

View Recognition Challenge for the Mouse Brain

Dataset Guidelines

The Dataset

The dataset can be found on the link:

<http://brainmaps.org/index.php?p=speciesdata&species=mus-musculus>

Downloading the Original Dataset

This dataset can easily be downloaded from the link :

<http://brainmaps.org/HBP2/mus.musculus/>

Using the APIs:

```
>> wget -r -np -R "index.html*" <URL> -e robots=off
```

Find Images in the Dataset

The API mentioned above will download a folder named “brainmaps.org” containing the whole dataset.

Useful images are present in 3 folders namely:

- 1) Cor (i.e. for Coronal slices)
- 2) Hor (i.e. for Horizontal slices)
- 3) Sag (i.e. for Sagittal slices)

Each folder has a similar directory tree, thus the directory tree only for Cor has been explained here.

```
├── HBP2
│   ├── mus.musculus
│   │   └── cor
│   │       ├── 001-ache
│   │       ├── 001-nissl
│   │       ├── 001-parv
│   │       ├── 001-smi32
│   │       └── 002-nissl
```

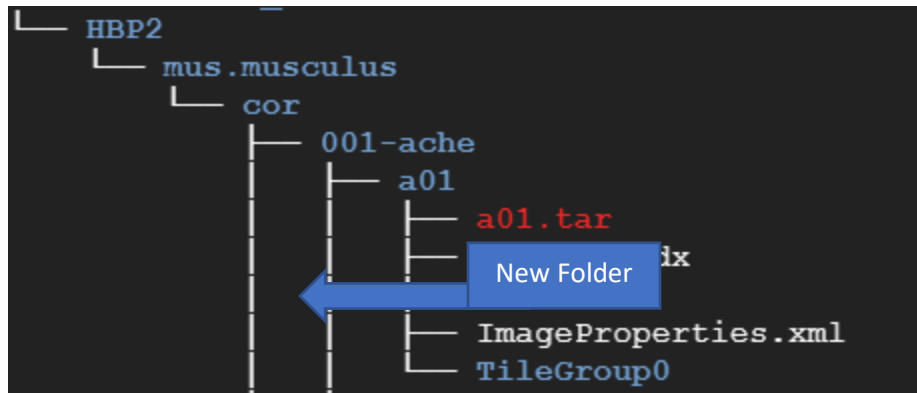
Cor folder holds 5 folders, each of them contains many folders each containing data for a single image.



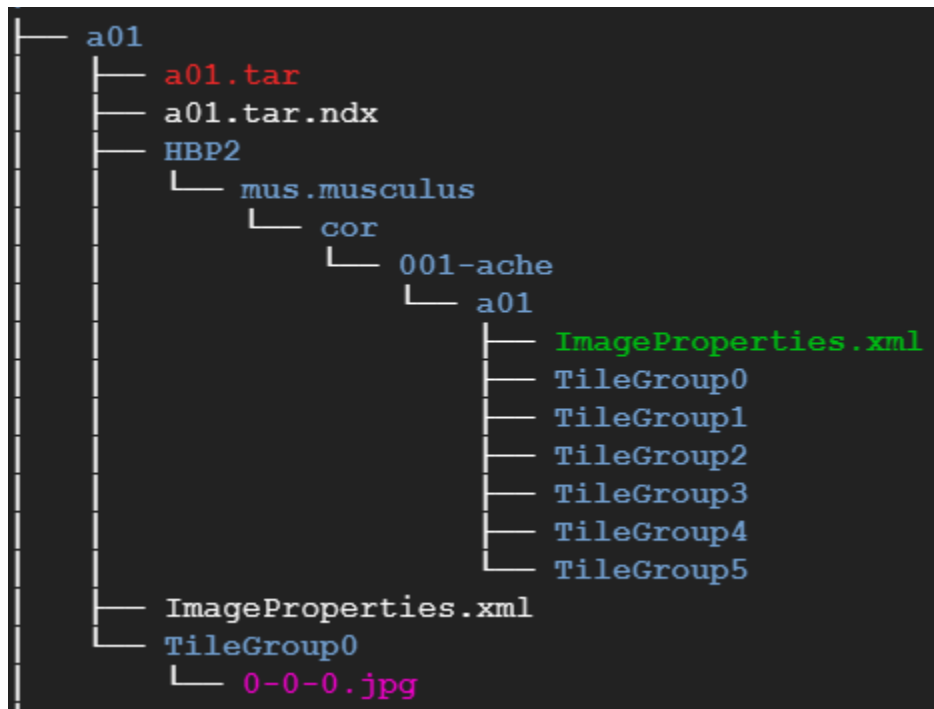
Each such folders contains a .tar file which holds image data clicked on various magnification levels. Along with this, it also holds a folder named “TileGroup0” which holds a low-resolution jpeg image of the slice.

