

CS 307 Team 3 - Sprint 2 Planning Document

Sawyer Blatz, Ian Renfro, Kevin Xia, Lena Adel, Audrey Vincent, Pretoria (Ria) Chang

Sprint Overview

Throughout our second sprint, we will be working on iterating upon what we have already set up. The bulk of our application is, at its foundation, functional. In that sense, we have made good progress, and our tasks will mostly be to improve what we have already implemented. On the backend, we are going to work on improving the efficiency of our algorithm, and ensuring our authentication process and account creation works as expected. We will continue to style our pages, discuss our user experience, and more efficiently allot our time.

Scrum Master: Audrey Vincent

Meeting Schedule: Monday and Tuesday at 8 PM

Risks & Challenges

Moving forward, we have come to understand the importance of communicating efficiently from the very beginning of the sprint so that there is not a large amount of tasks to implement as the deadline nears. As a team, we also learned from the first sprint that properly dividing tasks and allocating them to each member, as well as consistently scheduling time to work on said tasks, is something we are still striving to improve upon.

However, we feel that we have made improvements on our communication methods and understand what aspects of our teamwork need to be worked on.

Code-wise, we have found less challenge in developing our summarization algorithm than we expected, and will be iterating upon it to improve efficiency.

Fleshed out User Stories that will not be implemented this sprint

User Story #13

As a user, I want to have fine-grained control over the length of the summary, such as limiting it to one sentence, or just slightly condensing the information. (User Story #11)

| # | Task Description | Estimated Time | Owner | Team |
|---|---|----------------|--------|----------|
| 1 | Create a slider to determine the brevity | 2 hours | Ria | Frontend |
| 2 | Create the brevity enum | .5 hours | Sawyer | Backend |
| 4 | Parse the JSON response from the API into an array of the sentences with their rankings that will be passed to the Frontend | 2 hours | Sawyer | Backend |
| 5 | Control brevity of the summary by taking a certain number of elements from the sorted array and displaying them to the user | 2 hours | Audrey | Frontend |
| 6 | Test the parsing of JSON data and the brevity controller | 2 hours | Sawyer | Testing |

- Given that the brevity slider is functional, when the user adjusts the slider, then the output summary should contain an amount of sentences commensurate to the brevity setting.
- Given that different sentences outputted are ranked in order of importance, when the user generates a summary, then the summary will consist of the top rated sentences limited by the brevity setting.
- Given that the API response is successfully parsed in the backend, when a summary is generated from the summary module, then it will successfully be passed into the frontend to display to the user.

As a user, I would like to delete irrelevant sentences/bullets from my generated summary (User Story #12).

| # | Task Description | Estimated Time | Owner | Team |
|---|---|----------------|--------|----------|
| 1 | Parse JSON response into sentences that render blocks you can hide and add back | 3 hours | Audrey | Frontend |
| 2 | Add an icon when you would like to add a sentence before, on hover | 2 hour | Ria | Frontend |
| 3 | Add icon when you would like to delete a sentence, on hover | 2 hour | Ria | Frontend |
| 4 | Implement the functionality to keep track of hidden sentences based on brevity | 2 hours | Audrey | Frontend |
| 5 | Style the add and subtract buttons | 2 hours | Ria | Frontend |
| 6 | Write tests scripts to ensure functionality of sentence adding/deleting buttons | 2 hours | Ria | Frontend |

- Given that JSON responses are properly parsed, when users want to view blocks of sentences to add and delete, the interface will adjust based on the user's request.
- Given that there is a clear icon for adding sentences, when users want to add sentences into their summaries, then it will be simple and intuitive for them to do so
- Given that there is a clear icon for deleting sentences, when users want to delete sentences from their summaries, then it will be simple and intuitive for them to do so

As a developer, I would like to have an optimized algorithm for summarizing text. (User Story #31).

| # | Task Description | Estimated Time | Owner |
|---|---|----------------|------------|
| 1 | Compute chain strength dynamically | 2 hours | Kevin |
| 2 | Experiment and pick a new heuristic for determining word relevance to a chain | 6 hours | Kevin |
| 3 | Implement a non-greedy algorithm for lexical chaining | 10 hours | Kevin |
| 4 | Experiment with optimal chain amount from important chain selection | 2 hours | Kevin, lan |
| 5 | Experiment with optimal word amount from important word selection | 1 hour | Kevin |
| 6 | Experiment with better sentence ranking heuristics using lexical chains | 3 hours | Kevin |
| 7 | Add documentation (Readme) for the Summarization Module | 4 hours | Kevin, lan |

| 8 | Ensure that all test cases still pass and add new test cases when relevant | 2 hours | Kevin |
|---|--|---------|-------|
| 9 | Add automated build and install scripts to increase maintainability on remote servers. | 2 hours | lan |

