

CS 555 Group 22

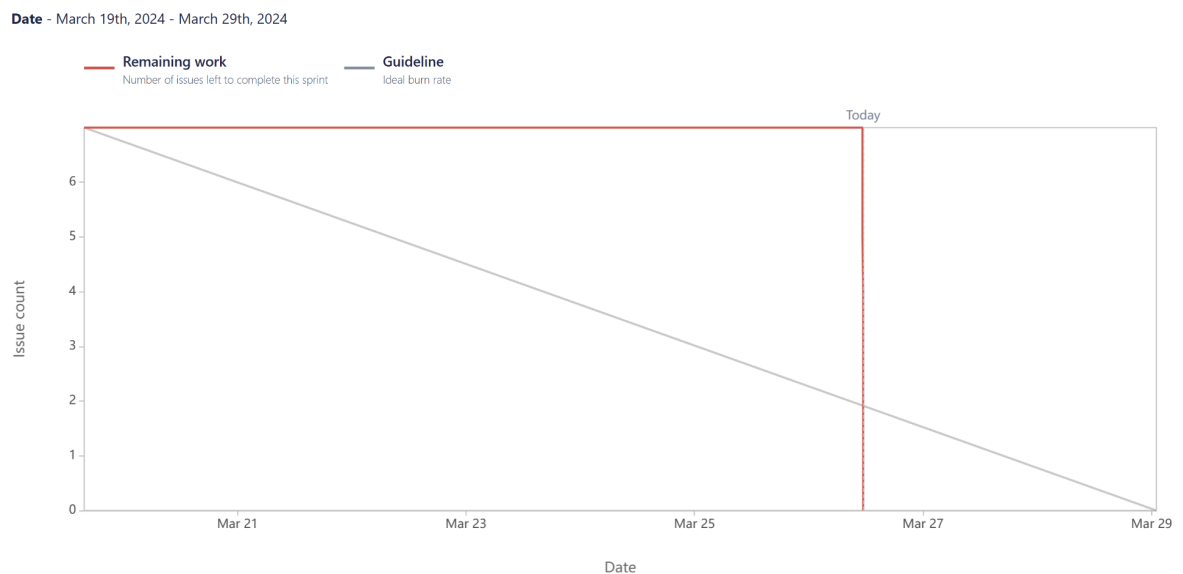
Sprint 2

## 1. Executing Sprint 2

### Sprint 2 User Stories

<input type="checkbox"/> Sprint 2 19 Mar – 29 Mar (7 issues)	0 0 7 Complete sprint ...
<input checked="" type="checkbox"/> KAN-26 Implement reshape functions	DONE ✓ GS
<input checked="" type="checkbox"/> KAN-25 Implement Normalization Functions	DONE ✓ GS
<input checked="" type="checkbox"/> KAN-28 Evaluate algorithms to highlight adjustments we can make to enhance performance.	DONE ✓ AB
<input checked="" type="checkbox"/> KAN-24 Update Readme on github	DONE ✓ JG
<input checked="" type="checkbox"/> KAN-23 document each step of the process to record which algorithms are operating and which fixes need to be ma...	DONE ✓ DF
<input checked="" type="checkbox"/> KAN-22 Test each algorithm, evaluate for issues and adjust as necessary.	DONE ✓ MS
<input checked="" type="checkbox"/> KAN-21 Integrate the correct algorithms to process data	DONE ✓ MS
+ Create issue	

