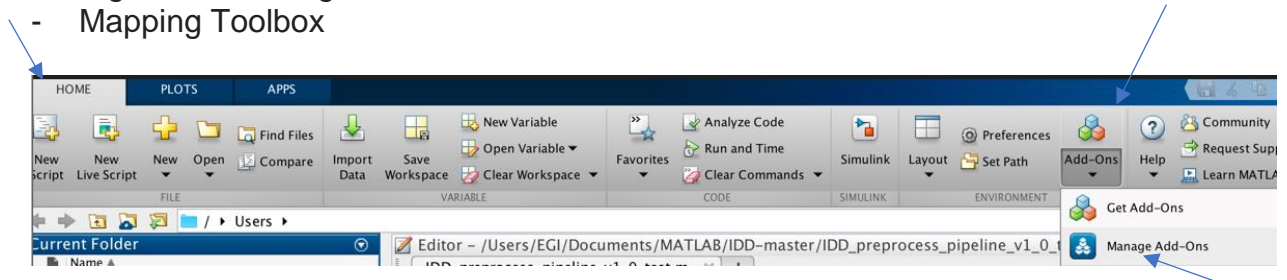


Instructions for Data Cleaning Pipeline

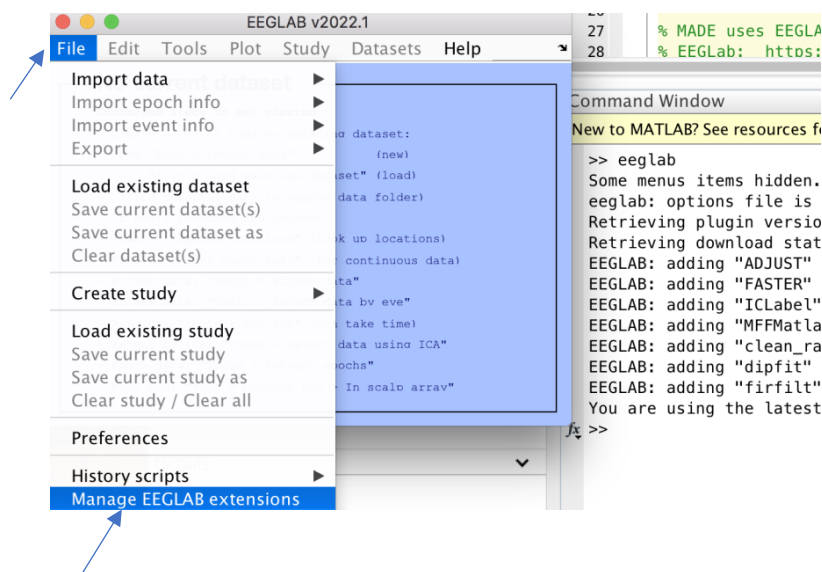
IDD-Reads EEG Data Cleaning Pipeline

1. Download and install Matlab.
2. Install additional Matlab toolboxes using MATLAB's Home tab → Add-Ons → manage Add Ons → get Add Ons:
 - Statistics and Machine Learning Toolbox
 - Signal Processing Toolbox
 - Mapping Toolbox



3. Download and install **EEGLAB**
https://sccn.ucsd.edu/eeglab/currentversion/eeglab_current.zip
4. Download EEGLAB extensions (you may use the “Manage EEGLAB Extensions” menu option in EEGLAB or the direct links provided):
 - MFFMatlabIO: [GitHub - arnelorme/mffmatlabio](https://github.com/arnodelorme/mffmatlabio): MFF Matlab file importer and exporter
 - FASTER: <https://sourceforge.net/projects/faster/>
 - ADJUST: <https://www.nitrc.org/projects/adjust/>