- Given that chain strength is computed dynamically and a different heuristic is chosen for word relevance, when users attempt to summarize information through our web app, their summary will be computed faster than it would have before
- Given a non-greedy lexical chaining algorithm and an optimal amount of words/chains, when users attempt to summarize information through our web app, their summary will be higher quality.
- Given proper documentation, when a user or developer wants to understand our algorithm and potentially utilize it, they will be able to utilize our resources to do so
- Given automated build and install scripts, when a developer is attempting to interface with our algorithm, then they will be able to do so with ease
- Given well-written test cases for the algorithm, then when a developer wants
 to test the effectiveness of the algorithm, then they will be able to see
 through our test cases that it is robust

User Story #16

As a developer, I would like obtain a profile picture for the user (User Story #36).

| # | Task Description | Estimated Time | Owner | Team |
|---|--|----------------|--------|----------|
| 1 | Create a page for users to upload a profile picture, and save it to the database | 4 hours | Audrey | Frontend |

| 2 | Allow the option for a user to grab their profile picture from their Google account | 0.5 hours | Sawyer | Frontend |
|---|---|-----------|--------|----------------------|
| 3 | Create endpoint and logic for saving the profile picture | 2.5 hours | Lena | Database |
| 4 | Create entry in the database for saving the profile picture | 2 hours | Lena | Backend |
| 5 | Create a component to view user's profile in the main navigation bar | 3 hours | Ria | Frontend |
| 6 | Testing and documentation of functionality for frontend | .5 | Audrey | Frontend/Bac kend |
| 7 | Create documentation for endpoint in backend and creating entry in the database | 1 hour | Lena | Backend/Data base |
| 8 | Testing for endpoint in backend and creating entry in the database | 1 hour | Lena | Backend/Data base |

- Given that there is a clear indicator on the frontend to upload a picture,
 when users will click on the area to upload a photo it will open up an option to upload from their local file storage.
- Given that there is a clear error/success message, when the user uploads an image, there will be a clear message on the front end indicating a success or fail.
- Given the success of the image upload, the user's profile image will appear on the profile page for the specific user, and on the main navigation bar.
- Given that the user's account is connected to Google Drive, the user will be able to attach a profile picture from their connected account.

Architecture and Performance

User Story #17

As a user, I would like to export my summaries to text files or Google drive (User Story #17).

| # | Task Description | Estimated Time | Owner | Team |
|---|---|----------------|--------|----------------------|
| 1 | Hook into the Google Drive API on both Frontend and in our Database | 3 hours | Sawyer | Backend/Fron tend |
| 2 | Create functions that will allow us to push data that is stored on our database to Google Drive folders | 2 hours | Sawyer | Database |
| 3 | Give users an option to download the summaries as a text file | 2 hours | Audrey | Frontend |
| 4 | Give users an option to export to Google Drive | 2 hours | Audrey | Frontend |
| 5 | Test and documentation of functionality | .5 | Audrey | Frontend |

Acceptance Criteria

- Given that the Google Drive API is properly integrated into our application, when a user wishes to interface with their files, they will be able to do so through Google Drive.
- Given that there are functions that allow us to push data stored on our database to Google Drive folders, when a user adds a folder to their simplif.ai account, it will be capable of being stored on Google Drive
- Given that the Google Drive API is properly integrated into our application, when users wish to use Google Drive functions with their simplif.ai files, they will be able to do so

Users can organize their notes and summaries

As a user, I would like to save my summaries to a database (User Story #16).

| # | Task Description | Estimated Time | Owner | Team |
|---|---|----------------|--------|----------------------|
| 1 | Send the summary to the Database | 3 hours | Lena | Backend |
| 2 | Test the data stored in Database | 1 hour | Lena | Testing |
| 3 | Create documentation adding data to database | 3 hours | Lena | Database |
| 4 | Implement save button and component to view the corresponding updated list of summaries | 4 hours | Audrey | Frontend |
| 5 | Create endpoint to return a list of the user's notes in the database | 2.5 hours | Lena | Backend/Data base |
| 6 | Create documentation for the list of user's notes in the database | 1 hour | Lena | Backend/Data base |
| 7 | Test the list of user's notes in the database | 1 hour | Lena | Backend/Data base |

- Given that the summary is added to the Database correctly and tested properly, when implemented then it will be simple for us to access the summary data upon a user's request.
- Given well-written documentation for sending data to the database, when we
 wish to send data, there will be clear and easy to read instructions on how to
 utilize them
- Given that the user saves a summary, the frontend will respond with correct error/success messages.

