Script Order

**A diagram of a company

Description automatically generated with medium confidence**

1. defineTrials.m
   1. Follow the structure to define trial types
2. makeDataStruct.m
   1. Formats the data for analysis scripts
   2. If there is too much data, can take a while to save and load. If so, run rats in batches and save multiple faster.
   3. Loading in multiple files is exponentially faster than loading in one really big file. (min vs hrs). ‘loadcollateddata(filepaths)’ will load in individual files and format them
   4. 7gb for a single file should be upper limit.
   5. Also save a ‘parameters.mat’ file, contains meta data needed for other scripts
3. powerAnalysis.m
   1. Does power spectrum analysis
   2. Powerdata (rat x chan x condition x freq idx x tria type)
   3. f (vector of freq idx)
4. PlottingPowerMaster.m
   1. Generates all the power analysis plots
   2. Uses two functions in functions foler, plotbytrial and plotbycondition
5. connectivityAnalysis.m
   1. Runs connectivity analysis
   2. Ft\_connectivity – structure with all connectivity data
      1. Fieldnames for all measures you ran
         1. Each field is cell of rat x condition x trial
         2. Each cell is (chan x chan x freq x session)
      2. electrodeOrder is a cell of electrode idx
      3. info.freq is frequency indices
6. PlottingConnectivityMaster.m
   1. Generates all the connectivity analysis plots
7. writingDataToExcel.m
   1. selects what data you want to export to excel
   2. average across all trials and sessions per rat.
8. TFdecomp.m
   1. This will run analysis and generate plots – just for visualization purposes
   2. Two sections, one for running single rat and one for running average across all rats
   3. Run whatever section you want
   4. Run the plotting section
   5. You’ll need to save plots manually here

Functions folder

Always include

sortedChans.mat, sortedChans.xlsx – if electrodes are changed then these need to be changed also. As long as it is formatted in the same way I have it should work.