After you untar the file in its own directory you will find a new folder in that directory named “HBP2”

This would make your directory tree from your root directory look like given in the following image.



The main image data resides in this newly created folder i.e. HBP2. Its directory looks like,



Here in, each tile group holds many images as shown in the image below.

Images have various magnification levels which can be determined by the image's name.

Since, these magnified images tend to be very large in size (approx. 10,000 x 10,000 pixels), these images have been divided into various small images in a grid format so that they can be stored and used easily.

To obtain a full magnified image one will have to join all these small pieces like a jigsaw puzzle. This can be done easily as the coordinates corresponding to the block on the grid where each image was extracted from is mentioned in the name of the image.

```
e/a01/TileGroup1$ ls
5-0-10.jpg 5-14-12.jpg 5-6-10.jpg 6-11-0.jpg 6-15-4.jpg 6-21-1.jpg 6-26-0.jpg 6-31-3.jpg 6-6-0.jpg
5-0-11.jpg 5-14-13.jpg 5-6-11.jpg 6-11-1.jpg 6-1-5.jpg 6-21-2.jpg 6-26-1.jpg 6-31-4.jpg 6-6-1.jpg
5-0-12.jpg 5-14-9.jpg 5-6-12.jpg 6-11-2.jpg 6-16-0.jpg 6-21-3.jpg 6-26-2.jpg 6-3-1.jpg 6-6-2.jpg
5-0-13.jpg 5-15-10.jpg 5-6-13.jpg 6-11-3.jpg 6-16-1.jpg 6-21-4.jpg 6-26-3.jpg 6-32-0.jpg 6-6-3.jpg
5-10-10.jpg 5-15-11.jpg 5-7-10.jpg 6-11-4.jpg 6-16-2.jpg 6-2-1.jpg 6-26-4.jpg 6-32-1.jpg 6-6-4.jpg
5-10-11.jpg 5-15-12.jpg 5-7-11.jpg 6-11-5.jpg 6-16-3.jpg 6-22-0.jpg 6-27-0.jpg 6-32-2.jpg 6-6-5.jpg
5-10-12.jpg 5-15-13.jpg 5-7-12.jpg 6-1-1.jpg 6-16-4.jpg 6-22-1.jpg 6-27-1.jpg 6-32-3.jpg 6-7-0.jpg
5-10-13.jpg 5-15-9.jpg 5-7-13.jpg 6-12-0.jpg 6-17-0.jpg 6-22-2.jpg 6-27-2.jpg 6-32-4.jpg 6-7-1.jpg
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5-14-11.jpg 5-5-13.jpg 6-1-0.jpg 6-15-3.jpg 6-21-0.jpg 6-2-5.jpg 6-31-2.jpg 6-5-5.jpg
```

Each image is named in the Z-X-Y.jpg format where

Z corresponds to the magnification level of the original magnified image

X & Y corresponds to the coordinates of the block on the grid from where the image was extracted.

Low Resolution Dataset Available

We are providing a low-resolution dataset which comes from the “TileGroup0” folders in the Dataset.

Expectation

It is expected from the participants that they download the dataset and write and execute scripts to stitch images of a magnification level of their own choice.