EEGLAB Menu



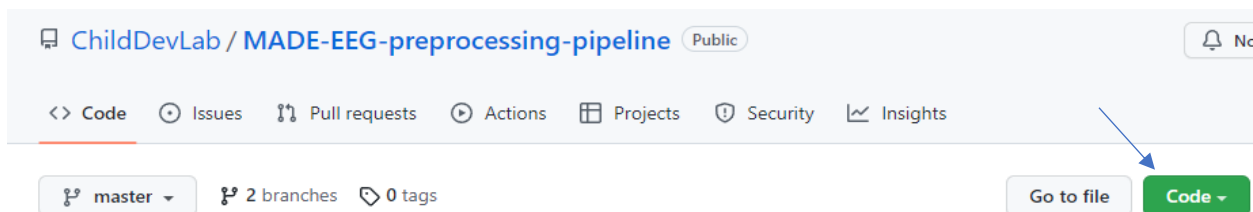
Instructions for Data Cleaning Pipeline



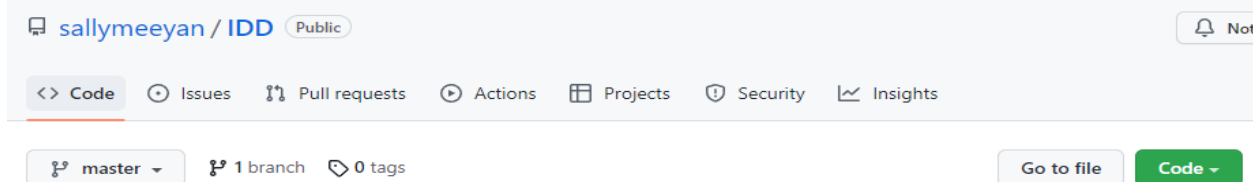
*** If any of the links do not work, check https://scn.ucsd.edu/wiki/EEGLAB_Extensions

*** If installing plugins using the direct links, place unzipped files in the EEGLAB's Plugin folder.

5. Download **MADE** pipeline: <https://github.com/ChildDevLab/MADE-EEG-preprocessing-pipeline> (click on the green "Code" button to download a zipped file)

