

**MICHIGAN STATE**  

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**UNIVERSITY**

**Alpha Presentation**  
**Using Sensors to Study**  
**Human Behavior**  
**The Capstone Experience**

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Spring 2020



*From Students...*  
*...to Professionals*

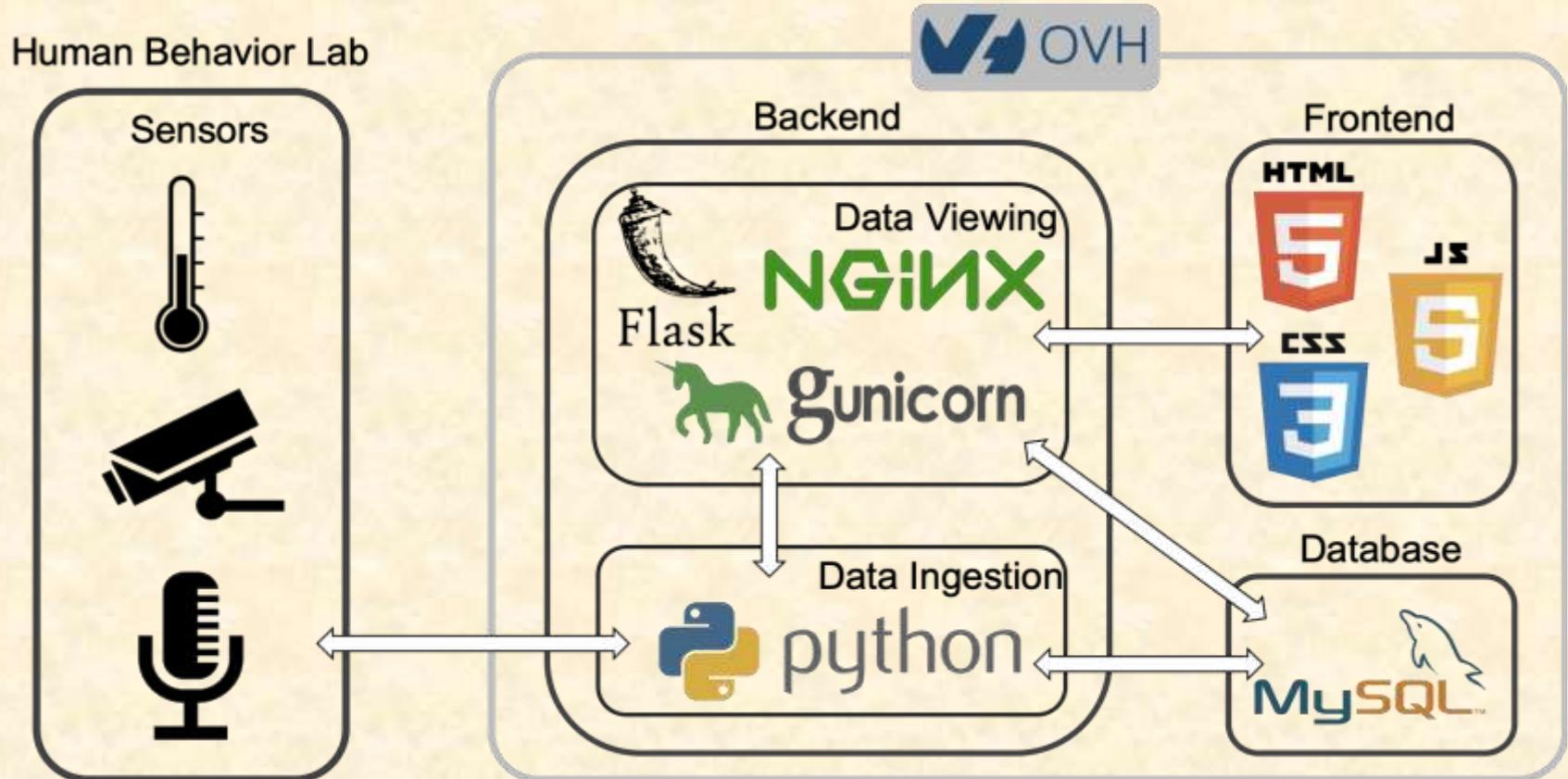
# Project Overview

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- Convert Room 3155 EB
- Stream Data From Sensors
- View and Store Data
- Ability to Trigger Actions
  - Data Thresholds
  - Data Stream Start/ Stop



# System Architecture



# Live Feed

The screenshot displays a web application interface for a live feed. The top navigation bar includes 'Data Hub', 'Login', 'Home', 'Live Feed', 'Archives', and 'Registration'. The main content area is divided into several sections:

- Elapsed Time:** 01:32:17
- Video:** A live video feed showing a person in a red shirt in a room with a tiled ceiling and fluorescent lights.
- Temperature Data:**

Room Temperature:	--.~
Skin Temperature (Subject 1):	--.~
Skin Temperature (Subject 2):	--.~
- Audio Data:**

Streaming Audio	Current dB: 60 dB
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- Sensor Controls:**
  - Video 1
  - Audio 1
  - Sense 1
- Trigger Settings:**
  - Audio (dB): 90
  - Temperature (°F): 100
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- Trigger Watch:**
  - Video
  - Audio
  - Temperature
- Event Log:** A section at the bottom of the video feed area.



