README: Running Pre-processing Scripts

General Notes:

* The general processing pipeline is: split ⇒ smooth ⇒ run analysis
* There are three kinds of data that need to be split: keystroke, shimmer and empatica
  + All follow same pipeline, but different code
* For the most part, following the prompts from the code will give you the right output
* Below are the steps to run the script; best to do them in order!

Shimmer:

1. Copy ALL shimmer folders at once and put into appropriate raw/subj folder
   1. The zip file should say “(something)-selected.zip”
2. Run **SplitTrials\_Shim1** >> This runs over ALL subjects
   1. Select your “raw\_?” folder
   2. Watch it do its magic
   3. Output: your new split files will end up in a folder called “shimmer/ShimmerSplit”
3. Run **R\_vector\_and\_Plots2** >> This runs for EACH subject
   1. Select data/shimmer/subj#/ShimmerSplit
      1. Do it for each subject
   2. Output: there will be a folder called “Vector” for the CSVs for all the vector data, and another folder called “Otherplots” that plot everything
4. Run **ResampleShim3** >> This runs for EACH subject
   1. Select data/shimmer/subj#/Vector
      1. Do it for each subject
   2. Output: a folder called “Resampled for XCorr” which contains a bunch of csv with resampled vector data
5. Run **ShimmerEpochAnalysis\_acc4** >> This runs for ALL subjects
   1. Select data/shimmer
   2. Output: A folder called ShimEpochAnalysis inside the subject folders containing one CSV per body part

Empatica

1. Copy the entire empatica folder into the appropriate “raw” folder
2. Run **SplitTrials\_Empa1**  >> This runs over ALL subjects
   1. Select your “raw\_?” folder
   2. Output: within the raw/subj# folder, a folder called “EmpaticaSplit”
3. Create a folder inside data called “smoothed\_?”, where ? corresponds to the run name
4. Run **SmoothResample2** >> This runs over ALL subjects
   1. Select your “raw\_?” folder
   2. Select your “smoothed\_?” folder (as prompted)
   3. Output: smoothed data into a “smoothed\_?” folder

Keystroke

1. Copy text file into the appropriate “raw” folder
2. Create a keystroke folder for the appropriate experiment round, and within that, create a Splitdata folder
3. Run **TrialSplitting\_keystroke** >> This runs over EACH subject individually
   1. Select your “raw\_?” folder
   2. Select the Splitdata folder (inside keystroke folder)
   3. Enter the subject name (“subj1” etc)
   4. Output: folders within keystroke/Splitdata for each subject, and within each subject folder, 5 text files for each round
4. Run **Keystroke\_Epoch\_Analysis** >> runs for EACH subject
   1. Multi-select the files within keystroke/Splidata/subj#
   2. Select a destination folder (as prompted) >> select the WHOLE keystroke folder
   3. Enter in the subject number (to name the folder, as prompted)
   4. Output: some figures and csvs written into this subject folder

VAN

1. Copy the entire VAN (or VANTAN) folder into the appropriate raw/subj folder
2. Create a folder called “van\_[insert mission]” or “vantan \_[mission]”
3. Run **VANTANanalysis** >> This runs over EACH subject individually
   1. Go into the raw/subj/VAN or VANTAN folder and select ALL the files
   2. Follow the next prompt and select the van or vantan folder you just created
   3. Enter the subject you are currently running
   4. Output: one or two files within van\_[mission]/subj#/

Things needed to be fixed:

* Splitting cut offs (need to adjust to 32 mins for the first two phases, and 25 mins for the last round)
* Just make things do more work so we do less work

Things to add to the code:

* Epoch data for keystroke (started already)
* ShimmerEpochAnalysis code for velocity and displacement
* Shimmer filtering code