Peak Visualization Third Iteration

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Client Information

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Mentor Feedback

- Beginning/Mid Iteration
  - Look into adding a full user system i.e. login and register.
  - Coding information about converting files to file streams in C#
  - Interviewing advice.
- Before Client Meeting
  - Potentially change the raw data export to a more common file type like csv.
  - Potential risks for program flow from adding more screen to Unity dashboard.

Client Feedback

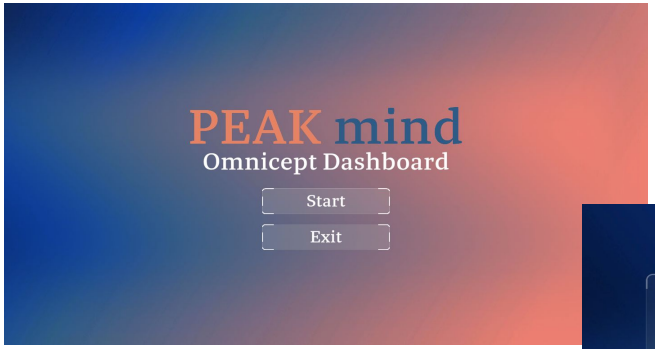
- Re-add ability in Unity dashboard to save datasets locally.
- Add more emphasis to the Cognitive Load in the dashboard.

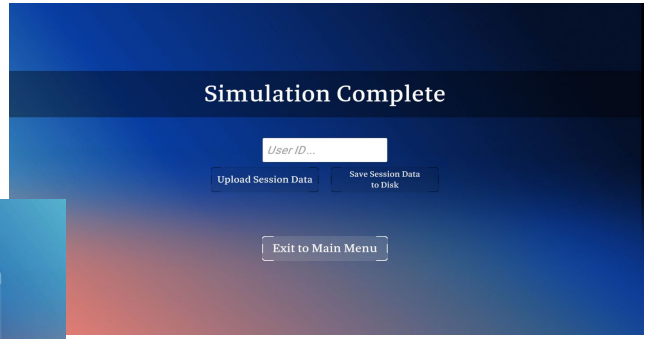
User testing results

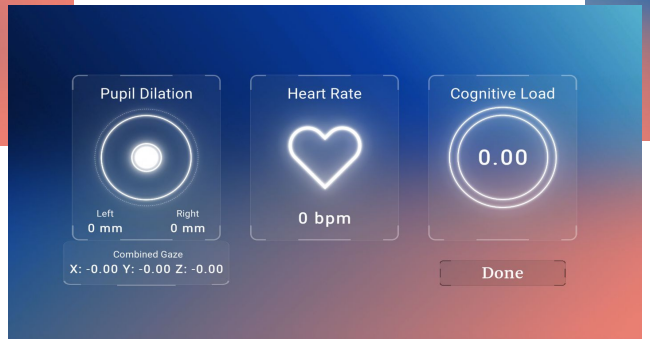
- The logos we were using were outdated.
- It was unclear that a data set needed to be selected in the webapp so a placeholder would be nice in the dropdown.

Updated Unity Application

- Visual overhaul to more closely match Peak Mind's design language (font, color)
- Added scene flow control to allow for program flow and more natural user experience







