CV Research Scientist – Behavior Generation

Image Colorization

The objective is to produce color images given grayscale input image.

Code: Use this zip file for this challenge with some starter code:
https://fm.thinktankteam.info/files/_NEON_Challenges/image-colorization_d6a566.zip

Dataset: Use the download link below to download the dataset. You are expected to split your dataset to create a validation set for initial testing. Your final model can use the entire dataset for training. Note that this model will be evaluated on a test dataset not visible to you.

https://drive.google.com/file/d/15jprd8VTdtIQeEtQj6wbRx6seM8j0Rx5/view?usp=sharing

Baseline Model: A baseline model is available in **basic_model.py.** You may use this model to kickstart this assignment.

- Fill in the dataloader, (**colorize_data.py**)
- Fill in the loss function and optimizer. **(train.py)**
- Complete the training loop, validation loop **(train.py)**
- Determine model performance using appropriate metric. Describe your metric and why the metric works for this model?
- Prepare an inference script that takes as input grayscale image, model path and produces a color image

The network available in model.py is a very simple network. How would you improve the overall image quality for the above system? **(Implement)**

Bonus: You are tasked to control the average mood (or color temperature) of the image that you are colorizing. What are some ideas that come to your mind? **(Implement)**

Update the README.md file to add instructions on how to run your code: training and inference.

Once you are done, zip the code and README files. Upload your solution using the link in the email.