Users can organize their notes and summaries User Story #19

As a user, I would like to create an account (User Story #1).

| # | Task Description | Estimated Time | Owner | Team |
|---|--|----------------|--------|----------|
| 1 | Create an endpoint to add a new account | 2 hours | Sawyer | Backend |
| 2 | Create a component for the user to register for an account | 2 hours | Audrey | Frontend |
| 3 | Style the register page | 2 hours | Ria | Frontend |
| 4 | Test account creation | 2 hours | Ria | Frontend |

Acceptance Criteria

- Given that there is an endpoint to add a new account, when a user registers for an account, they are able to do so.
- Given that there is a component for the user to register for an account, when a user registers for an account, there will be functionality in the app for them to do so and be stored in the database.
- Given that the register page is properly styled, when a user wishes to create an account, they will find the register page intuitive and aesthetically pleasing.

User Story #20

As a user, I would like to adjust the brevity of my summary by generating more or less sentences (User Story #14).

| # | Task Description | Estimated Time | Owner | Team |
|---|---|----------------|--------|----------|
| 1 | Create frontend element (slider) that a user can adjust | 2 hours | Audrey | Frontend |
| 2 | Change the actual length of the summary | 2 hours | Audrey | Frontend |

| | that is displaying when the slider updates | | | |
|---|--|---------|-----|----------|
| 3 | Write tests to ensure the functionality of the slide | 2 hours | Ria | Frontend |

- Given that there is a brevity slider implemented on our web page, when users want to adjust the length of their summary, then they will easily be able to understand how.
- Given that there is a brevity slider implemented on our web page, when users want to adjust the length of their summary, then simplif.ai will be able to adjust the brevity of the summary accordingly.
- Given that there is a brevity slider available on our web page, then when a user utilizes the slider, then they will find it aesthetically pleasing.

User Story #21

As a user, I would like to have an option to display my summaries in night mode (User Story #28).

| # | Task Description | Estimated Time | Owner | Team |
|---|--|----------------|--------|----------|
| 1 | Create an endpoint for storing the display mode (night or day) in the database | 1 hour | Sawyer | Backend |
| 2 | Create an entry in the database to store the night mode preference | .5 hours | Sawyer | Database |
| 3 | Create design for night mode on the front end | 3 hours | Ria | Frontend |
| 4 | Create tests for night mode | 2 hours | Ria | Frontend |

- Given that the night mode scheme is implemented correctly, when a user selects the night mode option then the scheme of the web app should change to be a darker theme.
- Given that the night mode scheme is implemented, when a user selects the night mode option then they will find it aesthetically pleasing and appropriately easy on the eyes during the night
- Given that night mode is implemented correctly, when a user switches to night mode then the webapp should change in a fast manner.

User Story #22As a user, I would like to change my web page color scheme (User Story #29).

| # | Task Description | Estimated Time | Owner | Team |
|---|--|----------------|--------|----------|
| 1 | Add button option for user to change color scheme | 2 hr | Ria | Frontend |
| 2 | Style button and inputs to change color scheme | 2 hr | Ria | Frontend |
| 3 | Wrap app state for color scheme to propagate through application | 1 hr | Audrey | Frontend |
| 4 | Test functionality on Frontend | 1 | Audrey | Frontend |

Acceptance Criteria

• Given that the color scheme options are implemented correctly, when a user selects a different color scheme then the web app should be updated to show the new color scheme.

- Given that the color scheme options are implemented correctly, when a user wants to select a different color scheme, they will be able to choose from a pleasing selection.
- Given that the color scheme options are available, when a user wishes to change their color scheme, they will be able to navigate to the scheme options and change them with ease.

