# EE/CprE/SE 492 - sddec18-09

## Hidden Guardian
## Week 8 Report 5
10/22/18 - 11/05/18
Faculty Advisor: Professor Phillip Jones

## Team Members:

Jennifer Frank - Team Lead/Mobile Application Development
Jacob Stilwell - Mobile Application Development
Matthew Pedretti - Hardware Engineer
Keng-Yik Ho - Hardware Engineer
Thomas Kirby - Database and Backend Development

## Weekly Summary:

This week we created the keyword page and added display and delete functionality, added refresh functionality to the main page and started to work on the two pages that display more specific information about the gaming entry. We worked as a team to specifically define our implementation plan for the last semester, redraw up some screen sketches, and consider some corner cases for use. We also sent in our request hardware components for the bluetooth speaker, and have most hardware implementation that can be done up until we receive that hardware.

## Past Two Week Accomplishments:

**Tom:** Tom worked on compressing .wav files.

**Jacob:**
**Keyword Page**
- Created keyword page and moved keyword add functionality.
- Added keyword delete functionality and displaying the current keywords for the specific user.

**More Specific Gaming Entry Page**
- Started to work on creation of gaming entry to hold the 1 minute text and to swipe left and right for context

**Jenn:**
1. Added refresh functionality so that the main page is getting updated with the new database data every 500 milliseconds using a timer.
   a. Troubleshooted issues with this task

        i.      TimerTask alone did not work because it tried to adjust the view on a thread other than the main thread

        ii.      Using just a handler, timer, and set seconds alone threw errors

        iii.      Final solution included using a timer that scheduled a timertask at a fixed rate and then within the timertask class instantiated a handler that used runnable.

2. Created the Gaming Session Page so that it displays varying data based on which list view was selected and started working on the functionality

    a.    I have it set up to pass in session ID to the new page so that it will only display messages in that context (once the session IDs are assigned).

3. Worked with team to specifically define what we want with our final screen sketches

**Matthew:** I completed the speaker components list and sent the list and design to our advisor to get them ordered. I contacted a database specialist about our plan for implementing the SQL database and received some feedback on ways to improve it. I have also begun looking at the rubrics for the final poster and final report to create the templates for those as I wait for speaker parts to arrive.

**Keng Yik:** Keng Yik worked on raspberry pi / hardware backend basic functionality.

## Pending Issues:

1. We *had* a concern about how we are storing message text clips in our database in terms of increased users and meeting the needs of our scope. However, we addressed this issue by making plans to change our database so a new message table is created per user (and potentially hardware id).

2. Though we have compressed the .wav files, it is still a very slow process to convert them from speech to text. This is mainly due to our server provided, and would be less of an issue if this was implemented on a large scale, but we are still trying to find solutions and workarounds to this issue for our prototype and final presentation.

3. We have a concern about the amount of time we have left and our ability to implement all design ideas and edit it so that it is as user-friendly and intuitive as possible. We intend to ramp up our efforts and put in more time into this project during the final 5 weeks.

## Individual Contributions:

| Name | Contribution | Biweekly hours | Total hours |
|---|---|---|---|
| Jennifer Frank | Worked on main page refresh, specific | 12 | 59 |

| | gaming session data page, and updating schedule/timeline | | |
|---|---|---|---|
| Jacob Stilwell | Completion of keywords page, start of specific gaming entry for text and scrolling | 8 | 29 |
| Matthew Pedretti | Finalized and ordered the list of speaker parts. Consulted with a database specialist on the structure of our database. | 7 | 31 |
| Keng-Yik Ho | | | 20 |
| Thomas Kirby | | | 19 |

## Plans for the upcoming week:

| Member | Task | Deadline | Notes |
|---|---|---|---|
| Jenn | Make the specific gaming entry page more detailed | 11/9 | |
| Jenn | Add delete gaming entry option | 11/9 | |
| Jenn | Automatically delete gaming entry options for dates that exceed one week | 11/9 | |
| Jenn | Create info button functionality for Jacob's more detailed gaming entry page | 11/9 - 11/13 | |
| Jenn/Jacob | Add text color context to messages for confidence ratings | 11/9 - 11/13 | This was pushed back because confidence ratings are not being sent into the database yet. |
| Jenn | Adjust the code so that there is a new | 11/19 | This is to help with scope |

| | | | |
|---|---|---|---|
| | message table being created for every new user | | |
| Jenn | Make the app more user friendly | 11/19 | |
| Jacob | Create the more specific gaming entry page (displays full one minute context text and swipe left/swipe right displays surrounding minute long context). | 11/9 | |
| Jacob | Audio File for the minute text context is displayed at the top of the "more specific gaming entry" page | 11/9 | |
| Jacob | Focus on the "add a hardware" feature and how this will affect front end | 11/19 | |
| Matthew/Keng Yik | Assign gaming session id/message id to audio files that are sent to server | 11/8 before meeting | |
| Matthew/Keng Yik | Send hardware code | 11/8 | In a production setting the hardware code would exist as both a sticker somewhere on the device, and internally saved in the Pi |
| Matthew | Begin setting up the template for the final poster and final report | 11/11 | |
| Matthew/Keng-Yik | When parts come in work on attaching components and | 11/16 | |

| | button functionality | | |
|---|---|---|---|
| Thomas | Push backend audio-> speech to text -> database code to repository | 11/5 | This needs to be done ASAP. |
| Thomas | Get confidence ratings entered into the database | 11/6 | |
| Thomas | Connect the raspberry pi to the database | 11/8 before our meeting | |
| Thomas/Jenn | Adjust the database to accurately reflect what we need (handle potentially larger scope) | 11/8 before meeting | |
| Matthew/Keng-Yik/Thomas | Have gaming session id and message id assigned and sent to the database | 11/8 by end of meeting | |
| Thomas | Work on assigning date and time stamps when passing in audio data | 11/9 | |
| Thomas | Work on a solution to making .wav files send faster | 11/19 | |
| Everyone | Spend at least 2-3 hours working on Final Poster / Final Report / Final Presentation Demo | 11/19 | |

## Updated Hardware/Software Goals for 11/9 pre-prototype (due to missing speaker hardware):

By 11/9 we want to have as much completed for our prototype as we can, without the speaker's availability. This means we will be able to send an audio clip into our server, convert it from

speech to text, have a user create an account and set up their hardware component or login, view all gaming sessions, click on a gaming session and view the keywords triggered in list form. Click on the keywords and then view the text context which will be color coded based on confidence ratings and bolded based on keywords. They will be able to scroll left and right to see even more context.

## Plans post pre-prototype:

Things that will need to be completed after this pre-prototype is the actual prototype which should be a simple addition once we receive the speaker hardware parts (hopefully completed by 11/15).

We will then focus on the ability to add another hardware piece to an already existing user account, allowing the ability for a parent to have multiple hardware components for multiple kids. We will also work on making the mobile app more user friendly, and look into the ability to play the full audio clip of a gaming session. While we try to improve these design features, we will be focusing on the poster, final report and final presentation demonstration.

Our goal is to have final prototype completed the 26th, so we can put our full attention into the final presentation details.