

Training report for CycleGAN model (model1Mixed)
Date: 2024-04-28

Information for your materials and method:

The CycleGAN model was trained from scratch for 200 epochs on 177 paired image patches (image dimensions: (256, 256, 3), patch size: (256,256)) with a batch size of 1 and a least-square GAN loss function, using the CycleGAN ZeroCostDL4Mic notebook (v 1) (von Chamier & Laine et al., 2020). Key python packages used include tensorflow (v https://storage.googleapis.com/colab-tf-builds-public-09h6ksrfwbb9g9xv/tensorflow-2.15.0-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl#sha256=a2ec79931350b378c1ef300ca836b52a55751acb71a433582508a07f0de57c42), numpy (v 1.25.2), torch (v https://download.pytorch.org/whl/cu121/torch-2.2.1%2Bcu121-cp310-cp310-linux_x86_64.whl#sha256=1adf430f01ff649c848ac021785e18007b0714fdde68e4e65bd0c640bf3fb8e1), cuda (v 12.2.140 Build cuda_12.2.r12.2/compiler.33191640_0). The training was accelerated using a Tesla T4 GPU.

Augmentation: The dataset was augmented by default

Parameters

Default Advanced Parameters were enabled

Parameter	Value
number_of_epochs	200
patch_size	256x256
batch_size	1
initial_learning_rate	0.0002

Training Dataset

Training_source: /content/gdrive/MyDrive/mixedCoins/mixedBadCoins

Training_target: /content/gdrive/MyDrive/mixedCoins/mixedGoodCoins

Model Path: /content/gdrive/MyDrive/results/model1Mixed

Example Training pair



References:

- ZeroCostDL4Mic: von Chamier, Lucas & Laine, Romain, et al. "Democratising deep learning for microscopy with ZeroCostDL4Mic." Nature Communications (2021).
- cycleGAN: Zhu, Jun-Yan, et al. "Unpaired image-to-image translation using cycle-consistent adversarial networks." Proceedings of the IEEE international conference on computer vision. 2017.

Important:
Remember to perform the quality control step on all newly trained models
Please consider depositing your training dataset on Zenodo