Project Title: CivicConnect

Problem Statement:
For those who are not already a part of service organizations/initiatives or options within their community, it can be difficult to seek out community service opportunities. One of the easiest internet mediums for people to navigate and gain information from are social media platforms. There are several notable platforms that expand beyond traditional social media content, such as those for career building and networking, finding novels and films, and even sharing running statistics: Why not create a platform centered around community service that allows for people to get community service recommendations based on their profile and allow users to post about events they have partaken in. The purpose of building this network is to encourage individuals to discover and engage with their communities, creating an environment of community service that is tailored to an individual's interest and fostering a culture of giving back that goes beyond the scope of traditional social media.

Background Information:
Targeted Users
There are two main demographics for this site, the first being community members with access to a web-browser that are curious about seeking community service opportunities on one, consolidated side. The second target demographic are advocates/organizations that generate community service opportunities and want a place to advertise these events and garner participants.

Similar Platforms
There are several existing platforms that accomplish different things through a similar recommendation-based or social media format. For example, users of Netflix can navigate through the app/site and be given recommendations and media for shows/movies based on their specific interests and previously watched. Another platform, LinkedIn, follows the more traditional social media format, but interestingly, not all posts in a user's "feed" come from their following, but rather the liked posts of those they are connected with and recommendations from the algorithm. When the broad functionality of these two examples is extrapolated, you get the intended functionality of CivicConnect -- a social media platform that recommends users community service listings based on their interests and previous attendance.

<u>Limitations</u>
There are many challenges that could potentially come along with CivicConnect. There are already many existing platforms for community service opportunities, as seen through various nonprofit organizations and third-party listing websites. Users have to navigate through multiple websites and platforms to find opportunities that tailor to their interests, which can be extremely time consuming and discouraging. CivicConnect addresses this limitation through consolidating all community service opportunities through accessing various online databases, allowing users to easily browse, search, and discover events without the need to visit multiple sites. In addition, traditional platforms lack a recommendation system that can provide users with a list of opportunities based on personalized suggestions. We resolve this issue by incorporating artificial intelligence algorithms, similar to those like LinkedIn or Netflix, which utilizes user preferences, past engagement, and activity data to provide individual suggestions. Many current solutions do not encourage ongoing engagement building among users, but our platform will address this through adopting social media-inspired formats that will enable users to follow organizations, share opportunities, comment on events, and connect with other volunteers. This interactive approach promotes community building and user engagement, creating an inclusive environment within the community.

Requirements:
Note: Community Members and Organizations are both a *type* of user. If "User" is used, this is a more broad term that is applicable to both stakeholders.

<u>Functional</u>
    (a) User Registration and Authentication
1. As a user, I would like to register and authenticate securely so that I can access my personalized profile and service recommendations.
2. As a user, I would like the option to reset my password if I forget it so that I can regain access to my account.
3. As a user, I would like to have different options to sign up, including signing up with a Google Account or a traditional username and password sign up.
4. As a user, I would like to be able to login securely into my account and have my account information populated according to how I last saved it.
5. As a user, I would like to have some type of two-factor authentication for my account to increase security.
6. As a user, I would like to link my email and phone number to my account to get notifications to both for anything in relation to the application.
7. As a user, I would like to link outside social media accounts to my CivicConnect account so that I can reach a larger audience with my posts.
    (b) Curation and Recommendations

1. As a Community Member, I would like to specify my availability (e.g., weekends, weekdays, specific times) and location so that I receive relevant service opportunities.
2. As a Community Member, I would like to specify my interests and hobbies so that I receive relevant service opportunities.
3. As a Community Member, I would like to receive push notifications when an opportunity that matches my profile has been posted.
4. As a Community Member, I would like to bookmark/save postings to look back on later.
5. As a Community Member, I would like to filter my feed based on transportation requirements (e.g., walking distance, public transport) to get from my location to the posted events.
6. As a Community Member, I would like to be able to search events by any parameters, including type of event, time, and date.
7. As a Community Member, I would like to receive notifications when events that I have bookmarked/saved are close to reaching maximum capacity.
8. As a Community Member, I would like to see the Organization's profile and read their bio, find their socials, and look at their events; As an Organization, I would like to view the users' profiles who have RSVP'd to my event.
9. As an Organization, I would like to add the following parameters to event postings: type (e.g., environmental, education, health), time, date, and location.
10. As an Organization, I would like to have a sign up where Community Members can sign up for our newsletters or promotional emails.

