



# A social networking web application for the gaming community: *Gamer-Verse*

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**Abstract:** The gaming industry is on the rise nowadays, with more than 2 billion players all over the world. Virtual games are an escape from reality. They challenge the human mind and are a better source of entertainment and refreshment. When compared to movies, where the audience witnesses a story, games make the audience live that story. Online games have been a way for friends to meet even during the lockdown of COVID-19. Online games are arguably the best way to socialize in lockdown scenarios. To make this process better, enhance the gaming experience and make full use of the time spent playing games, we introduce a web app called Gamer Verse. It implements a search algorithm based on name, location, or games played by the users to find other players that share similar interests.

**Index Terms – Gaming, socializing, connecting.**

## 1. INTRODUCTION

Since the COVID-19 pandemic spread over the world, the human-to-human interactions became very low, and restricted. Despite being social animals, humans in every corner of the world had limited to no proper access to social connections. During this hassle, online communication became the primary source of networking for everyone. In free time, most people turned to games as a form of relaxation, hobby, and/or socialization. Even though gaming is a booming industry, there is no proper source to find game friends with similar interests or game styles. To bridge this gap, we have developed a web app called Gamer Verse. Gamer Verse is a social networking platform designed especially for the gaming community. In this web app, users can create their own gaming profile with specific details about themselves, the games they enjoy, their points of interest, ways to communicate, and much more. This paper generally covers the working, research, and the idea behind this project along with the test results and conclusion.

## 2. RESEARCH METHODOLOGY

### 2.1. Surveying existing system

The gaming community has some technology to find new friends in the world of random players. There are platforms like reddit that support channel making system. A user can find the channel of their respective game and follow others on that channel. The issue with this method was it was not location based, so matching play time or meeting to play together was not easy.

Another great platform is Discord. Discord also has server functionalities where users can make their own servers, dedicate their servers to games they play, or join a more popular dedicated server that already exists. Discord could solve the location issues to some extent, but it also had the issue of user limit, where in only 25,000 users can be online at the same time without causing connectivity issues [1]. Location specific channels are not easily reachable as only popular channels are mentioned on the game websites or recommended by famous game content creators.

There are many applications present on Google Play Store and App Store that claim to help finding gaming friends. They have their unique methods, but they are not focused on connecting people based on their similar interests or location of residence. Our project tries to tackle these shortcomings and provide one complete solution.

### 2.2. Benefits of Gaming and Socializing:

Gaming is a way to relax and explore a universe full of endless possibilities simultaneously. It improves cognitive and problem-solving skills in an exciting way. Since most games are quite dynamic in nature, they increase hand-to-eye coordination [2], allow you to multi-task and socialize within your own comfort zone. When socializing and gaming go together hand-in-hand, they prevent

feelings of loneliness and help people connect with others and grow mentally. This can increase the quality of life, help you explore various cultures or make new friends, expand your horizon, improve the ability to capture minute details, and much more [3].

### 2.3 Objective of paper

The primary objective of the project, Gamer Verse, is to connect gamers worldwide, but more importantly, enhance local connections and social networking in the gaming community. This paper covers all the important features of our web app and its functionality. From registering as a new user to finding new friends, games, and gamers in your location, and posting about your achievements, liking others' posts, or reviewing your own posts, Gamer Verse offers a wide array of functionalities that keeps the user engaged in social interactions which are explained further in the paper.

## 3. PROPOSED METHODOLOGY

This section has a short introduction on the various technologies that we have used and why we have used them.

### 3.1 Figma for Design

Figma is a web-based design tool with real-time collaboration. We used Figma as a front-end development tool for our project. We made a prototype for our project using Figma. Entire user interface for our app was made on Figma. The benefits of using Figma are:

- There's no software to download, install, and continually update.
- There's no need to save and organize your files. Your work is automatically saved to a shared space in the cloud.
- One URL becomes the source of truth that everyone gets to see. Which means there is no need to continually upload, sync, and arrange PNGs in multiple places.