User Story #23As a user, I would like to use a Slack bot that uses simplif.ai (User Story #21).

| # | Task Description | Estimated Time | Owner | Team |
|---|--|----------------|--------|----------|
| 1 | Hook into Slack API | 2 hours | Sawyer | Backend |
| 2 | Create backend logic for slack bot to communicate with summarizing API | 2 hours | Sawyer | Backend |
| 3 | Create the slack bot in its own app.js that will house the frontend logic of the bot | 3 hours | Sawyer | Frontend |
| 4 | Write tests for slack bot to ensure proper functionality | 3 hours | Sawyer | Backend |

- Given that the Slack bot is created, when a user wishes to utilize simplif.ai's functionality while in a slack channel, they will know how to do so.
- Given that the Slack bot is properly implemented, when a user attempts to summarize a text by calling the bot, then the Slack bot will return a summary of the text.
- Given that the Slack bot is implemented correctly, when a user wants to make a summary through slack then they should be able to easily call the bot for the summary.

As a developer, I would like to have users store their contact information (User Story #35).

| # | Task Description | Estimated Time | Owner | Team |
|---|--|----------------|--------|----------|
| 1 | Create database entry for storing additional information like phone number and email | 1 hours | Sawyer | Database |
| 2 | Create backend logic and endpoint for adding contact information like phone number and email | 3 hours | Lena | Backend |
| 3 | Add documentation for backend logic and endpoint adding contact information | 1 hour | Lena | Backend |
| 4 | Test backend logic and endpoint adding contact information | 1 hour | Lena | Backend |
| 5 | Create input field on the frontend and implement fetch call to save | 2 hours | Audrey | Frontend |

- Given that we implemented the database scheme correctly, when a user logs in for the first time their information will be added to the database.
- Given that we store their contact information correctly, when we need to send an email to the user then we should be able to retrieve the user's contact info.
- Given that we store their contact information correctly, when we need to give a user information then we should have some options in which to contact them.

As a user, I would like to organize my files into folders using Google Drive (User Story #).

| # | Task Description | Estimated Time | Owner | Team |
|---|---|----------------|--------|----------|
| 1 | Create backend logic for adding files to Google Drive folders | 2 hours | Sawyer | Backend |
| 2 | Create frontend button for adding files to Google Drive | 2 hours | Ria | Frontend |
| 3 | Create documentation the Google Drive API calls | 1 hour | Sawyer | Backend |
| 4 | Test the Google Drive folder functionality | 2 hours | Lena | Backend |

Acceptance Criteria

- Given that there is backend logic for adding files to Google Drive folders, when a user wishes to add a file to their Google Drive folder, then they will be able to do so.
- Given that there is a frontend design for moving files into folders in Google
 Drive, when a user wishes to move files to folders in Google Drive, it will be
 visually clear and intuitive to do so.
- Given that there is a frontend design for moving files into folders in Google
 Drive, when a user wishes to move files to folders in Google Drive, then they
 will be able to do so and subsequently be able to view their files in Google
 Drive.

User Story #26

As a user, I would like to add collaborators to different folders using Google drive (User Story #19).

| # | Task Description | Estimated Time | Owner | Team |
|---|------------------|----------------|-------|------|
|---|------------------|----------------|-------|------|

| 1 | Set up Google Drive API | 2 hours | Sawyer | Backend |
|---|--|---------|--------|----------------------|
| 2 | Create database entry for collaborators | .5 hour | Sawyer | Database |
| 3 | Create backend endpoint and logic for adding collaborators | 3 hours | Lena | Backend |
| 4 | Create frontend option to add collaborators | 2 hours | Ria | Frontend / Design |
| 5 | Create documentation for backend and endpoints | 1 hour | Lena | Backend |
| 6 | Test backend logic and endpoints | 1 hour | Lena | Backend |

- Given that the Google Drive API is set up, then when users want to be able to utilize Google Drive functions, they will be able to do so.
- Given that there is backend functionality for collaborators, when users want to add collaborators to their summaries, they will be able to do so.
- Given that there is documentation for endpoints, when developers wish to test endpoints, then there will documentation for them to reference.