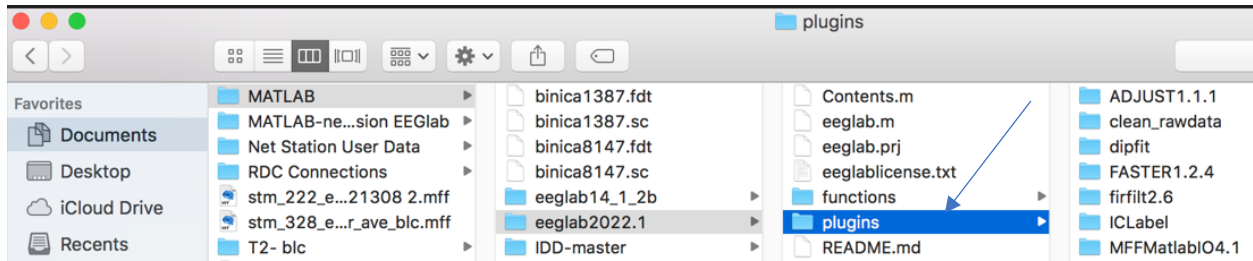


6. Download **IDD** pipeline <https://github.com/sallymeeyan/IDD>

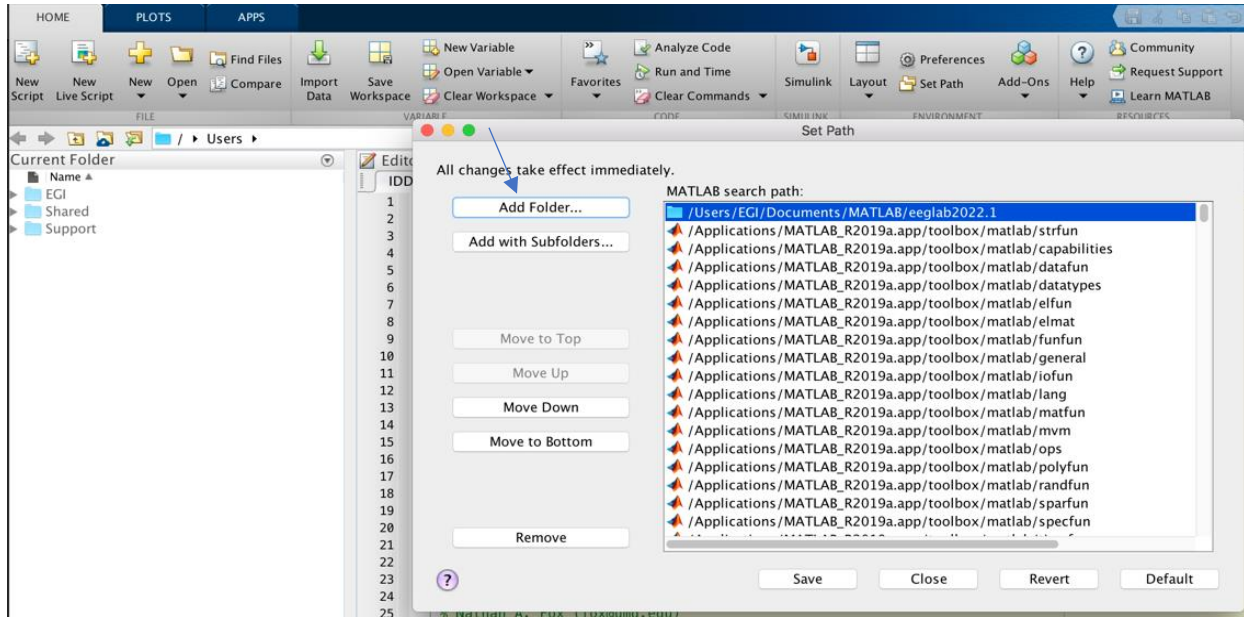


7. Unzip MADE and IDD pipelines and place the corresponding files into the 'plugins' folder inside the EEGLAB folder.

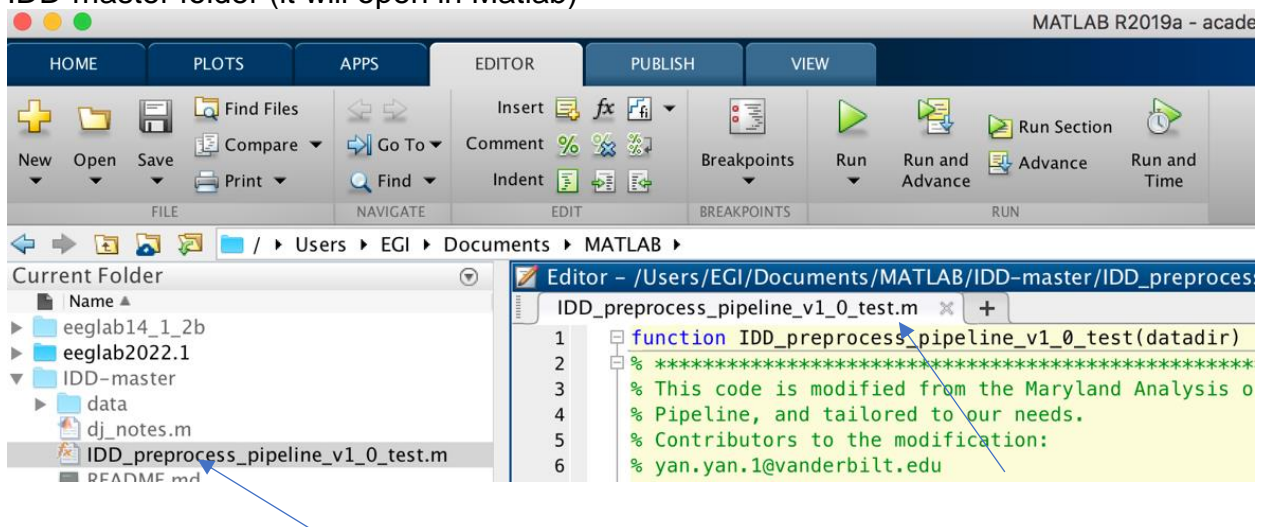
Instructions for Data Cleaning Pipeline



8. In MATLAB set paths to EEGLAB, IDD-master and MADE folders.



9. Open the IDD preprocessing pipeline: Double click to Open **IDD test.m** in the IDD-master folder (it will open in Matlab)



