**5/11/2024**

To:

*Things done:*

1. Understand freedom diffusion paper

2. Run Code (Experiments section of paper)

- Success:

1. Unconditional ImageNet Diffusion Model (Face GD)

2. Unconditional Human Face Diffusion Model (Face GD)

3. CNet

- Failure

1. SD (can’t run due to mismatch in Clip models parameters)

\* It is fine, the Face GD one is most important as there are all the conditions there

*Possible research areas:*

1. multi conditional control (now, only has 2 conditions)

* 1. Multi-condition control difficulties (dependent conditions, formula ineffective)

2. video transition (different style transitions, smooth transitions)

3. FreeDoM’s sampling time cost of still higher than the training-required methods because

* 1. each iteration adds a derivative operation for the energy function, and time-travel strategy introduces more sampling steps

4. Hail Mary: 2 paper integration

5. Add a new training-free condition

From: