Next Gen Emotion Computing Iteration 5

Our Client

- **Peak Mind**
- Dr. Alicia Mckoy
- VR Stress Reducing Technology
- Personalized coaching and support
- Identify employees at risk of burnout
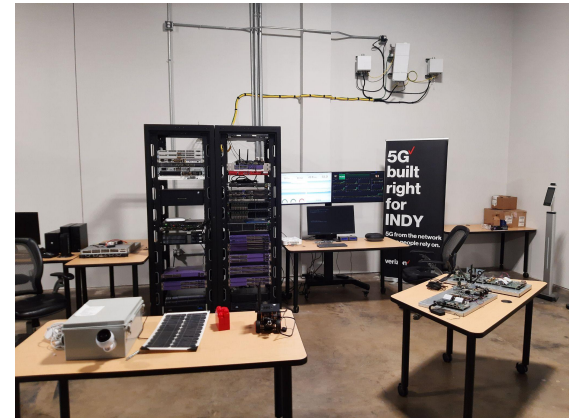- Provide early intervention

Team Members

Beethoven

Peter

Ethan

Tommy

New Functionality This Iteration

- Full video recording with actual HP headset and upload to web app
  - (previously only worked with simulator)
- Added back button to the Dashboard and the AdminPortal
- Implemented error handling for invalid email and incorrect email/password combination during login
- Generate All User Sessions Org Report
  - Displays organization-wide averages in a pop-up for Heart Rate, left and right eye pupil dilation, and cognitive load
  - Exportable csv that contains averages per user session, identifiable by both 6-digit id and session name (date-timestamp.json) with total org averages at bottom.
  - Confirmed feature details with client on 4-8-2024

Big new functionality wow!!!! (New Functionality Continued)

- Emotion Detection API
- Uploaded face videos are analyzed on-demand
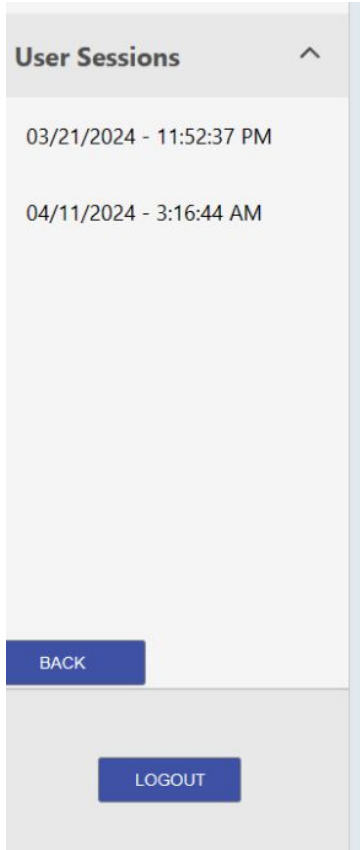- Detects "happy," "sad," "neutral," "angry," "disgust," "surprise," and "fear"

(actually might need to find a better model for our data)

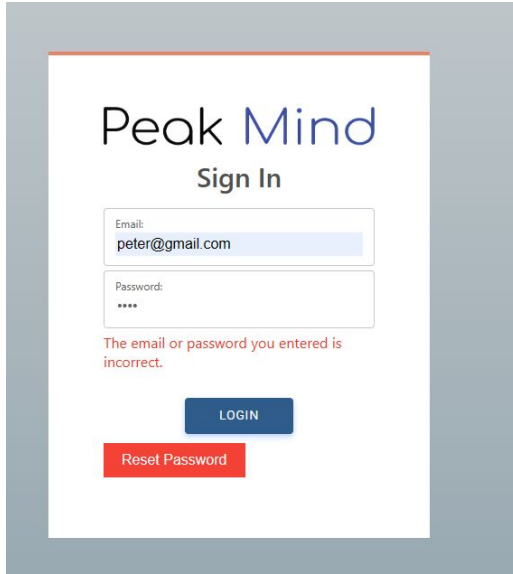# Full video recording with actual HP headset and upload to web app

- FR5. (Corresponds to BR2) (Priority: HIGH) Activate the mouth facial biometric camera.
- FR1. (Corresponds to BR2) (Priority: HIGH) When a user is using the VR device, the video feed from the device's facial cameras will be recorded.
- BR2. Validate that stress reduction techniques are effective
- Full video upload now works as intended with hardware

Added back button to the Dashboard and the AdminPortal

User Sessions ∧

03/21/2024 - 11:52:37 PM

04/11/2024 - 3:16:44 AM

BACK

LOGOUT

- FR3. (Corresponds to BR1) (Priority: LOW) A user may log in with a six-digit code to view a visualization of their collected data.
- BR1. Reduce stress in the workforce
- Back button allows for navigation to previous page within the webapp

Implemented error handling for invalid email and incorrect email/password combination during login

- FR3. (Corresponds to BR1) (Priority: LOW) A user may log in with a six-digit code to view a visualization of their collected data.
- BR1. Reduce stress in the workforce
- Handles cases where the email and/or password have been entered incorrectly and must alert the user of which has been entered incorrectly.