New User Story #27

As a user, I would like to host my web application on the internet (New User Story).

| # | Task Description | Estimated Time | Owner | Team |
|---|---|----------------|-------|---------|
| 1 | Create a place to host the web app on aws | 8 hrs | lan | Backend |
| 2 | Write scripts to make pushing to the container easier or use a syncing method | 6 hrs | lan | Backend |
| 3 | Test that the application works fully on | 2 hrs | lan | Backend |

| | the deployed site. | | | |
|---|---|-------|-----|---------|
| 4 | Automated testing, linting, build, deploy scripts for the web app | 6 hrs | lan | Backend |

- Given that the web application is hosted correctly, when a user navigates to the url then it will load the web app.
- Given that there is automation implemented for the web app, then when
 users or developers wish to deploy simplif.ai, then their development
 experience will be made easier through automatic testing, linting, building
 and deploying for the app.
- Given that the web application is hosted correctly, when a user navigates to the url then the app will display full functionality for the user.

Remaining Backlog(12/39)

Users would have an account for the app

- 1. #19 As a user, I would like to create an account.
- 2. #3 As a user, I would like to be able to reset my password if I forget it.
- 3. #2 As a user, I would like to edit my account, sign out, and delete my account.

Users can summarize their notes

- 4. #6 As a user, I would like to have a place to input text.
- 5. #4 As a user, I would like to summarize information from plain text.
- 6. As a user, I would like to summarize information from online articles.
- 7. As a user, I would like to summarize information from pdf files, if time permits.
- 8. As a user, I would like to summarize information from ppt files, if time permits.

- 9. As a user, I would like to summarize information from video captions, if time permits.
- 10.#5 As a user, I would like to generate a list of condensed information from text.
- 11.#13 As a user, I want to have fine-grained control over the length of the summary, such as limiting it to one sentence, or just slightly condensing the information.

Users can edit their summarized notes

- 12.#14 As a user, I would like to delete irrelevant sentences/bullets from my generated summary.
- 13.#7 As a user, I would like to modify the text of sentences/bullets from my generated summary.
- 14.#20 As a user, I would like to adjust the brevity of my summary by generating more or less sentences.
- 15.#8 As a user, I would like to use a text editor to finalize the summary of my text.

<u>Users can organize their notes and summaries</u>

- 16. #18 As a user, I would like to save my summaries to a database.
- 17.#17 As a user, I would like to export my summaries to text files or Google drive.
- 18.#26 As a user, I would like to organize my files into folders using Google Drive.
- 19.#27 As a user, I would like to add collaborators to different folders using Google drive.
- 20. As a user, I would like to be able to use this service on a spotty Internet connection (offline mode).

<u>Users can use outside application to integrate with summarized notes</u>

21.#23 As a user, I would like to use a Slack bot that uses simplif.ai.

22. As a user, I would like to record lectures or speech and input the dialogue into our summarize application, if time permits.

<u>Users can manage their schedule through their summarized notes</u>

- 23. As a user, I would like to receive email updates about important upcoming dates extracted from my notes.
- 24.#24 As a user, I would like to be able to toggle the option to receive email updates.
- 25. As a user, I would like to be able to add important upcoming dates to my Google Calendar upon receiving an email update.

<u>Users can easily navigate the application with a comprehensive design</u>

- 26.#9 As a user, I want the web application to have an easy-to-read font.
- 27. As a user, I would like a tutorial or a help system for me to learn how to use the app.

Users have option of changing application design

- 28.#21As a user, I would like to have an option to display my summaries in night mode.
- 29.#22 As a user, I would like to change my web page color scheme.

Application summarizing functionality

- 30. As a developer, I would like to scan a web page and input the parsed information into my database.
- 31.#15 As a developer, I would like to have an optimized algorithm for summarizing text.
- 32.#11 As a developer, I would like to implement an API for our service.

<u>Application account functionality</u>

- 33.#10 As a developer, I would like users to be able to securely login.
- 34.#12 As a developer I would like to have a database where I can store data about the user.
- 35.#25 As a developer, I would like to have users store their contact information.

36.#16 As a developer, I would like obtain a profile picture for the user.

Keep telemetry and manage the application

- 37. As a user, I would like to be able to report issues to the developer.
- 38. As a developer, I would like user feedback.
- 39.#1 As a developer, I would like to have proper documentation, coding standards, and version control standards.

Additional User Stories

• As a user, I would like to host my web application on the internet

Total Hours

| Name | Hours |
|--------|-------|
| Sawyer | 30 |
| lan | 30 |
| Kevin | 30 |
| Lena | 30 |
| Audrey | 30 |
| Ria | 32 |