

Hippocampus Pipeline

Executable Code and software

- FSL toolbox
- Executable Code in folder shared_bin
- HippoProcess_Parameterization.py and FluidRegister.py

Experiment Data

Example data

Pipeline

Linux FSL toolbox 5.0.1 installation <https://fsl.fmrib.ox.ac.uk/fsl/fslwiki>

Hippocampus segmentation and mesh parameterization:

- Store the folder shared_bin at your server and copy its path
- Open file HippoProcess_Parameterization.py and paste the path to the place `/**path**/`

```
def __init__(self, bin, tmpDir):
    self.BIN = bin
    self.TMPDIR = tmpDir

#CUSTOMIZE: please fill in appropriate environment variables for Matlab
os.putenv('LD_LIBRARY_PATH', '**path**/shared_bin:**path**/shared_bin/Matlab/
```

- Input: MRI
- Run HippoProcess_Parameterization.py.

python `/**your directory**/HippoProcess_Parameterization.py` <input image file with its directory> <output directory>

- Output: filename_LHippo_60k_std_par.m and filename_RHippo_60k_std_par.m

Hippocampal Surface Registrations:

- Open file FluidRegister.py and paste the path to the place `/**path**/`
- Input: study mesh and template mesh. In the example, we use AD_112292_LHippo_60k_std_par.m as the study mesh and use AD_102040_LHippo_60k_std_par.m as the template mesh.
- Run FluidRegister.py
python `/**your directory**/ FluidRegister.py` <input study mesh file with its directory> <input template mesh file with its directory> <output directory>
- Output: filename_LHippo_60k_std_par_flowd_jfeat.m