

## Capstone Two Project Proposal: A Location Tracking and Visualization App

### 1. Tech Stack:

- Frontend: React with Google Maps API and/or Mapbox API (TBD).
- Backend: Node.js with Express
- Database: PostgreSQL for storing user data and location information.
- Authentication: JWT for secure user authentication.
- Deployment: Render

### 2. Focus of the Project:

- The project will be an evenly focused full-stack application with a strong emphasis on creating an intuitive and visually appealing user interface to interact with location data.

### 3. Type of Application:

- The project will be a responsive web application accessible on both desktop and mobile devices.

### 4. Project Goal:

- The goal is to provide users with a platform to explore and mark locations that were designed by an interior design firm. Users can mark locations they have visited, plan to visit, and favorite locations for personalized tracking.

### 5. Target Users:

- The primary demographic includes design enthusiasts, architecture aficionados, and individuals interested in exploring unique spaces. The app aims to attract users who enjoy discovering and maybe potential clients for the interior design firm.

### 6. Data Usage:

- Data will include information about locations, their attributes, and user-specific details. Location data will be sourced from the interior design firm. The app will integrate Google Maps and Mapbox APIs for map visualization and location information.

### 7. Approach:

- **Database Schema:**
  - Users (user\_id, username, email, password\_hash, favorites)
  - Locations (location\_id, name, address, coordinates, description, image\_url,)
- **API Issues:**
  - Potential issues with integrating multiple map APIs might make the data messy.
  - Depending on how many API calls are made, the react time may be slow or costly.

- **Security:**
  - I will need to secure user information (username, password, etc).
- **Functionality:**
  - Users can explore locations, mark visited places, and add favorites.  
Admins can manage location data.
- **User Flow:**
  - Registration/Login -> Explore Locations -> Mark Favorites -> Logout
- **Features Beyond CRUD/ Stretch Goals:**
  - Interactive map views, social sharing of visited locations, notifications for new locations, and personalized user dashboards.
  - Users can contribute reviews, ratings, and mark their visitation status.
  - Maybe have an option for the user to inquire about the space from the design firm?

**Conclusion:** The Map app aims to create an engaging and community-driven platform for exploring and sharing well-designed locations. The combination of an intuitive user interface, seamless map integration, and social features will make the Map app a unique and valuable resource for design enthusiasts and travelers alike.