### Sprint 2 Burndown Chart



## 2. Demonstrating Sprint 2

Screenshots of working tests - Done through Pair programming

```
- Filter length: 497 samples (3.310 s)

[Parallel(n_jobs=1)]: Done 17 tasks      | elapsed: 0.0s
[Parallel(n_jobs=1)]: Done 71 tasks      | elapsed: 0.0s
[Parallel(n_jobs=1)]: Done 161 tasks     | elapsed: 0.1s
[Parallel(n_jobs=1)]: Done 287 tasks     | elapsed: 0.2s
319 events found on stim channel STI 014
Event IDs: [ 1 2 3 4 5 32]
319 events found on stim channel STI 014
Event IDs: [ 1 2 3 4 5 32]
319 events found on stim channel STI 014
Event IDs: [ 1 2 3 4 5 32]
ok

-----
Ran 7 tests in 30.111s

OK
PS C:\Users\jakeg\Documents\School\Spring 2024\SSW 555\SSW555-Group22> git add.
git: 'add.' is not a git command. See 'git --help'.
```

```
- Lower passband edge: 1.00
- Lower transition bandwidth: 1.00 Hz (-6 dB cutoff frequency: 0.50 Hz)
- Upper passband edge: 30.00 Hz
- Upper transition bandwidth: 7.50 Hz (-6 dB cutoff frequency: 33.75 Hz)
- Filter length: 497 samples (3.310 s)

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ok
testPlotEvents (AlexTest.testData.testPlotEvents) ... Opening raw data file C:\Users\jakeg\mne_data\MNE-sample-data\MEG\sample\sample_audvis_filt-0-40_raw.fif...
  Read a total of 4 projection items:
    PCA-v1 (1 x 102) idle
    PCA-v2 (1 x 102) idle
    PCA-v3 (1 x 102) idle
    Average EEG reference (1 x 60) idle
  Range : 6450 ... 48149 = 42.956 ... 320.665 secs
Ready.
Reading 0 ... 41699 = 0.000 ... 277.709 secs...
Filtering raw data in 1 contiguous segment
Setting up band-pass filter from 1 - 30 Hz

FIR filter parameters
-----
Designing a one-pass, zero-phase, non-causal bandpass filter:
- Windowed time-domain design (firwin) method
- Hamming window with 0.0194 passband ripple and 53 dB stopband attenuation
- Lower passband edge: 1.00
- Lower transition bandwidth: 1.00 Hz (-6 dB cutoff frequency: 0.50 Hz)
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319 events found on stim channel STI 014
Event IDs: [ 1  2  3  4  5 32]
ok
testEEG3 (AlexTest.testData.testEEG3) ... Opening raw data file C:\Users\jakeg\mne_data\MNE-sample-data\MEG\sample\sample_audvis_filt-0-40_raw.fif...
  Read a total of 4 projection items:
    PCA-v1 (1 x 102) idle
    PCA-v2 (1 x 102) idle
    PCA-v3 (1 x 102) idle
    Average EEG reference (1 x 60) idle
  Range : 6450 ... 48149 = 42.956 ... 320.665 secs
Ready.
Reading 0 ... 41699 = 0.000 ... 277.709 secs...
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- Hamming window with 0.0194 passband ripple and 53 dB stopband attenuation
- Lower passband edge: 1.00

```

```

Ready.
Reading 0 ... 41699 = 0.000 ... 277.709 secs...
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FIR filter parameters
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319 events found on stim channel STI 014
Event IDs: [ 1  2  3  4  5 32]
ok
testEEG2 (AlexTest.testData.testEEG2) ... Opening raw data file C:\Users\jakeg\mne_data\MNE-sample-data\MEG\sample\sample_audvis_filt-0-40_raw.fif...
  Read a total of 4 projection items:
    PCA-v1 (1 x 102) idle
    PCA-v2 (1 x 102) idle
    PCA-v3 (1 x 102) idle
    Average EEG reference (1 x 60) idle
  Range : 6450 ... 48149 = 42.956 ... 320.665 secs
Ready.
Reading 0 ... 41699 = 0.000 ... 277.709 secs...
Filtering raw data in 1 contiguous segment
Setting up band-pass filter from 1 - 30 Hz

FIR filter parameters
-----

```

here

Ln 100, Col 1 Spaces: 4 UTF-8 CRLF Python 3.12.2 (venv: venv)

```

testDataResampling (AlexTest.testData.testDataResampling) ... Opening raw data file C:\Users\jakeg\mne_data\MNE-sample-data\MEG\sample\sample_audvis_filt-0-40_raw.fif...
  Read a total of 4 projection items:
    PCA-v1 (1 x 102) idle
    PCA-v2 (1 x 102) idle
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ok
testEEG1 (AlexTest.testData.testEEG1) ... Opening raw data file C:\Users\jakeg\mne_data\MNE-sample-data\MEG\sample\sample_audvis_filt-0-40_raw.fif...
  Read a total of 4 projection items:
    PCA-v1 (1 x 102) idle
    PCA-v2 (1 x 102) idle
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  Range : 6450 ... 48149 = 42.956 ... 320.665 secs
Ready.

