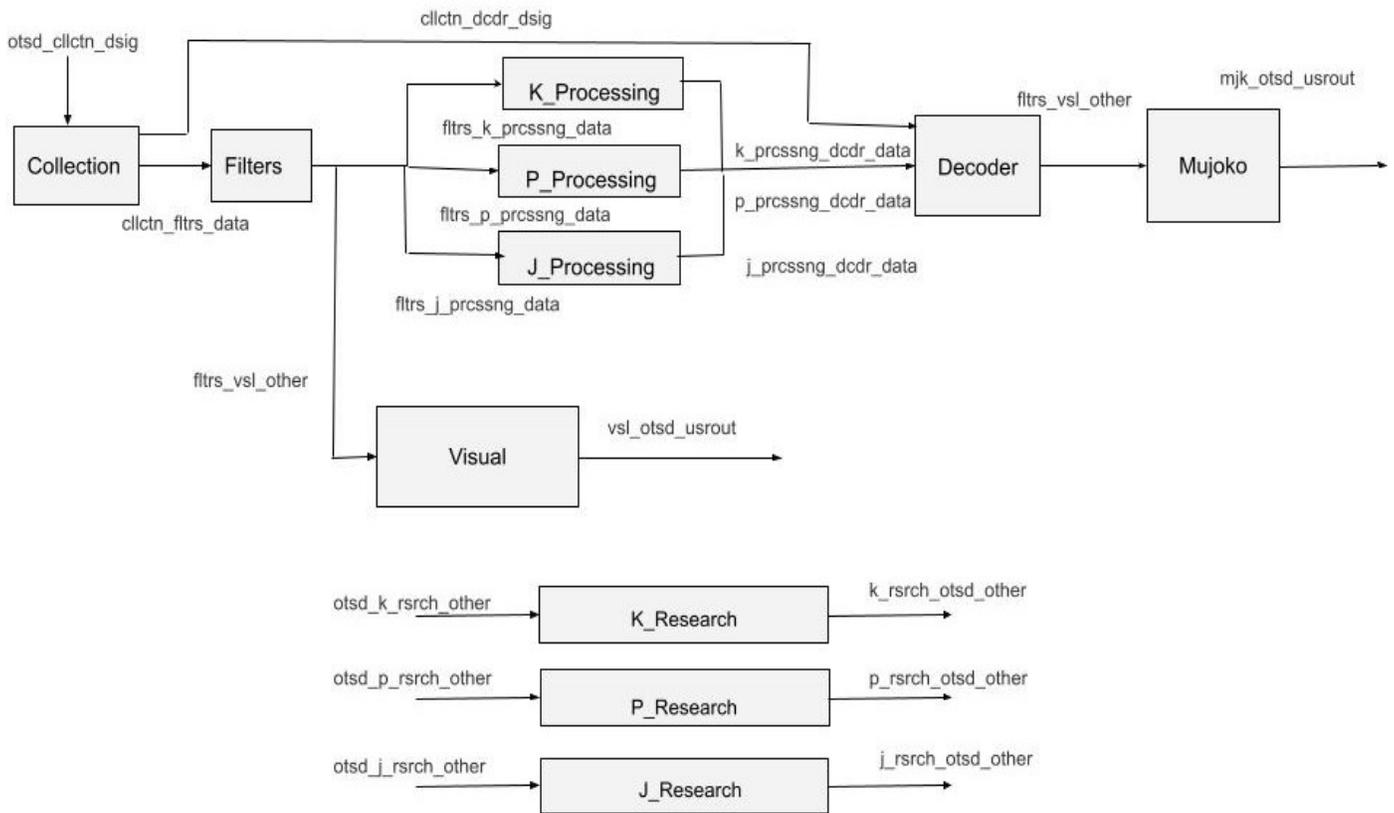


EEG Project 39: Block Diagram and Interface Definitions



Name	Properties
otsd_cllctn_usrin	<ul style="list-style-type: none"> • Other: User specifies when to collect data • Other: User is wearing EEG headset and glove circuit • Other: User has eyes closed and is focusing on just hand movement
otsd_j_rsrch_other	<ul style="list-style-type: none"> • Other: At least three papers describing implementation/algorithms for the chosen feature generating method are cited and summarized. • Other: At least 1 paper demonstrating the successful combination of CAR and the feature generation method. • Other: At least one academic source that is not a research paper that aids in the implementation of the feature generation method. • Other: At least three papers describing implementation/algorithms for CAR are cited and summarized.

