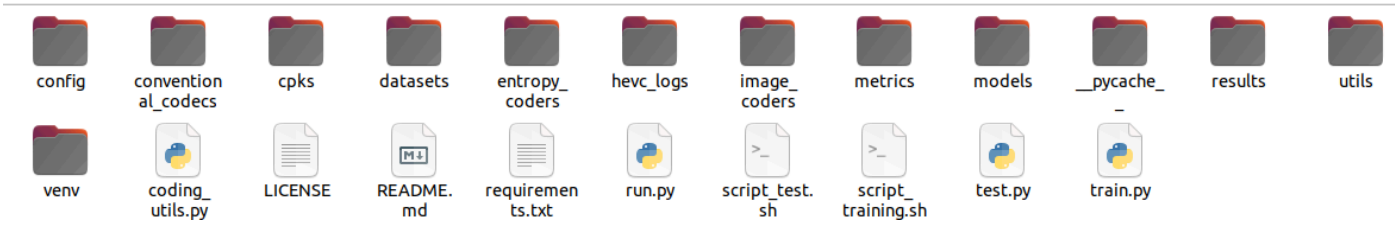
Follow these steps to get HDAC working

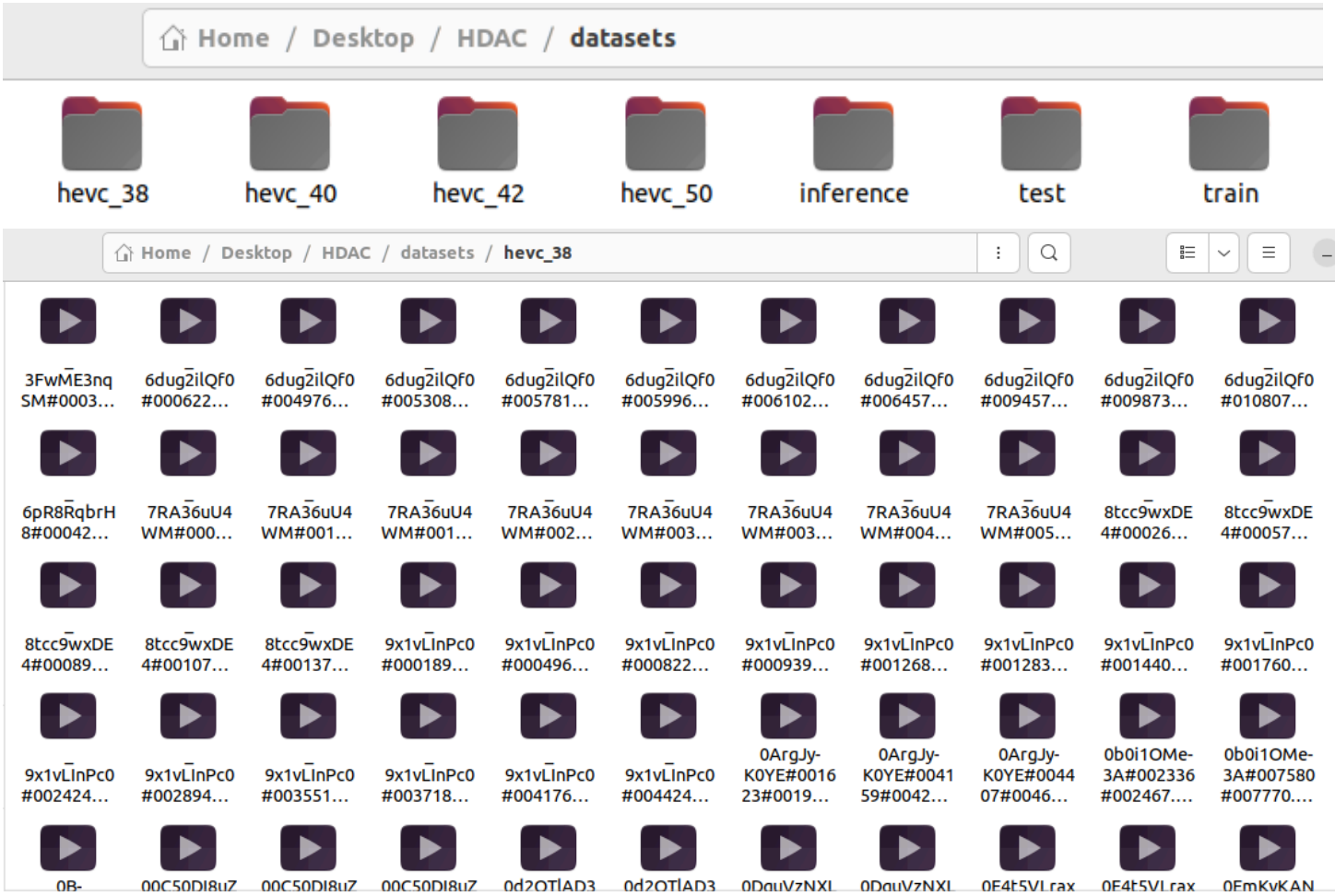
1. Set up the environment. Confirmed to work in a Ubuntu 22.04.3 virtual machine and the following commands will assume this is the environment used. HDAC will take up around 15-20GB of space so ensure that your environment has enough disk space to compensate.
2. Download the code from the github page and the updated requirements.txt file (located in this shared folder) inside the virtual machine/environment.
3. Extract the HDAC code somewhere (I recommend on the desktop) and cd into it. Replace the requirements.txt file in the HDAC directory with the updated one downloaded from the drive.
4. Inside the HDAC directory, run **"python3 -m venv"** to create a virtual environment for running the code. If you get an error about python missing, command not found, etc. run **"sudo apt update"** which should automatically download python
5. Activate the environment with the command **"source venv/bin/activate"** inside the HDAC directory. If it works you will see a (venv) in the command line. Next, install the packages with **"pip install -r requirements.txt"** to download the packages into the virtual environment
6. Create the following directories inside of the main HDAC directory: test, datasets, cpks. The layout of the HDAC directory should look as follows:



7. In the results directory, create a directory named "hdac" then another directory inside it also named "hdac". Inside this, create a file named "metrics.json". Don't edit or add to this file. The path should be results/hdac/hdac/metrics_0.json.
8. **[CHECKPOINTS]** Download the file hdac.pt from this google drive link, extract the zip, and place it in the cpks directory
9. **[CONVENTIONAL CODECS]** Download the hevc_htm and vvc files from this google drive link and place them inside the conventional_codecs directory

10. **[DATASETS]** Download the inference and train directory [from this google drive link] and place them inside the datasets directory. Additionally, download the file **hevc_46** from that link and extract the folder named “out” into the datasets directory and rename it to hevc_38. Essentially, you want the folders in datasets to directly contain the data files as seen in the 2nd screenshot.

11. **[DATASETS]** Copy this new directory 4 times for a total of 5 additional directories. This process might take several minutes. Set up the datasets directory as seen in the first screenshot. The contents of the **hevc_x** and **test** directories should all be the same, with the contents being seen in the second screenshot



12. Run the command **sudo chmod -R +x [path]/HDAC** to add execute permissions for all files in the HDAC director
13. In the HDAC directory with the virtual environment activated, run the following command to start the testing process: **python3 run.py –mode test –log_dir**

results –config config/hdac.yaml –checkpoint cpks/hdac.pt. If it asks you to overwrite a file say yes.

14. The testing script will constantly run iterations until the execution is canceled with Control+C. Once an iteration is done the metric output will be printed in the terminal. Looking into saving the metric data output to a text file or something could be future work.