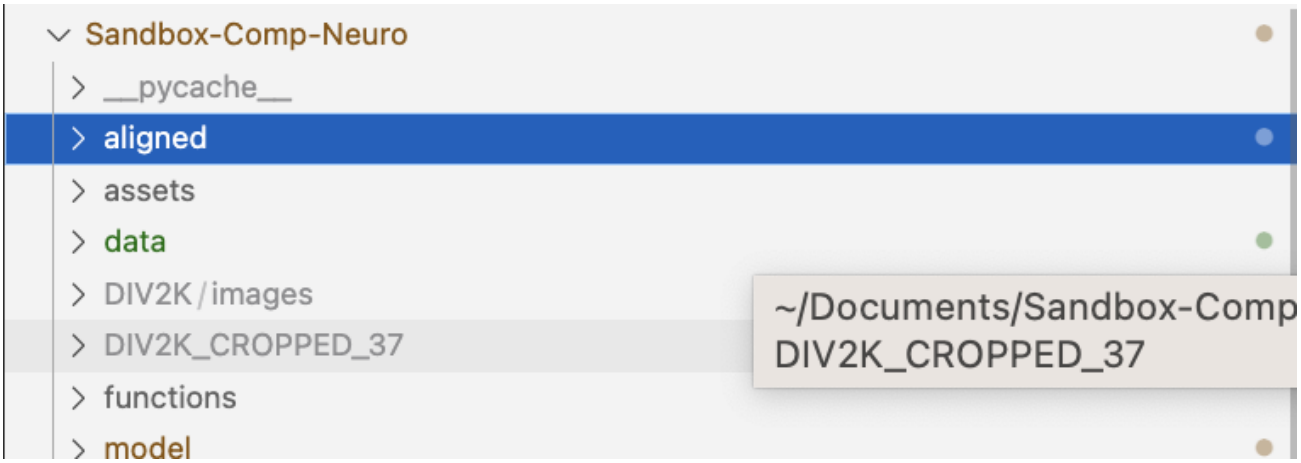
Train CompNeuro Model

Action Items:

- train with all 108 numpy arrays resulting from Superglue alignment
  - this means to follow all the steps below with the full amt of arrays
- finish training the model with 50 numpy arrays - Abinaya
  - figure out how to resume model from checkpoint

make the dataset: convert our numpy arrays to rgba and save as png

1. take the **numpy arrays** of images that you want and put them in the aligned folder in the Sandbox directory



2. convert those numpy arrays to rgba using the npy_rgba notebook, located in the Sandbox directory

npy_rgba.ipynb U | 2_color_matching.py M | .comet.config

Sandbox-Comp-Neuro > npy_rgba.ipynb > files = os.listdir(path=path_to_arrays)

+ Code + Markdown | Run All | Restart | Clear All Outputs | Variables | Outline ...

+ Code + Markdown

```
from PIL import Image
import numpy as np
import os
```

[11] ✓ 0.0s

```
# make sure to replace this with your own path
path_to_arrays = "/Users/abinayadinesh/Documents/Sandbox-Comp-Neuro/aligned"
```

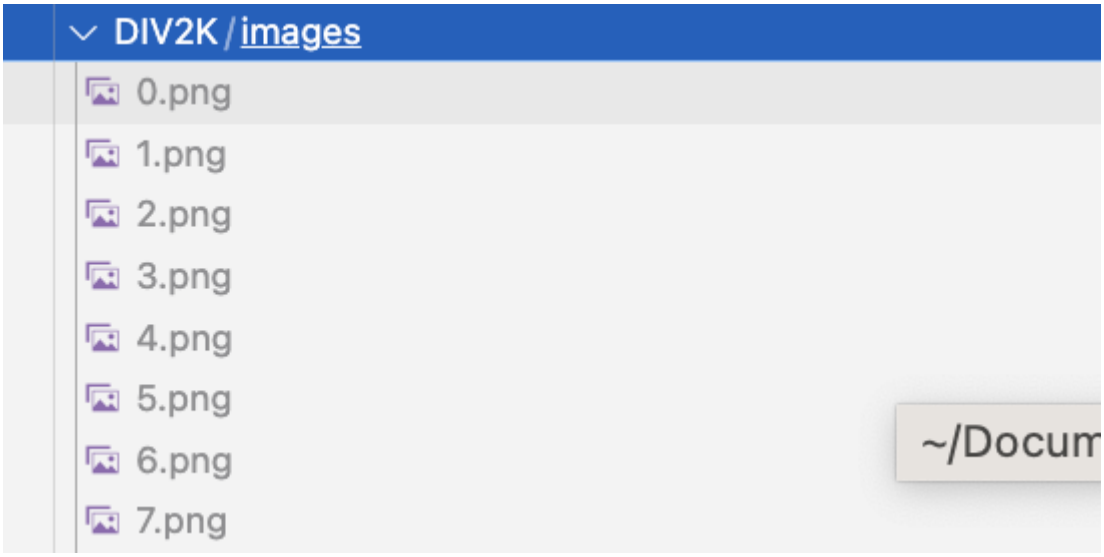
[ ]

```
files = os.listdir(path=path_to_arrays)
counter = 0
for file in files:
    array = np.load(path_to_arrays + "/" + file)
    print(array.shape)
    img = Image.fromarray(array)
    img.save(str(counter) + '.png')
    counter += 1
```

[15] ✓ 1m 10.4s

```
(1232, 1640, 4)
```

3. Drag and drop the images that were outputted into the DIV2K folder



train the model

PLEASE USE GPU'S, OR ELSE THIS WILL TAKE ALL DAY
run the command:
python3 main.py --ons_dim 32 -nct 4

this will take all the images in DIV2K and batch them into a directory called DIV_2K_Cropped_37 so we have a dataset of 50k images
then it will automatically train the model on this dataset

evaluate

evalute using the color matching functions:
python 2_color_matching.py

figures will be in results/cmf/model_3_tri_32_Cn_0.01