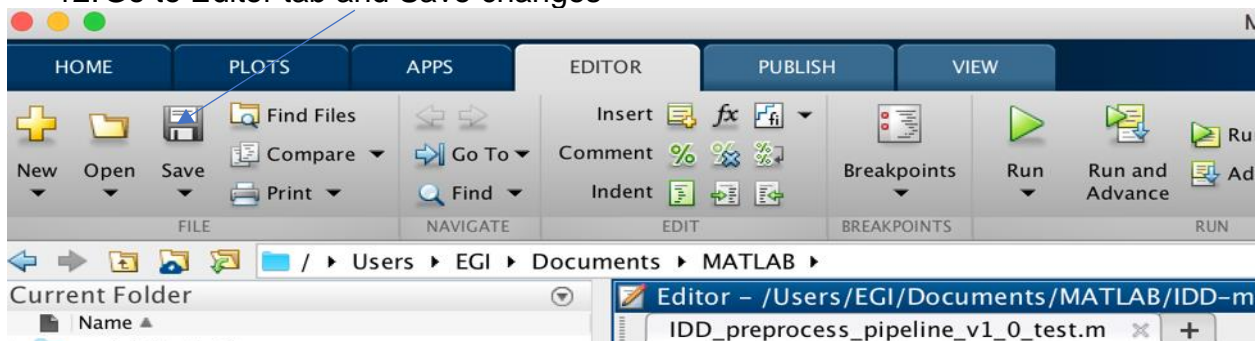
Instructions for Data Cleaning Pipeline

10. On lines #67 and #69, enter the full path to the IDD preprocessing pipeline and the ADJUST plugin.

11. On line #115, enter the stimulus event codes for your study. The pipeline will plot ERP waveforms for the first two events in the list.

```
66  
67 - addpath('/Users/EGI/Documents/MATLAB/IDD-master'); % enter the path of the EEGLAB folder in this line  
68 - % enter the path of the adjusted_adjust  
69 - addpath('/Users/EGI/Documents/MATLAB/MADE-EEG-preprocessing-pipeline-master/adjusted_adjust_scripts');  
70  
71 - eeglab;  
72 - close all;  
73  
74 - % omit - 1. Enter the path of the folder that has the raw data to be analyzed  
75 - % M1: No need to enter the path to the data folder as it's the argument of the  
76 - % function.  
77  
78 - rawdata_location = datadir;  
79  
80 - % omit - 2. Enter the path of the folder where you want to save the processed data  
81 - % M2: To facilitate parallel processing, the output folder will be created  
82 - % inside the raw data folder  
83 - mkdir(rawdata_location filesep 'result');  
84 - output_location = [rawdata_location filesep 'result'];  
85  
86 - % 3. Enter the path of the channel location file  
87 - channel_locations = '/Users/EGI/Documents/MATLAB/MADE-EEG-preprocessing-pipeline-master/channel_location';  
88  
89 - % 4. Do your data need correction for anti-aliasing filter and/or task related time offset?  
90 - adjust_time_offset = 0; % 0 = NO (no correction), 1 = YES (correct time offset)  
91 - % If your data need correction for time offset, initialize the offset time (in milliseconds)  
92 - filter_timeoffset = 0; % anti-aliasing time offset (in milliseconds). 0 = No time offset  
93 - %stimulus_timeoffset = 68; % stimulus related time offset (in milliseconds). 0 = No time offset  
94 - response_timeoffset = 0; % response related time offset (in milliseconds). 0 = No time offset  
95 - %response_markers = {'xxx', 'xxx'}; % enter the response makers that need to be adjusted for time off  
96  
97 - % 5. Do you want to down sample the data?  
98 - down_sample = 0; % 0 = NO (no down sampling), 1 = YES (down sampling)  
99 - sampling_rate = 250; % set sampling rate (in Hz), if you want to down sample  
100  
101 - % 6. Do you want to delete the outer layer of the channels? (Rationale has been described in MADE manuscri  
102 - % This function can also be used to down sample electrodes. For example, if EEG was recorded with 128 t  
103 - % like to analyse only 64 channels, you can assign the list of channels to be excluded in the 'outerl  
104 - delete_outerlayer = 0; % 0 = NO (do not delete outer layer), 1 = YES (delete outerlayer);  
105 - % If you want to delete outer layer, make a list of channels to be deleted  
106 - outerlayer_channel = {'list of channels'}; % list of channels  
107 - % recommended list for EGI 128 channel net: {'E17' 'E38' 'E43' 'E44' 'E48' 'E49' 'E113' 'E114' 'E119' 'E12  
108  
109 - % 7. Initialize the filters  
110 - highpass = 0.1; % High-pass frequency  
111 - lowpass = 30; % Low-pass frequency. We recommend low pass filter at/below line noise frequency (see manus  
112  
113 - % 8. Are you processing task-related or resting-state EEG data?  
114 - task_eeg = 1; % 0 = resting, 1 = task  
115 - task_event_markers = {'sngf', 'repf', 'sngH', 'repH'}; % enter all the event/condition markers  
116
```

