**Post Project Data Storage**

It is always worthwhile to think about how you can best store data efficiently, but especially when you have finished a project or processing pipeline and need to ready your data for long term storage.

**There are three main pillars of effective data storage**:

1. **Plan for the future**.
   1. Think about when and how you may need to access for your files in the future.
   2. For instance, if you will need to access your processed scalar maps regularly, it may be a good idea to zip the actual .nii files as opposed to compressing and entire folder that would require a long unzipping process to access. However, if you will only need to access the finalized data sheets derived from your analysis, you may approach long-term storage of your processed files differently.
2. **Remove extraneous files**.
   1. If you have duplicate files in your project folder or if you have files in your project folder that are stored elsewhere, consider deleting these files from your project folder before archiving/storing it.
   2. For instance, you may have preprocessed scalar maps both in your project folder as well as in another location. These would be good candidates for removal before long-term storage.
3. **Compress as much as possible**.
   1. Once you have gotten rid of files that you do not need, it is vital to compress the files you will need to store.
   2. This may involve compressing entire folders, individual files, or both.
   3. **Note**: Do not compress already compressed files.
      1. For example: If you have a folder of compressed niftis (with the file extension .nii.gz), do not then compress the entire folder.
   4. In order to do this efficiently and effectively, consider point #1.

**Places to store data**:

1. Box or another cloud storage platform. On these platforms, space is less of an issue, but it is still good practice to delete extraneous files and compress all other files.
2. Your personal repository or archive. In this case, storage is up to you, but the above best practices are still recommended.
3. Your PI’s research repository space or archive. In this case, good storage practices are the most vital as every PI has their own preferences and space is at a premium on places like the /fs/research/ drives and other external drives used for long-term storage.

**Methods of compressing data**:

1. Right click a file or folder and select “Compress”. Only use if you need to compress an entire folder of unzipped files or an individual file.
2. Compress via the Terminal.
   1. Use the command `gzip` as it is the fasted and most space saving bash command for zipping.
   2. Example usage:
      1. gzip -r /path/to/folder
      2. “-r” stands for “recursive”. This will search through all folders and sub folders to zip only files that are unzipped.

**Accessing compressed data**:

1. It is generally recommended to unzip files via command line but using a command similar to the one you used to zip the files: gunzip -r /path/to/folder