

Capstone Project Proposal

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Application Description

Our app will be a social media-like application for sharing, managing, tracking progress, and reviewing various video games across gaming platforms. Connect with your friends and share your achievements in real time. Keep track of games you're currently playing and games you want to play. You would be able to keep track of these games in your own lists of these games as well as leave reviews on games. Receive personalized recommendations for up and coming games along with current deals and offers. Archive your own achievements and compare achievements to your friends and others around the world.

1. Large in Scope

This will be a web app and possibly a full stack mobile application. The data required to run the app will be large with needs to track different games and user data. It will require multiple revisions until we will be happy with everything involved. With every large software project, there are roadblocks and requirements that will increase the scope.

Predicted roadblocks:

- a. Large Database (at least 20 tables with complex relationships)
- b. We will possibly have to handle large amounts of data between users, reviews, games, achievements, and feeds for each user.
- c. An API large enough to handle CRUD operations for our database that can be used in a webapp and possibly a mobile app
- d. Intensive interactions between the user and the website (importing achievements and tracking reviews and comments on user accounts and feed items)
- e. Many design documents to keep ourselves consistent through the pages (make sure all pages have a similar design and flow between them to create positive user experience)
- f. Components to interact with services that work with large scale 3rd party APIs in a quick and easy manner. Along with failsafes if the external APIs are down.
- g. Handle linking accounts securely from other websites onto our own in order to get the users various accounts across every gaming platform (Playstation, XBox, etc...)
- h. Dealing with data that changes per-user, concurrency issues with our database will likely occur (mainly could occur when mobile app goes offline)
- i. In order to create a live feed, we will have to refresh data for our users immediately (including not forcing the user to refresh app when events occur for friends)
- j. Make our site run efficiently with zero downtime between updates

- k. Notify users of ongoing deals on video games and on going events in games (done through notifications on the mobile app or emails if done through the webapp)

2. No Obvious Solution

From what we have found on the internet, there is no centralized hub for gamers. There is always a split between different consoles (Playstation, XBox, etc...), splits on whether the site allows you to review games or allows you to import games you own and play, and a large one is not allowing users to connect and compare the games and achievements they are earning in the gaming world with friends and others around the world. This app will make tracking and reviewing of your games easy and fast with just a couple clicks to track your experiences and the mountains you have climbed in the gaming world. We want to bring all of these features together into one centralized location for people to share their games and achievements with their friends and track their gaming experiences. With all these requirements, it becomes increasingly obvious how difficult it will be to find a solution to all this.

There are multiple moving parts and polishing will need to be done. For example, there are many API's that we will attempt to utilize for our own purposes. There are also issues with social media apps and creating something unique, many social media are used to share life updates and experiences but not tailored towards accomplishments outside of the real world. We will focus on a responsive design that will require skills in development and UI/UX skills which will come with many problems that will need to be solved.

3. Components/ Parts/ Sub-Problems

Our app will require multiple layers that include back-end and front-end technologies. This creates multiple sub-problems that we predict will require an iterative process of design and development.

- a. Utilizing multiple APIs and understanding pre-existing documentation (to allow for account linking)
- b. Learning React.js (the main framework we want to use, possibly mixed with some C#)
- c. Handling the security and safety of our users
- d. Creating an algorithm to create the best game recommendations for our users (May be much more work than we think)
- e. Notifying users about different events that take place on the app
- f. Giving users a timeline that is curated to their profile (updated as new events occur for the user and their friends)

4. Meets Specified Needs

Our app will fulfill a social need for the gaming community, as there are currently few options for a game-management/ social media app for this community.

Predicted audience:

1. The gaming community (All consoles, PC, and mobile game players)
2. Gaming or tech companies that would want their games advertised or sponsored

We plan to do user testing on the target audience during the development of this project to ensure that we are fulfilling the wants and needs of our audience. This will also introduce a design cycle that will enforce an iterative design and show flaws in our original design.

5. Acquired New Knowledge

We will use third-party API's while also creating our own API to work with our web app. Our planned framework is React.js, which is currently unfamiliar to us.

Because of the duration of this project we will go through many different phases of design and requirement understanding that in other projects we have done haven't been to this level. While there might not be a product owner that could change things on us on a daily basis as we do user testing there will be plenty of changes that pop up for us to regather as a group and think through new designs and ideas to fulfill customer needs.

This project will also require skills in general project management and teamwork. With a large project of this scope, the amount of management and organization will have to be perfected by each teammate. Working together and working efficiently will be paramount to completing a quality product on time.

We want this project to be our magnum opus. We want to apply the best practices in this project. And we don't want to falter. This means, ethics, principles, clean code, testing. Practicing this will result in cementing the knowledge in a way that we can use in the rest of our careers.