UDACITY

PROJECT

Generate Faces

A part of the Deep Learning Nanodegree Foundation Program

PROJECT REVIEW

CODE REVIEW

NOTES

SHARE YOUR ACCOMPLISHMENT!

Meets Specifications

Congratulations on completing this project! You did a great job so far.
I'd like to suggest you watch this video and the corresponding document. It has some great advice to improve DCGANs performance.

Now, get ready for the next one!

Required Files and Tests

The project submission contains the project notebook, called "dlnd_face_generation.ipynb".

Perfect job. Your notebook is named as required.

All the unit tests in project have passed.

All the test units are passing perfectly. Well done.

Build the Neural Network

The function model_inputs is implemented correctly.

The function `model_inputs` is working flawlessly as well. Well done.

The function discriminator is implemented correctly.

Nice job with the discriminator.
You could add at least one additional convolution layer (in both the discriminator and the generator). Improved results are generally obtained using 3 or more layers.
Also, you could try to play with the LeakyRealu alpha coefficient.

The function generator is implemented correctly.

Same as above.

The function model_loss is implemented correctly.

Great job implementing `model_loss`.

The function model_opt is implemented correctly.

Great job with `model_opt` as well, even using `tf.control_dependencies()`.

Neural Network Training

The function train is implemented correctly.

- **It should build the model using `model_inputs`, `model_loss`, and `model_opt`.**
- **It should show output of the `generator` using the `show_generator_output` function**

Excellent job with the training function.
Good job converting the range from -0.5 / 0.5 to -1.0 / 1.0.

The parameters are set reasonable numbers.

Your hyperparameters are looking good, but IMO, you could tune them better.
The learning rate and the beta1 values are a bit low.
Try using 0.5 to 0.8 as beta1, and at least doubling the learning rate.

The project generates realistic faces. It should be obvious that images generated look like faces.

Great job! Faces are clearly recognizable, although they are a bit noisy. Give it a try to my suggestions and see if you can improve the results.

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