

# Project Proposal Reflection

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# INTENDED USE OF THE SYSTEM

The CT Explored app is a mobile application designed for a diverse group of users—including residents, tourists, educators, students, researchers, and history enthusiasts—who are eager to explore Connecticut's rich cultural and historical heritage. By offering curated guided tours that display points of interest (POIs) on interactive maps, the app provides a seamless, interactive platform for discovering historical landmarks, events, and stories across Connecticut. Users can select tours, view POIs, and access detailed information about each location, such as images, descriptions, and directions. Additionally, social media integration with Instagram allows users to share their experiences, post updates, and compete on a leaderboard by earning points for sharing posts tagged with "#ctexplored", thereby engaging users and fostering a community around the exploration of historical sites through mobile devices.

## Overall Functionality

The CT Explored system offers a variety of functions designed to enhance the user's exploration experience. Its core functionality includes displaying different tours with POIs, allowing users to save POIs for later access, and providing detailed information about each location. Users can access directions via Google or Apple Maps and share their experiences on Instagram to earn leaderboard points. The app integrates user authentication and social media account linking, making it easy to manage user-generated content and enhance the gamification of tour exploration. The system helps users accomplish their task of exploring by making historical information easily accessible through an intuitive, map-based interface, with features like saving points of interest and obtaining directions simplifying their experience.

The system offers comprehensive functionality designed to enhance the user experience of exploring Connecticut's history. Core functions include:

- **Town Exploration:** Users can choose from a variety of guided tours that delve into the history and culture of Connecticut towns, each offering rich insights into the state's heritage.
- **Interactive Maps:** The app provides interactive maps that allow users to easily navigate and discover POIs along their chosen route.
- **Detailed Information:** Each POI comes with detailed descriptions, offering insights into the historical and cultural significance of the location.
- **Integrated Directions:** The app features integrated directions, making it easy for users to travel from one point of interest to another seamlessly.
- **Save Favorites:** Users can save their favorite locations for future visits, helping them create a personalized itinerary.
- **Leaderboard Challenge:** Users can share their journey by posting pictures from tour locations to Instagram, earning points and competing with other explorers on the app's leaderboard.

## Main Components of the System

The system can be divided into the following key components:

- **Frontend (Mobile App):** Built with React Native and the Expo Go framework, the frontend provides the interactive user interface, allowing users to navigate tours via maps, view detailed historical descriptions, save favorite POIs, and engage with the leaderboard. This ensures a smooth, cross-platform experience for both iOS and Android users.
- **Backend (Supa-base & AWS):** The backend infrastructure, hosted on AWS with Supa-base for data handling, supports critical functions like user authentication (using OAuth), Instagram linking for leaderboard participation, and storing tour and user data. The backend ensures data security and efficient performance, particularly in handling session management and API calls.
- **Interactive Maps:** These are key elements of the system's user interface, providing real-time, map-based navigation through historical tours. Each tour is represented on the map with POIs marked, and users can click on locations for further details.
- **API Integration:** The app integrates multiple APIs for authentication (Google, Facebook, Apple) and Instagram, facilitating smooth user onboarding, session management, and social media interactions.
- **Leaderboard System:** A gamification component integrated with Instagram; the leaderboard encourages user participation by awarding points for sharing tagged posts from specific tour locations. It is powered by API calls that track Instagram posts and sync user data in the app.

## Proposed Developments/Upgrades

To enhance the functionality and user experience of the *CT Explored* app, the following key upgrades are proposed:

- **New Tour Development:** Add additional tours across different locations to expand user exploration opportunities.
- **Improved Social Media Integration:** Expand social media linking options to include more platforms, encouraging wider participation and user-generated content sharing.
- **Accurate Map and Address Data:** Update and verify all POI map pins and addresses to ensure precise navigation for users.
- **Enhanced Content Linking:** Improve the "Read More" feature by directly linking users to relevant, specific content for each point of interest.
- **Leaderboard Clarification:** Provide clearer explanations of how points are earned, encouraging more engagement with the competitive features of the app.
- **Optimized Tour Routing:** Restructure tour paths to create logical sequences, reducing the need for users to backtrack or navigate confusing routes.
- **Detailed Descriptions and Links:** Incorporate more in-depth descriptions for POIs and add external links to provide further context and historical significance.