PROJECT

Generate Faces

A part of the Deep Learning Nanodegree Foundation Program

PROJECT REVIEW | CODE REVIEW | NOTES

Meets Specifications

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Congratulation! You have past last project!

I suggest you to read following articles to know how to improve results in GAN:

- https://github.com/soumith/ganhacks#how-to-train-a-gan-tips-and-tricks-to-make-gans-work
- http://blog.otoro.net/2016/04/01/generating-large-images-from-latent-vectors/

Great job!

Required Files and Tests

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

✓ **All the unit tests in project have passed.**

Awesome!
All the code snippets and unit tests are running perfectly.

Build the Neural Network

✓ **The function model_inputs is implemented correctly.**

Correct!

✓ **The function discriminator is implemented correctly.**

Great job with using leaky relu, dropout and batch normalization!

✓ **The function generator is implemented correctly.**

Good job with using `tanh` at the last layer.

✓ **The function model_loss is implemented correctly.**

Well done with smoothing!
This prevent discriminator from being too strong.

✓ **The function model_opt is implemented correctly.**

Great!

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

Awesome!

✓ **The parameters are set reasonable numbers.**

I think you hyperparameters are set to good values!
I've found for myself that generation is better with low batch size around 8 - 50. You have 10 - which is optimal.
Also you use good value for the momentum term `beta1 = 0.5` to stabilize training. Greater momentum can results in the training oscillation and instability (https://arxiv.org/pdf/1511.06434.pdf).

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

I think your generated faces are already good. We can clearly see the faces!

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