

CS/SSW 555 Agile Methods

Group 22 LitHub
Sprint #1
2/16/2024

Project Background Information

Selected Project Option Number: Option 1

Main Objective of Project:

Our objective of this project is to create a 3D visual rendering of a model of a brain using EEG/MEG that surgeons can study and locate areas of interest. We do this by first intaking EEG/MEG data and storing it in the cloud. Then next we want to use Source Localization Algorithms to pinpoint the sources of brain activity. After that we plan to make the 3D visualization system that generates a reconstruction of the brain. With the model, we also want to allow surgeons to enhance visuals provided by the reconstruction to pinpoint and study areas of interest. We also plan to add real time rendering to the program.

Team Members and Roles:

| Name | Role |
|-----------------|---------------|
| Jake Gebeline | Product Owner |
| Michael Savino | Scrum Master |
| Grant Shufelt | Developer |
| Dave Frost | Tester |
| Alexander Bakos | Developer |

List & Description of Each Sprint:

| Sprint # | Objective |
|----------|--|
| Sprint 1 | Data Integration and Storage <ul style="list-style-type: none">• Setup cloud infrastructure• Prepare preprocessed data• Implement manipulation scripts |
| Sprint 2 | Source Localization Algorithms Implementation <ul style="list-style-type: none">• Integrate Algorithms to process data• Thoroughly Test and adjust algorithms |
| Sprint 3 | 3D Visualization System Development |

| | |
|----------|---|
| | <ul style="list-style-type: none"> • Design and Develop a 3D visualization system • Implement ability to enhance visualization/view regions of interest |
| Sprint 4 | Additional Functionalities and Enhancements <ul style="list-style-type: none"> • Brainstorm additional functions to aid surgeons • Develop chosen functions • Conduct thorough testing |

Project Links:

| Type | URL |
|---------------------------|---|
| GitHub/GitLab/Etc | https://github.com/msavino16/SSW555-Group22 |
| Jira | https://stevens-msavino.atlassian.net/jira/software/projects/KAN/boards/1 |
| Live Demo (if applicable) | |

Technology Stack Used:

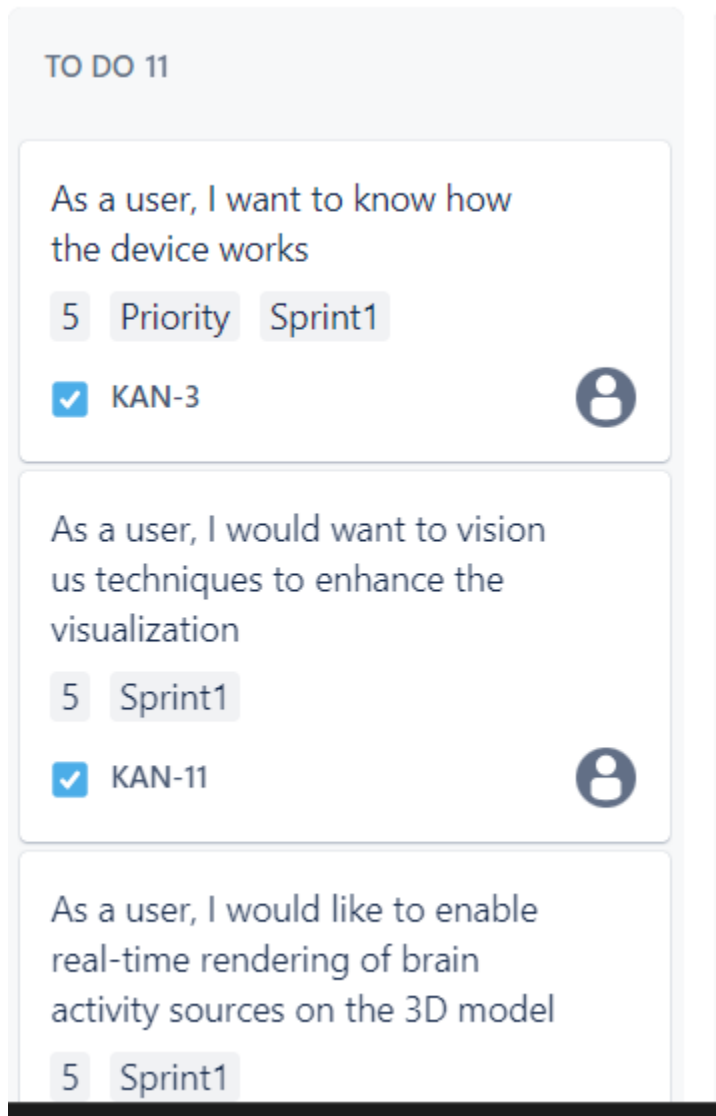
| Type | Technology |
|----------------|-----------------------|
| User Interface | JavaScript, CSS, HTML |
| Backend | Python |
| Database | Pandas, Numpy |
| | |
| | |
| | |

Sprint Progress Update: Current Status

Summary of Work Completed

- Made Slack accounts and chat room
- Made GitHub for developers to use
- Made Jira account for project and issue tracking

Screenshot of Jira Backlog



Screenshot of Burndown Chart

There is no burndown chart yet.

Screenshot of QA Results

We do not have any QA results yet.

Screenshot(s) of Interface (Lo-Fi, Mid-Fi, or Hi-Fi)

We do not have any interface yet because the project has just been created.

Video of Project at Current State:

It does not need to be one edited video. If there are multiple videos, please link all of them below:

| |
|--|
| Public Video URL (Google Drive, Loom, Etc) |
| No video yet, Just created all project accounts and teams. |
| |
| |
| |

Sprint Progress Update: Current Blockers

Timeline Impacts:

| Type | Impact |
|---|-------------|
| Create websites and programs to start working | Adds 1 week |
| | |
| | |
| | |
| | |
| | |

Looking Ahead: Next Sprint

- Start outlining what the first sprint will look like
- Divide the work in each sprint to have goals and specify what has to be done
- Assign issues on Jira
- Have a rough estimate of when the project will be finished

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