Vibe View
Population Distribution of the CSUB Campus
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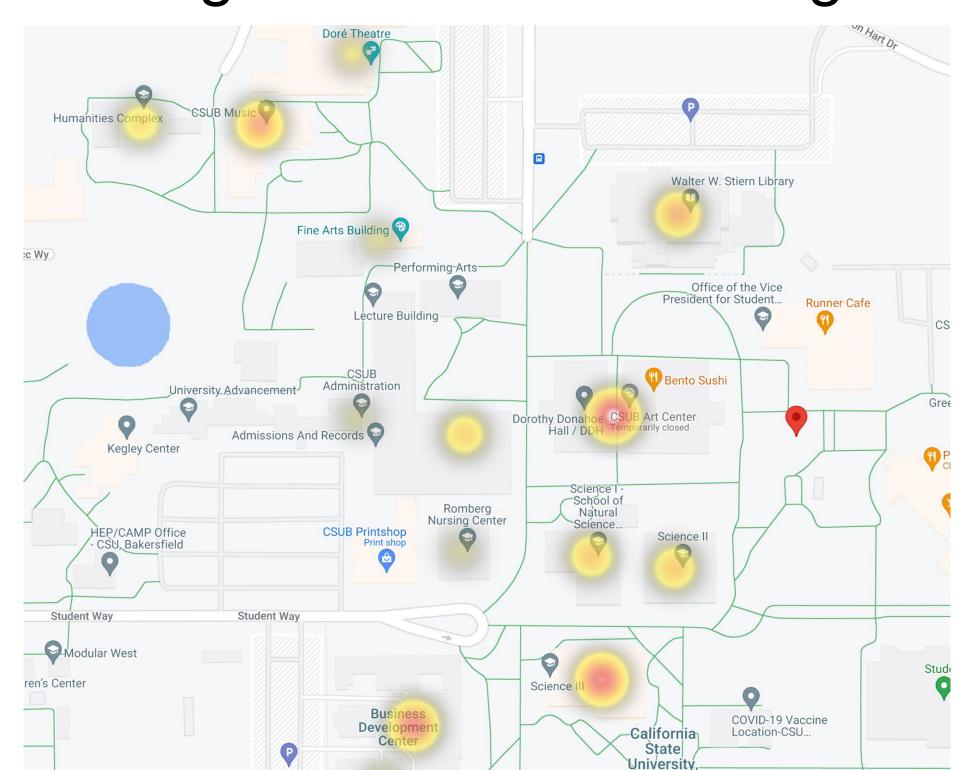
CALIFORNIA STATE UNIVERSITY BAKERSFIELD

Initial Concept

- The need for utilities such as water and air conditioning on a large campus such as CSUB is not just desired, but in some cases are necessary.
- Not all classes require such usage, and this causes tremendous power usage by campuses during the day
- Vibe View is to provide the school with a means of visualizing building populations, to allow for the option of reducing utility usage thus saving power.

Major Features

Heatmaps:
- Allows the visualization of building population throughout the day
- Darker/Stronger color indicates larger density
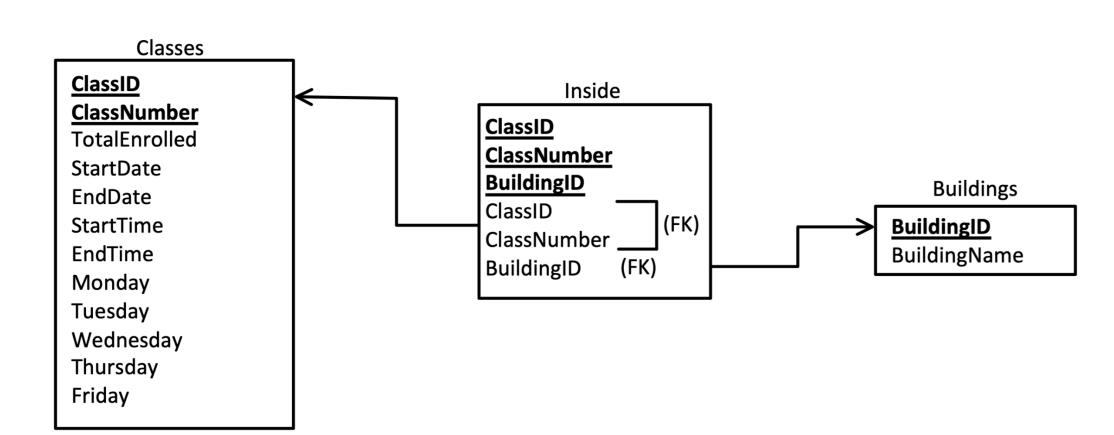

Heatmap Overview

Time Slider:
- Allows users to see population heatmaps of buildings as time changes
- User controls time

Semester Based Integration

- Data used is based off course catalogue provided by CSUB
- Compatible with similarly formatted csv files
- Can seamlessly store and use data for future semesters

Google Maps API

- User-Friendly Interface
- API can be optimized for mobile devices
- Flexible with additional API's that can be added
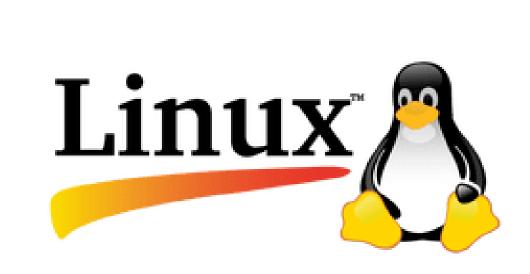- Customizable appearances

Timeline

Fall 2022:
1. Project concept and features are determined
2. Potential Partnership with Jace Dooley (a business partner with the accelerator program)
3. Researched tech stack and APIs for map feature

Spring 2023:
1. Began pulling classroom and building data for database population
2. Worked on back-end development linking webpage and database
3. Implemented Google Maps API
4. Front-end and final updates to features

Tech Stack

Agile

- Agile lets us change parts of the project without changing everything, i.e. heatmaps for buildings rather than parking, but database data can stay the same

Challenges

- Data Collection
- Transferring data from PHP to JavaScript (AJAX)
- Heatmap Logic

Limitations and Improvements

- Mobile device compatibility
- Building max occupancy would increase heatmap accuracy