Generate All User Sessions Org Report

ADD USER **GENERATE ALL USERS IN ORG REPORT**

- FR4. (Corresponds to BR2) (Priority: MEDIUM) Peak Mind analysts may access all collected data and associated visualizations.
- BR2. Validate that stress reduction techniques are effective
- Displays organization-wide averages in a pop-up for Heart Rate, left and right eye pupil dilation, and cognitive load
- Exportable csv that contains averages per user session, identifiable by both 6-digit id and session name (date-timestamp.json) with total org averages at bottom.
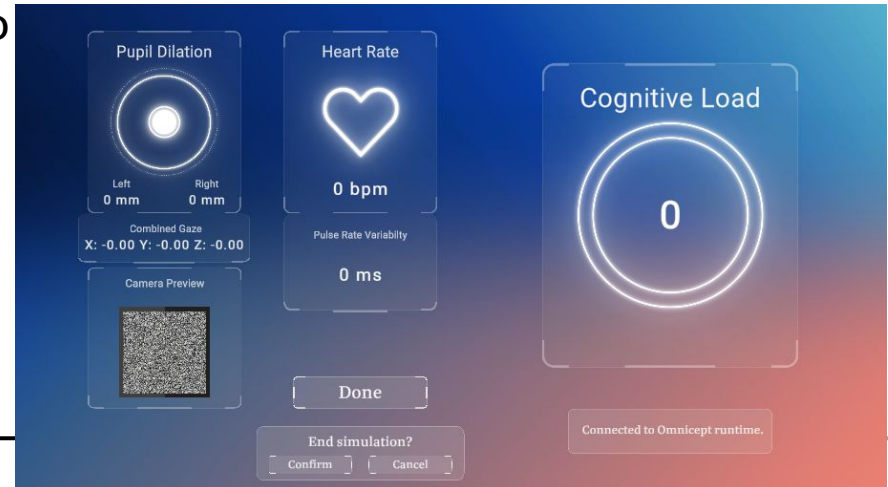- Confirmed feature details with client on 4-8-2024

User ID	Session ID	Heart Rate Average	Right Eye Average	Left Eye Average	Cognitive Load Average
129351	20240412T151416.json	132.14	4.64	5.79	0.25
Organization-wide Average	N/A	132.14	4.64	5.79	0.25

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Emotion Detection API

- FR4. (Corresponds to BR2) (Priority: MEDIUM) Peak Mind analysts may access all collected data and associated visualizations.
- BR2. Validate that stress reduction techniques are effective
- Uploaded face videos are analyzed on-demand
- Detects "happy," "sad," "neutral," "angry," "disgust," "surprise," and "fear"
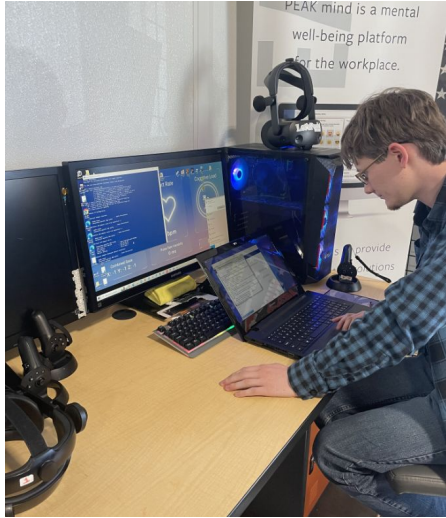
New UI Changes This Iteration

- Heart rate variability
- Eye gaze
- Forgot password button
- Peak Mind Logo

Mentor Feedback

Wyatt:

- Try to coordinates with the clients for more information on more features that impactful to the project and finish off the semester strong.
- Finish off any minor features or problem the client might have before sending the final build.

Client Feedback

Dr. Mckoy:

- Dr. Mckoy was impressed with our features added this iteration.
- She requested Github access as well as executables and she wanted us to have the webapp running on her server.
  - The login info provided does not work.
- Dr. Mckoy thanked us for our effort this year

Contributions: Ethan

- Enabled camera to work with actual VR headset to ensure that video upload works.
- Synchronized note timestamp names and property names
- Created a config file that sets the base api url as well as allows for auto-login
- Updated Unity UI
- Added Facial Recognition in backend
- Split frontend test coverage on a per-file basis

Contributions: Peter

- Back Button

- Invalid email/password

Contributions: Ben

- Massively increased front end test coverage
  - We started iteration 5 with less than 6 percent.
- Generate All Org Session Averages CSV
  - CSV presents all user sessions within an organization, sorted by 6-digit user id as well as datetime file name.
  - Generates an average per session as well as a total average per org for 4 key biometrics: heart rate, left and right eye pupillometry, and cognitive load

Contributions: Tommy

- Tested the software with the actual headset
- Test cases for reset password

Random