

MICHIGAN STATE
UNIVERSITY

Alpha Presentation

Live Platform Real-Time Occupancy Status

The Capstone Experience

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

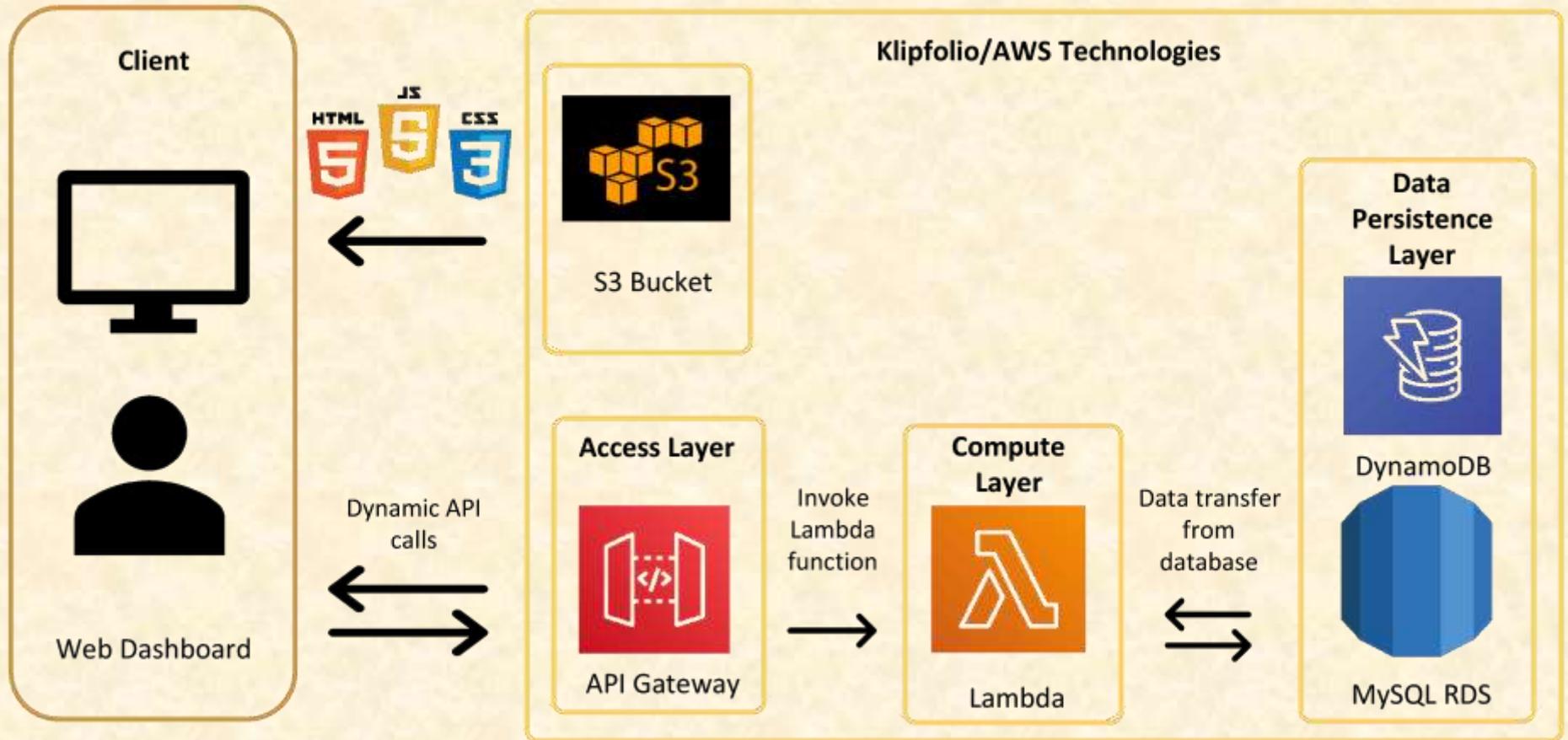
Department of Computer Science and Engineering
Michigan State University
Fall 2020

