Propainter Development

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Task 1: Deploy gradio

Development Environment

Clone the repository by running the following command:

```
git clone git@github.com:lucky9-cyou/ProPainter.git
```

Download the propainter checkpoints and SAM checkpoints. For SAM, we use the `sam_vit_h_4b8939.pth` checkpoint.

Install the development environment by running the following commands:

```
# create new anaconda env
conda create -n propainter python=3.8 -y
conda activate propainter

# install pytorch
conda install pytorch torchvision torchaudio pytorch-cuda=11.8 -c pytorch -c
nvidia

# intall tensortrt for cuda 11.8
wget https://developer.nvidia.com/downloads/compute/machine-learning/tensorrt/
10.5.0/local_repo/nv-tensorrt-local-repo-ubuntu2204-10.5.0-cuda-11.8_1.0-1_amd
64.deb
dpkg -i nv-tensorrt-local-repo-ubuntu2204-10.5.0-cuda-11.8_1.0-1_amd64.deb
sudo cp /var/nv-tensorrt-local-repo-ubuntu2204-10.5.0-cuda-11.8/nv-tensorrt-
local-EE22FB8A-keyring.gpg /usr/share/keyrings/
sudo apt update
sudo apt install tensorrt
python3 -m pip install --upgrade tensorrt-cu11

# install python dependencies
pip3 install -r requirements.txt

# install web dependences
pip install -r web-demos/hugging_face/requirements.txt
```

Run the Gradio Application

Run the following command to start the Gradio application:

```
cd web-demos/hugging_face/
python3 app.py
```

The Gradio application will be available at 'http://127.0.0.1:7860/' by VSCode port forwarding or 'http://101.126.90.71:50183'.

Task 2: Invoke the Gradio Application

You can use `client.py` to invoke the Gradio application. The following is an example of how to use the client to invoke the Gradio application:

```
python client.py --video inputs/sample/sample.mp4 --pose weights/vitpose.pt
```

The inpainted video will be saved to `outputs/sample.mp4`. If you want to change the output path, you can use the `--output` option.