(c) Event Creation by Organizations
1. As an Organization, I would like to upload images and videos for my event posts so that I use visuals to describe the event.
2. As an Organization, I would like to attach captions to my posts regarding events to provide logistical details.
3. As an Organization, I would like to see how many users have bookmarked/saved the event I have posted so that I can quantify interest before the event happens.
4. (If time allows) As an Organization, I would like to schedule posts for future events and to plan them in advance.
5. As an Organization, I would like to edit features of event postings that have already been made.
6. As an Organization, I would like to be able to delete event postings.
7. As an Organization, I would like to create a post and be able to make it a daily, weekly, biweekly, or monthly event.

8. As an Organization, I would like to notify Community Members previously interested in my events or Members with similar interests about a new posting from us.

(d) Event Attendance and Participation
1. As an Organization, I would like to see the number of users who have RSVP'd to my event so that I can prepare for the correct number of participants.
2. As an Organization, I would like to allow users to share their event participation on other social media platforms outside of CivicConnect.
3. As an Organization, I would like to put a cancellation constraint on the event where Community Members can only cancel until 24 hours before the event.
4. (If time allows) As a Community Member, I would like to leave feedback/rate the event after attending so that others can read about my experience.
5. As a Community Member, I would like to be able to RSVP for an event or cancel an existing RSVP for an event.
6. As a Community Member, I would like to see the events for which I have RSVP'd.
7. As a Community Member, I would like to be notified if there have been any changes made regarding the events for which I have RSVP'd.
8. As a Community Member, I would like to have an in-app calendar where I can see what dates and times I have booked for.

(e) Community Member Posts
1. As a Community Member, I would like to create posts with multiple images/videos about events I have attended so that I can share my experiences.
2. As a Community Member, I would like to be able to specify the location of the post/update
3. As a Community Member, I would like to attach captions to my posts regarding events to provide more detailed accounts of my experience.
4. As a Community Member, I would like to create a posting on a linked social media account regarding my event attendance so I can spread awareness.
5. As a Community Member, I would like to be able to comment on other peoples' posts as well as my own along with replying to other comments on posts.
6. As a Community Member, I would like to be able to react to peoples' posts.
7. As a Community Member, I would like to like peoples' comments on their posts.

(f) Messaging
1. As a user, I would like to privately message other users with text, links, or photos and access my message history with other users. As a Community

Member, I would like to privately in-app message the Organization with any questions or concerns I might have regarding the events.

2. As a user, I would like to be notified when I receive a new message so that I can reply and continue the conversation.
3. As a user, I would like to search for others by name so that I can start a conversation with them.
4. (If time allows) As a user, I would like to be able to react to messages with emojis by double-tapping on the message.
5. (If time allows) As a user, I would like to be able to see if another member is typing.
6. As a user, I would like to be able to create group chats with several users that are attending the same event to coordinate plans.

(g) Notifications
1. As a user, I would like to be notified for upcoming events and community interactions with my posts and be able to toggle these notifications..
2. As a user, I would like to set the notification time for the event in advance such as 'notify before one day' or 'one week'.
3. As a user, I would like to be able to see when people are notified that I am interested in a post.

Non-functional
1) Performance and Scalability
1. As a Developer, the platform should be able to handle 10,000 simultaneous user requests without performance degradation.
2. As a Developer, I want the platform to utilize efficient caching mechanisms for frequently accessed data so that response times are minimized and the server load is reduced. I would like the platform to respond to actions (loading a page, searching for opportunities, and viewing event details) within 1000 milliseconds so that users can quickly find and engage with relevant community service opportunities without frustration or delays.

2) Security and Data Privacy
1. As a Development Team, our platform will use HTTPS with TLS 1.3 for secure connection.
2. As a Development Team, we will have regular security and vulnerability assessments that will be conducted to ensure ongoing protection against emerging threats.
3. As a Development Team, We would like our platform to utilize authentication processes to support multi-factor authentication (MFA) so that the platform can add additional layers of security to protect against unauthorized access.

4. As a user, I would like to know that my password is securely saved in a database using password encryption, specifically with RSA 256 encryption.
5. As a user, I would like to have constraints for my password to make it more secure such as the password must include a number and a capital letter.

3) Maintainability and Monitoring
1. As a Development Team, our platform will have automated deployment pipelines so that new features, updates, and security patches can be rolled out quickly with minimal downtime.
2. As a Development Team, our platform will support version control and rollback features, so in the case of any deployment issues or errors, the system can quickly be revered to a stable state.
3. As a Development Team, regular maintenance windows will be communicated in advance to all users so they are aware of scheduled downtime. This will minimize their disruptions to their access and use of the platform.
4. As a Developer, the platform will have well-documented code so that future updates, bug fixes, and feature additions can be implemented efficiently without impacting the existing functionality.