12. Go to Editor tab and Save changes



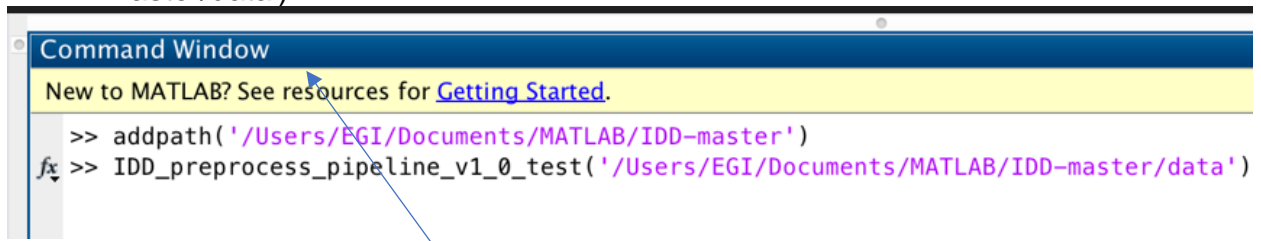
Instructions for Data Cleaning Pipeline

13. In the MATLAB command window, enter the full path to the IDD preprocessing pipeline and hit 'Enter'

e.g., `addpath('/Users/EGI/Documents/MATLAB/IDD-master')`

14. At the command prompt (>>) enter the full path to the folder with the data to be processed and hit 'Enter' to run the pipeline.

e.g., `IDD_preprocess_pipeline_v1_0_test('/Users/EGI/Documents/MATLAB/IDD-master/data')`



The screenshot shows the MATLAB Command Window interface. At the top, there is a blue header bar with the text "Command Window". Below this is a yellow banner with the text "New to MATLAB? See resources for [Getting Started](#)." The main area of the window is white and contains two lines of code entered at the prompt. The first line is `>> addpath('/Users/EGI/Documents/MATLAB/IDD-master')` and the second line is `fx >> IDD_preprocess_pipeline_v1_0_test('/Users/EGI/Documents/MATLAB/IDD-master/data')`. A blue arrow points from the yellow banner towards the first line of code.

```
Command Window
New to MATLAB? See resources for Getting Started.
>> addpath('/Users/EGI/Documents/MATLAB/IDD-master')
fx >> IDD_preprocess_pipeline_v1_0_test('/Users/EGI/Documents/MATLAB/IDD-master/data')
```