom with them.

- Top & Bottom: Displays Projection of the top and bottom images to compare the left, right, and back images with.

##### **Tools:**

- Scroll Wheel: Zooms in and out

- Hotkey 1. Pointer: Basic pointer

- Hotkey 2: Rulers:

  - Left Click: Adds Ruler Point

  - Right Click: Remove Ruler Point

  - Left Click Drag: Creates two points and creates a line in between them.

- Hotkey 3: Eyedropper Tool (Currently not working)

- Hotkey 4: Mover:

  - Left Click Drag: Moves the image around

  - Right Click: Rotates the image

- Hotkey 0: Change Ruler Color

- Hotkey -: Set output image color (Currently not working)

- Hotkey =: Set nullify color (Currently not working)

##### **Cube Preview:**

- Slider: Zooms image in and out
- Left Circle: Rotates the Y-axis of the cube
- Middle Circle: Rotates the X-axis of the cube
- Right Circle: Rotates the Z-axis of the cube

#### **Other Buttons:**

- Update:
  - Will open up once all six images are loaded in
  - Will update the current cube images and save them to a temporary directory
- Weight: Change the weight of the selected side (Currently Not Working)
- Preview:
  - Will open up once the update button is pressed
  - Will open up the 3D Model Preview

#### **Preview Window:**

- Preview: Creates the 3D Model
- Export: Exports a .obj of the 3D model (Currently Not Working)
- Filename: Input a filename for the export button.
- Resolution Split: Set the resolution of the 3D model
- Distance: Sets the distance between the vertical levels.