# Live Feed Event Log

The screenshot displays a web application interface for a live feed event log. The interface is organized into several sections:

- Navigation Bar:** Contains links for "Data Hub", "Login", "Home", "Live Feed" (the active page), "Archives", and "Registration".
- Elapsed Time:** A central indicator showing "Elapsed Time: 01:32:17".
- Video Feed:** A large window on the left showing a live video stream of a person in a red shirt in a clinical setting.
- Temperature Data:** A panel on the right showing "Room Temperature: --.:", "Skin Temperature (Subject 1): --.:", and "Skin Temperature (Subject 2): --.:".
- Audio Data:** A panel on the right showing "Streaming Audio" and "Current dB: 97 dB".
- Sensor Controls:** A panel on the right with toggle switches for "Video 1" (checked), "Audio 1", and "Sense 1".
- Trigger Settings:** A panel on the right with input fields for "Audio (dB): 90" and "Temperature (°F): 100", and an "OK" button.
- Trigger Watch:** A panel on the right with checkboxes for "Video" (unchecked) and "Audio" (checked).
- Event Log:** A panel at the bottom left showing a log entry: "Audio Trigger 1: 90 dB exceeded @ 13:56:21 01/03/2020".



# Archives Date Selection

The screenshot displays a web application interface for 'Data Hub'. The navigation bar includes 'Login', 'Home', 'Live Feed', 'Archives', and 'Registration'. The 'Archives' section is active, showing a 'Date Selection' list with five entries for 02/17/2020 at various times. The 'Video Data' section features a live video feed of a room with a person's back visible. Below the video, it shows 'Elapsed Time: 00:34:27'. The 'Sensor Selection' panel on the right allows toggling 'All', 'Audio', 'Video', and 'Temperature'. The 'Audio Data' section shows 'Streaming Audio' and 'Current dB: 87 dB'. The 'Temperature Data' section shows 'Room Temp: --', 'Skin Temp (Subject 1): --', and 'Skin Temp (Subject 2): --'.

Date Selection	
02/17/2020 @ 12:06:03	
02/17/2020 @ 12:05:28	
02/17/2020 @ 12:03:39	
02/17/2020 @ 11:55:01	
02/17/2020 @ 11:54:38	

Sensor Selection	
<input type="checkbox"/> All	<input checked="" type="checkbox"/> Video
<input checked="" type="checkbox"/> Audio	<input type="checkbox"/> Temperature

Audio Data	
Streaming Audio	Current dB: 87 dB

Temperature Data	
Room Temp:	--
Skin Temp (Subject 1):	--
Skin Temp (Subject 2):	--



# Archives Data Replay

The screenshot shows a web application interface with a navigation bar at the top containing 'Data Hub', 'Login', 'Home', 'Live Feed', 'Archives', and 'Registration'. The 'Archives' tab is active. On the left, a 'Date Selection' panel lists five timestamps from 02/17/2020 @ 12:06:03 to 11:54:38. The central 'Video Data' panel displays a video feed of a room with a person in a red shirt and a person in a blue shirt. Below the video, a white box shows 'Elapsed Time: 00:34:27'. On the right, a 'Sensor Selection' panel has 'All' (unchecked), 'Audio' (checked), 'Video' (checked), and 'Temperature' (unchecked). Below this, 'Audio Data' shows 'Streaming Audio' and 'Current dB: 87 dB'. 'Temperature Data' shows 'Room Temp: --', 'Skin Temp (Subject 1): --', and 'Skin Temp (Subject 2): --'.

Date Selection	
02/17/2020 @ 12:06:03	
02/17/2020 @ 12:05:28	
02/17/2020 @ 12:03:39	
02/17/2020 @ 11:55:01	
02/17/2020 @ 11:54:38	

Sensor Selection	
<input type="checkbox"/> All	<input checked="" type="checkbox"/> Video
<input checked="" type="checkbox"/> Audio	<input type="checkbox"/> Temperature

Audio Data	
Streaming Audio	
	Current dB: 87 dB

Temperature Data	
Room Temp:	--
Skin Temp (Subject 1):	--
Skin Temp (Subject 2):	--



# What's left to do?

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- Implement Multi-Streaming
- Support Visualizations of Different Data
- Install Sensors
- Support Third-Party Hardware
- Support Trigger Definition



# Questions?

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