**FreeSurfer Recon-All Class**

Winter 2017

**Location:** TBD

**Schedule:**

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| --- | --- | --- | --- |
| **Class** | **Covers** | **Date/Time** | **For Further Practice** |
| Introduction | * Freesurfer overview * Installation * MRI T1w data * Pipeline overview (recon-all) | TBD | 1. Install Freesurfer! 2. Download the class bin 3. Process Monica brain (or your own) |
| Data Preprocessing | Autorecon1:   * Motion correction (ish) * Talaraich registration * NU correction * Skull stripping | TBD | 1. Process Meghan brain (or your own)  2. Manually adjust Tal registration  3. Edit brainmask |
| Segmenting the Brain | Autorecon2:   * WM/GM surface generation * Subcortical segmentation * TKMedit GUI | TBD | 1. Run a brain through autorecon2 2. Pull up the wm.mgz and brainmask 3. Edit pial/wm lines |
| Parcellating the Cortex | Autorecon3:   * Surfaces and atlases * Freeview GUI * Extracting data | TBD | 1. Run a brain through autorecon3 2. Open aparc+aseg.mgz and brain in freeview 3. Extract data |
| Other Cool Freesurfer Stuff | * Using multimodal data * Hippocampus segmentation * TRACULA * PETSurfer (and PVC) * PySurfer | TBD | 1. Segment M&M’s hippocampus 2. Run Meghan’s DTI brain in TRACULA 3. Visualize a brain using the PySurfer script |

**Helpful Links**

Class GitHub Page: <https://github.com/catcamacho/freesurfer_class>

Wiki Landing Page: <https://surfer.nmr.mgh.harvard.edu/fswiki/FreeSurferWiki>

Installation: <https://surfer.nmr.mgh.harvard.edu/fswiki/DownloadAndInstall>

Recon-All Page: <https://surfer.nmr.mgh.harvard.edu/fswiki/recon-all>

v5.3 Table: <https://surfer.nmr.mgh.harvard.edu/fswiki/ReconAllTableStableV5.3>