CENG 796 - Peer-review form

Reviewed project ID: Group _**5**_

Reviewed project's title (title of the paper): _____Master: Meta Style Transformer for Controllable Zero-Shot and Few-Shot Artistic Style Transfer_____

Reviewer name(s): ___Meric Karadayi___Ibrahim Ersel Yigit_____

Instructions:

- Answer = *Yes*, *No* or *Partial*.
- You may expand sections as necessary.
- For most questions, you do not need to add comments, unless the instructions tell you otherwise.
- "Notebook" refers to "Jupyter Notebook" file that is expected to be named as main.ipynb

Question	**Answer**	**Comments**
Contains a jupyter notebook file	Yes	
Notebook is located at <project_root>/main.ipynb	Yes	
Notebook's first section contains paper information (paper title, paper authors, and project group members' name & contact information) Some good examples: see group03, group10, group11 (and a couple of other groups).	No	At the end of the notebook, they have mentioned the algorithm of the paper proposed. But beside that, neither paper information nor project group members are provided.
Notebook contains a section for hyper-parameters of the model.	Yes	
Notebook contains a section for training & saving the model.	Yes	
Notebook contains a section (or a few sections) for loading a pre-trained model & computing qualitative samples/outputs.	Yes	
Notebook contains reproduced plots and/or tables, as declared.	No	
Notebook contains pre-computed outputs.	Yes	

Data is included and/or a proper download script is provided.	Partially	Only the test set is provided. There is also no download script provided for train set that is used in project.
Notebook contains a section describing the difficulties encountered.	Yes	They explained the difficulties that they encountered as 6 main items. In the 2nd item, 1st subitem, they state the text does not mention the MLP, but actually it is in the first paragraph of 4th page. It also explicitly shown in the equation 4. In the 2nd item 2nd subitem, they mentioned linear projection but, we could not find anything about it in the paper. In the 4th item, they state the paper does not explicitly clarify whether squared error or Euclidean distance is used, while the paper shows the usage of Euclidean loss at equations 6, and 7
The paper has achieved its goals and/or explained what is missing.	Yes	
The notebook contains a section that reproduces the figure(s) and table(s) declared in the goals.	Partially	The figure that is declared is given (although it fails), on the other hand the table is not provided.
The notebook also reports the original values of the targeted quantitative results, for comparison.	No	
MIT License is included.	No	There is a file named licence.txt but the given licence is in the name of other two person apart from the authors. And it is also not MIT Licence
As the reviewer(s), you have read the paper & understood it.	Yes	
Implementation of the model seems correct.	Partially	- We have checked the hyperparameters in the notebook and the hyperparameters provided in the paper, Implementation Details section. The hyperparameters provided in the paper seems used correct in the notebook. But some hyperparameters in the notebook are not explicitly mentioned in the paper, which are input resolution, and mlp_ratio. Note that both are related with StyleTransformer, and the authors of the notebook mentioned the training results seems correct without StyleTransformer. Thus, the selection of these hyperparameters might be problematic. - In the implementation details section of the paper, it is mentioned that they first resized image and take random crop ONLY in training. And WikiArt dataset is also used

		as test style set. But in the implementation (get_dataloader.py file wikiart_dataset class), they resize and crop no matter whether it is used for training or test. Apart from that, data loaders seem implemented correctly. - For the loss function implementations, from the paper we have checked: ■ Equation 8: seems composed correctly. ■ Equation 6: seems implemented correctly. But not sure if it should be the mean or sum of the result. ■ Equation 7: seems implemented correctly. But again, not sure if it should be the mean or sum of the result. ■ Equation 9: seems mostly correct but we have a confusion that elaborated in additional comments. - For the training we have checked the main steps of meta training algorithm that is given as Algorithm 1 in the paper and implemented in train.py file in the project. Despite we could not understand every single detail of the code, as the manner of the main steps and general structure, it is also seeming implemented correctly.
Notebook looks professional (in terms of notation, readability, etc.)	Partially	The notebook mostly seems professional, on the other hand, a cell is left with keyboard interrupt error, which make notebook unprofessional, in our opinion. Moreover, since the notebook does not completely follow the description at https://user.ceng.metu.edu.tr/~gcinbis/courses/Spring24/CENG796/projects.html#requirements_version1 , reading and following it, was little bit hard.
Source code looks professional (in terms of coding style, comments, etc.)	Partially	There were a few functions that is not used in the project. Furthermore, there were a few importing lines within functions, classes etc. which is not a good practice, in our opinion. On the other hand, commenting of classes and functions are very explanatory almost in each case.

Additional comments:

In our personal opinions, main.ipynb file is a little bit crowded. Defining classes and functions in a different file instead of main.ipynb and importing from there might help. In the implementation of Equation 9, we could not understand why they used spatial-wise self cosine similarity matrix with only leaving lower triangle. In the equation within the paper, for each pair i, j and j,i considered separately. Moreover, after obtaining distance map matrices, there are no operation that becomes more efficient with triangular matrix (loss.py file get_similarity_loss function). We are not use it may affect the result, but we could not get the idea.