```

Ln 100, Col 1 Spaces: 4 UTF-8 CRLF Python 3.12.2 (.venv:venv)

```

PS C:\Users\jakeg\Documents\School\Spring 2024\SSW 555\SSW555-Group22> python -m unittest .\AlexTest.py -v
testDataFilter (AlexTest.testData.testDataFilter) ... Opening raw data file C:\Users\jakeg\mne_data\MNE-sample-data\MEG\sample\sample_audvis_filt-0-40_raw.fif...
  Read a total of 4 projection items:
    PCA-v1 (1 x 102) idle
    PCA-v2 (1 x 102) idle
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ok
testDataImport (AlexTest.testData.testDataImport) ... Opening raw data file C:\Users\jakeg\mne_data\MNE-sample-data\MEG\sample\sample_audvis_filt-0-40_raw.fif...
  Read a total of 4 projection items:
    PCA-v1 (1 x 102) idle
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Ready.
Reading 0 ... 41699 = 0.000 ... 277.709 secs...
ok
testDataResampling (AlexTest.testData.testDataResampling) ... Opening raw data file C:\Users\jakeg\mne_data\MNE-sample-data\MEG\sample\sample_audvis_filt-0-40_raw.fif...


```


Ln 100, Col 1 Spaces: 4 UTF-8 CRLF Python 3.12.2 (.venv:venv)

## Submitting Client Brief & Test results

 **Michael Savino** 12:35 PM  
@FS Digital @Prof. Yu Here is our Sprint 2 finished. I've attached files of test results and our updated client brief.

2 files ▾

 **CS\_SSW 555 - Client Brief.pdf**  
PDF

 **Sprint 2 Test Results.pdf**  
PDF

### 3. Reviewing Sprint 2

#### Sprint 2:

Things we want to keep doing:

1. We want to keep meeting in person. We find it a lot more productive and get more work done.
2. We want to keep having regular updates about our project and the progress each of us have made.
3. Continue to update the readme.

Things we need to work on:

1. Continue reducing procrastination.
2. Have more specific issues on the Jira board. Our issues could be much more refined and specific.
3. Meet more frequently as a team.

### 4. Planning Spring 3

☐ ▾ Sprint 3 ✎ Add dates (8 issues) 8 0 0 Start sprint ⋮

<input checked="" type="checkbox"/> KAN-29 Integration of EEG/MEG Data and store it securely for the visualization system.	TO DO ▾	MS ⋮
<input checked="" type="checkbox"/> KAN-30 Source Localization Algorithm Integration to accurately pinpoint sources of brain activity based on the EEG/...	TO DO ▾	MS
<input checked="" type="checkbox"/> KAN-31 Develop a prototype 3D brain model using the stored EEG/MEG data.	TO DO ▾	JG
<input checked="" type="checkbox"/> KAN-32 Design and implement enhancements to the user interface of the 3D visualization.	TO DO ▾	JG
<input checked="" type="checkbox"/> KAN-33 Add features to the visualization system to improve and enhance the visuals.	TO DO ▾	GS
<input checked="" type="checkbox"/> KAN-34 Optimize rendering performance to achieve real-time performance.	TO DO ▾	AB
<input checked="" type="checkbox"/> KAN-35 Conduct thorough testing to ensure compatibility of the visualization system across different devices and pla...	TO DO ▾	DF
<input checked="" type="checkbox"/> KAN-36 Create comprehensive documentation and user guides to assist surgeons in effectively using the visualizatio...	TO DO ▾	DF

+ Create issue