otsd_p_rsrch_other	<ul style="list-style-type: none"> • Other: At least one academic source that is not a research paper that aids in the implementation of the feature generation method. • Other: At least three papers describing implementation/algorithms for PSD are cited and summarized. • Other: At least 1 paper demonstrating the successful combination of PSD and the feature generation method • Other: At least one academic source that is not a research paper that aids in the implementation of PSD. • Other: At least three papers describing implementation/algorithms for the chosen feature generating method are cited and summarized.
otsd_k_rsrch_other	<ul style="list-style-type: none"> • Other: At least three papers describing implementation/algorithms for the chosen feature generating method are cited and summarized. • Other: At least three papers describing implementation/algorithms for CSP are cited and summarized. • Other: At least 1 source describing the implementation of CSP that is not a research paper (course notes, seminar, lecture, etc) • Other: At least 1 paper demonstrating the successful combination of CSP and the feature generation method
vsl_otsd_usrout	<ul style="list-style-type: none"> • Other: EEG channel graphs display 5 seconds worth of information (the most recent reading and 5 seconds of data from the past) • Other: 1 Fourier Transform graph of the EEG data. • Other: 1 graph detailing the frequency response of the filters applied to the data. • Other: One graph per EEG channel (this amounts to 16 graphs altogether).
dcd_r_mjk_dsig	<ul style="list-style-type: none"> • Max Frequency: 33Hz of data. • Other: Data values are in [-1, 1] range. • Other: Exactly two data readings (current and predicted hand movement).
cllctn_dcd_r_dsig	<ul style="list-style-type: none"> • Max Frequency: The frequency should be between 33Hz and 34Hz • Other: 5 finger readings per data sample. • Other: Range of values glove values: [-1, 1]
cllctn_fltrs_data	<ul style="list-style-type: none"> • Datarate: There are between 990 and 1000 samples read per second (max frequency ~1000Hz) • Other: 16 channel readings per data sample.

	<ul style="list-style-type: none"> • Other: Data with values ranging between -1 and 1 (from headset)
fltrs_vsl_other	<ul style="list-style-type: none"> • Other: 16 channel readings per data sample. • Other: Frequency of Measurements: 1000Hz • Other: Data readings are in mV. • Other: Magnitude of the EEG data readings is in the range [-1, 1]
fltrs_j_prsssng_data	<ul style="list-style-type: none"> • Messages: Data with magnitude values ranging between -1 and 1 (from headset) • Messages: Data is in the time domain • Other: Data has 1000 samples per second with a filtering time delay of less than 1 second per 2000 samples • Other: 16 channel readings per time instant
fltrs_k_prsssng_data	<ul style="list-style-type: none"> • Messages: Data is in the time domain • Messages: Data with magnitude values ranging between -1 and 1 (from headset) • Other: 16 channel readings per time instant • Other: Data has 1000 samples per second with a filtering time delay of less than 1 second per 2000 samples
fltrs_p_prsssng_data	<ul style="list-style-type: none"> • Messages: Data is in the time domain • Messages: Data with magnitude values ranging between -1 and 1 (from headset) • Other: 16 channel readings per time instant • Other: Data has 1000 samples per second with a filtering time delay of less than 1 second per 2000 samples
mjk_otsd_usrout	<ul style="list-style-type: none"> • Other: Predicted hand position visual. • Other: Current hand position visual. • Other: Frequency of updates for hand visuals is 33Hz.
j_rsrch_otsd_other	<ul style="list-style-type: none"> • Other: Declare a final decision of whether the feature generation method is a viable option for this system • Other: Summarize in 1 page the pros/cons of using Matlab vs Python for implementation • Other: A 1 page summary of my implementation method for the feature generating method • Other: Declare a final decision of whether CAR is a viable pre-processing method • Other: A 1 page summary of my implementation method for CAR
p_rsrch_otsd_other	<ul style="list-style-type: none"> • Other: Declare a final decision of whether the feature generation method is a viable option for this system

	<ul style="list-style-type: none"> • Other: Summarize in 1 page the pros/cons of using Matlab vs Python for implementation • Other: A 1 page summary of my implementation method for the feature generating method • Other: Declare a final decision of whether PSD is a viable pre-processing method • Other: A 1 page summary of my implementation method for PSD
k_rsrch_otsd_other	<ul style="list-style-type: none"> • Other: A 1 page summary of my implementation method for CSP • Other: Summarize in 1 page the pros/cons of using Matlab vs Python for implementation • Other: Declare a final decision of whether CSP is a viable pre-processing method • Other: Declare a final decision of whether the feature generation method is a viable option for this system • Other: A 1 page summary of my implementation method for the feature generating method
j_prcssng_dcdr_data	<ul style="list-style-type: none"> • Datarate: Frequency $\leq 33\text{Hz}$ • Messages: Data values are in the range $[-1,1]$ • Other: More than one data value is supplied per sample (to be used as a feature for the machine learning algorithm)
k_prcssng_dcdr_data	<ul style="list-style-type: none"> • Datarate: Frequency $\leq 33\text{Hz}$ • Messages: Data values are in the range $[-1,1]$ • Other: More than one data value is supplied per sample (to be used as a feature for the machine learning algorithm)
p_prcssng_dcdr_data	<ul style="list-style-type: none"> • Datarate: Frequency $\leq 33\text{Hz}$ • Messages: Data values are in the range $[-1,1]$ • Other: More than one data value is supplied per sample (to be used as a feature for the machine learning algorithm)