Github Repository Reference Link: <https://github.com/autonomousvision/differentiable_volumetric_rendering>

**Steps to run after cloning the official github repository:**

* Open a command prompt and write the following:

git clone https://github.com/autonomousvision/differentiable\_volumetric\_rendering

* Now, after cloning the repository,

cd differentiable\_volumetric\_rendering

* Now, create a virtual environment using the following script:

conda env create -f environment.yaml

conda activate dvr

python setup.py build\_ext --inplace

* If there are any errors while running the setup.py script, change the matplotlib version using the following command:

pip install matplotlib==3.2.0

After setting up,

Run the following to generate outputs of the input images provided in the repository:

python generate.py configs/demo/demo\_combined.yaml

This script should create a folder out/demo/demo\_combined where the output meshes are stored. The script will copy the inputs into the generation/inputs folder and creates the meshes in the generation/meshes folder. Moreover, the script creates a generation/vis folder where both inputs and outputs are copied together.

**Steps to generate outputs for our own images:**

Make a new folder inside ‘ media/demo/ ’ named trial\_images and past the input images inside the directory ‘ media/demo/trial\_images/ ’ .

Now, We need to make changes to the configs/demo/demo\_combined.yaml file.

Open the file ‘demo\_combined.yaml’ , and change the path to input images to:

**path: media/demo/trial\_images**

Which originally was **path: media/demo/choy\_renderings**

Now run the command:

python generate.py configs/demo/demo\_combined.yaml

And the outputs will be generated in the folder:

out/demo/demo\_combined/generation/vis/na

**Notes:**

**It takes about 6-7 minutes to generate the 3d output for a single input image.**