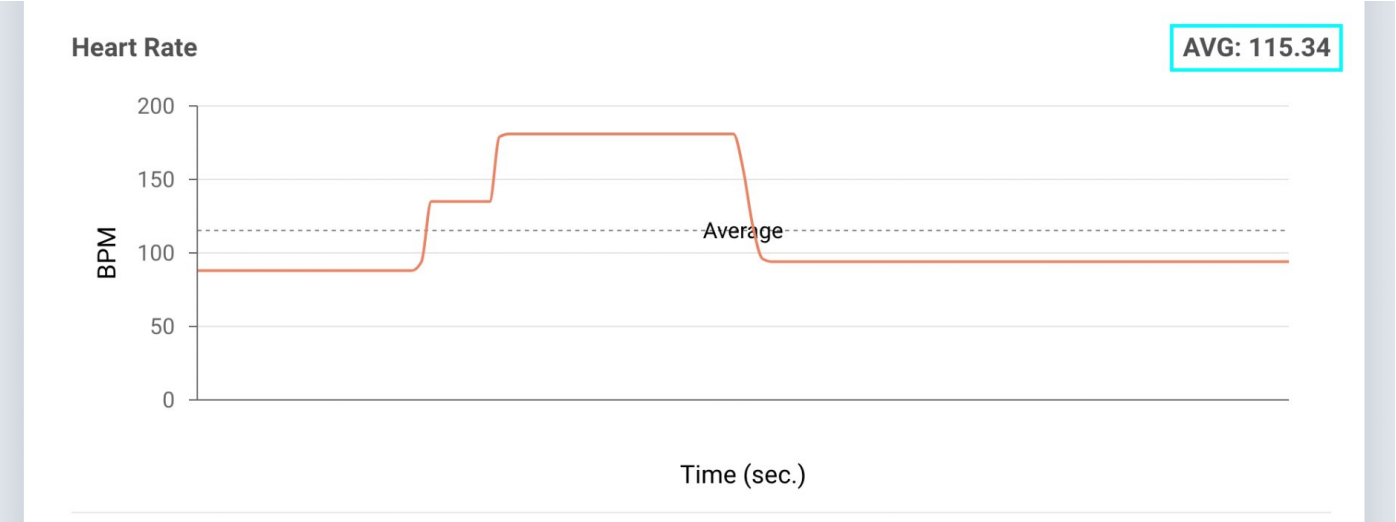
Updated AWS Resources

- Allows users to upload up to 5GB files
- Simulations can be ran for much longer before being uploaded from Unity dashboard.

```
        const signedUrl = await getSignedUrl(s3, getObjCommand);
        const s3Response = await axios.get(signedUrl);
        if (s3Response.status == 200) {
            return {
                statusCode: 200,
                body: JSON.stringify(s3Response.data),
            };
        } else {
            return {
                statusCode: s3Response.status,
                message: s3Response.statusText,
            };
        }
    } catch (err) {
        return {
            body: JSON.stringify({
                message: `Interal Server Error`,
                error: `${err.message}`,
            }),
            statusCode: 500,
        };
    }
}
```

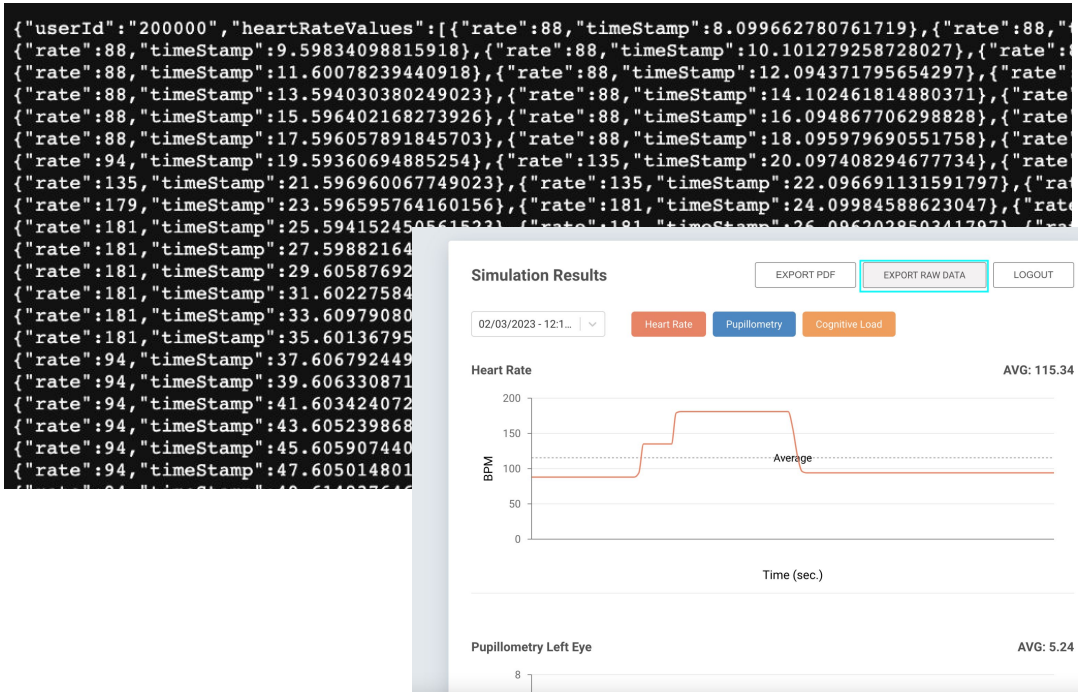
Web App - Data Averages

- Calculate and display averages for each biometric to make the information more digestible



