Diffusion Lab Notes

Contents of diffusion_lab.tar.gz
BOLDRESTING.nii.gz: BOLD resting state scan (5:12)
We won't use this for the lab, this is for you to experiment with on your own if you wish.
DTI68dirpittsAtoP.nii.gz: DTI scan, 69 directions (including 8 B0 images), b=1000
bvecs_bvals.txt: four columnn text file where first three columns are gradient direction (x,y,z) and fourth is b value
mprage.nii.gz: MPRAGE scan
mprage_DTIspace.nii.gz: MPRAGE scan, registered to DTI space

Additional download:
regional_masks.tar: contains 113 mask files, covering the 113 brain regions from the HarvardOxford Cortical and Subcortical Atlases. These have been registered to the subject's DTI space.

Make sure to download Diffusion Toolkit and Trackvis if you don't have them already: http://trackvis.org/download/

Diffusion Toolkit – used to calculate tensors from DTI data or ODFs from DSI data, and run deterministic tractography
- For reconstruction of tensors, you will need the raw data (DTI68dirpittsAtoP.nii.gz) and the vectors/b-values file (bvecs_bvals.txt).
- Make sure to set the option 'Invert Z.' Feel free to experiment with the rest.

Trackvis – used to visualize tractography files (.trk) created by Diffusion Toolkit