Project Overview

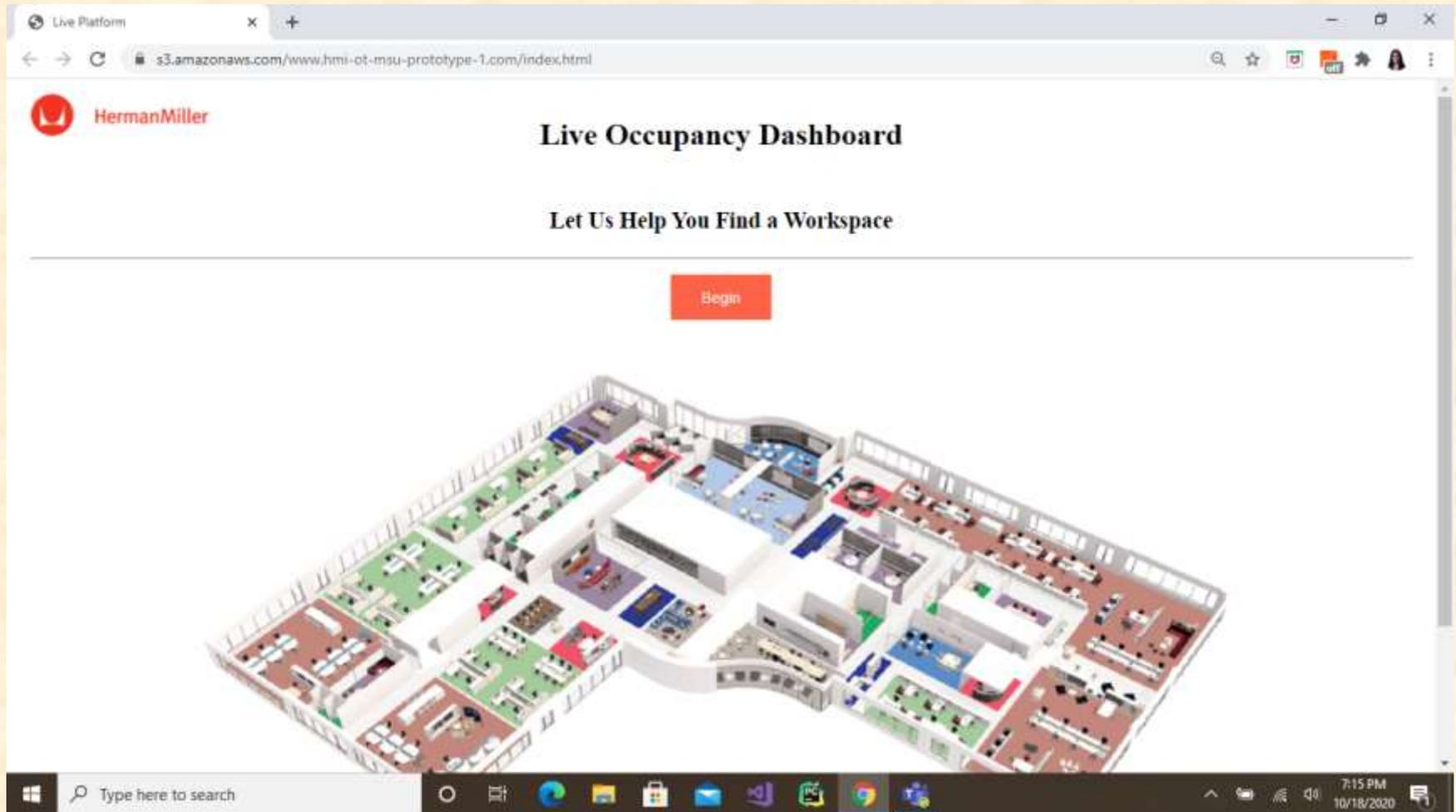
- Display desk occupancy on a dashboard given a custom floor plan
- Update dashboard in near real time to show current occupancy status
- Show points of interest with a legend



System Architecture



Home



Initial Floor

Live Platform

s3.amazonaws.com/www.hmi-ot-msu-prototype-1.com/floorplan.html?

HermanMiller

Live Occupancy Dashboard

Floor: Front Door

Entrance/Exit Elevator Cafeteria Restroom Break Room

Show points of interest on map

mapbox

7:18 PM 10/18/2020

Floor with Points of Interests

The screenshot displays a web browser window with the URL `s3.amazonaws.com/www.hmi-01-msu-prototype-1.com/floorplan.html?7`. The page features the Herman Miller logo and the title "Live Occupancy Dashboard". Below the title, it specifies "Floor: Front Door". A horizontal menu contains five color-coded buttons: "Entrance/Exit" (light blue), "Elevator" (light green), "Cafeteria" (light purple), "Restroom" (light pink), and "Break Room" (light orange). A checkbox labeled "Show points of interest on map" is checked. The main area shows a detailed floor plan with several rooms highlighted in colors corresponding to the menu: a light blue area at the bottom left, a light green area at the bottom center, a light purple area in the middle, a light pink area at the top center, and a light orange area at the top right. The browser's taskbar at the bottom shows the Windows logo, a search bar, and various application icons. The system tray in the bottom right corner displays the time as 7:22 PM on 10/18/2020.



Floor with Occupied Desks

Live Platform

s3.amazonaws.com/www.hmi-ot-msu-prototype-1.com/floorplan.html?

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Live Occupancy Dashboard

Floor: Front Door

Entrance/Exit Elevator Cafeteria Restroom Break Room

Show points of interest on map

8:20 PM
10/18/2020



What's left to do?

- Structure status to update in near real-time
- Transfer individual APIs to a single API
- Provide overall occupancy level for floor
- Add secure socket layer
- Allow customers to apply branding to website



Questions?

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