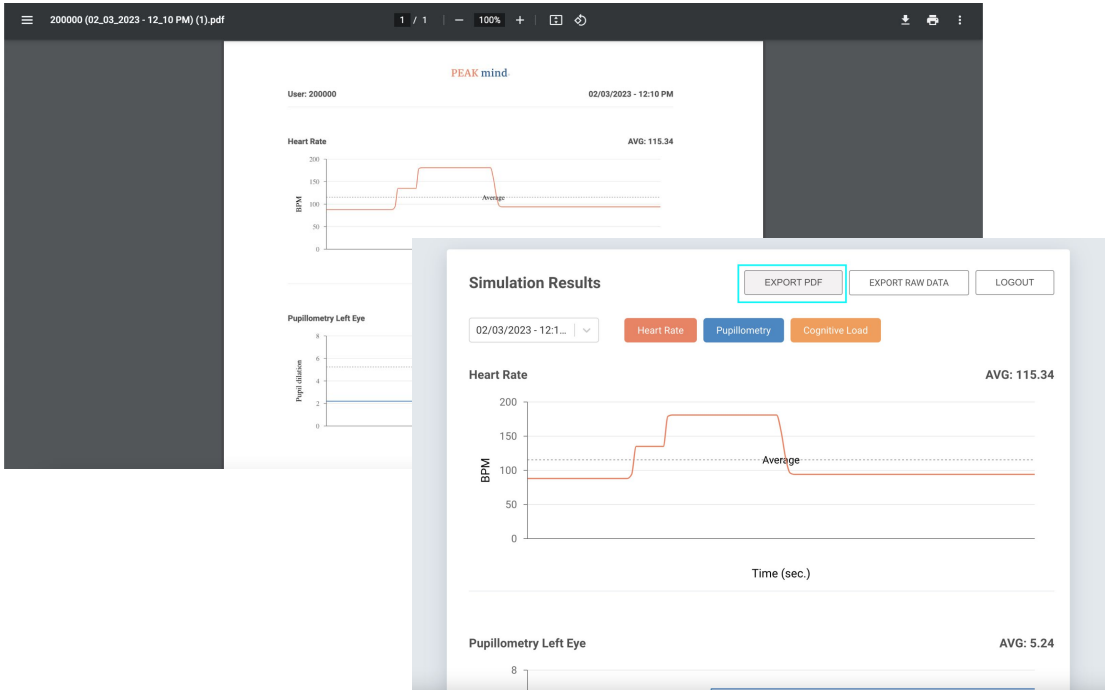
Web App - Raw Data Export

- Allow for users to export data as raw data
- To be used by data scientists



Web App - PDF Export

- Allow for users to export data as a PDF
- To be used by employers, employees, and human resources



Benefits to Client

- Before we created this project, the client had no way of utilizing the HP Omnicept to gather the data they need for their product and no way of displaying the data collected to their users
- After this iteration, the client would be able to:
  - Monitor the live biometrics of simulation participants
  - Collect data from real simulations and store them on AWS
  - Deploy the web app and allow users to see the results of their simulation and export their data

Planned Fourth Iteration Features

- Add visuals for heart rate variability.
- Add visuals for PPG data and adding ppg data to saved data.
- Change visual hierarchy in Dashboard application to represent how cognitive load is calculated.
- Re-add the ability to save data to local machine from unity app.
- Create backend with Flask.
- Adding some way to view averages from different data sets.
    - Ideally all data collected.
    - Possibility of showing averaged data within a certain timeframe.
- Adding true user login and registration system for both dashboard uploads and web app. (Ideally using JWT)

Tyler’s Coworker Made This.