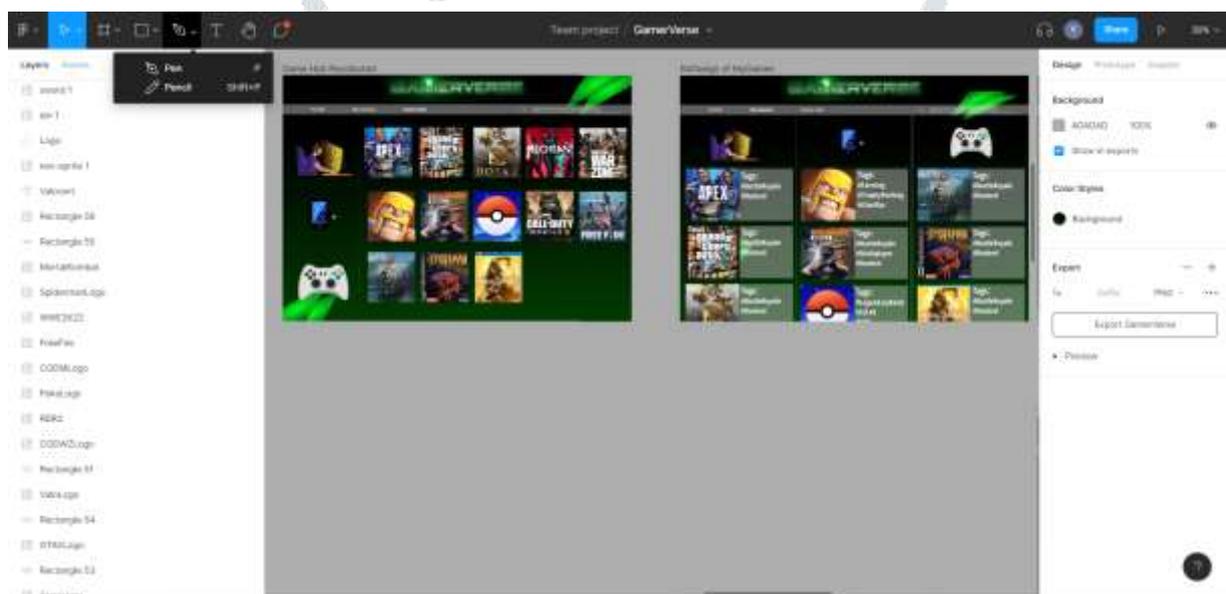


Figure 1: Figma Project for GamerVerse

### 3.2 React Native as Framework

Expo is a framework and a platform for universal React applications. Expo Web enables the implementation of a Web Applications. This means that the components provided by React Native can be used for web applications. As is true for React and React Dom is used for rendering on the web. It is a set of tools and services built around React Native and web platforms that helps you develop, build, deploy. Expo React Native is written with a mixture of JavaScript and JXL, a special markup code resemblant of XML. The framework has the ability to communicate with both realms – JavaScript-based threads and existent, native app threads.

The main advantage of using Expo is that you can get many features like accessing linear gradient, Navigation through different pages is much simpler, access to location APIs. Expo React Native is great for developing Web Applications. It provides a slick, smooth and responsive user interface, while significantly reducing load time. It's also much faster and cheaper to build apps in Expo React Native as opposed to other framework without the need to compromise on quality and functionality.

### 3.3 Firebase as Database

We have used firebase real-time database for our application. The Firebase Realtime Database is a cloud-hosted database. Data is stored as JSON and synchronized in real-time to every connected client.

When you build cross-platform apps with Firebase Apple platforms, Android, and JavaScript SDKs, all of your clients share one Realtime Database instance and automatically receive updates with the newest data. We chose firebase because of the following reasons:

- Works not just online, but even when the users are offline to store the changes and sync it whenever the users come online
- Firebase Real-time Database integrates well with the Firebase Authentication that helps build simple and intuitive security model for the developers.
- You don't need to use servers to build the apps because the Firebase Real-time Database allows it with mobile and web SDKs.
- Firebase makes authentication easier.

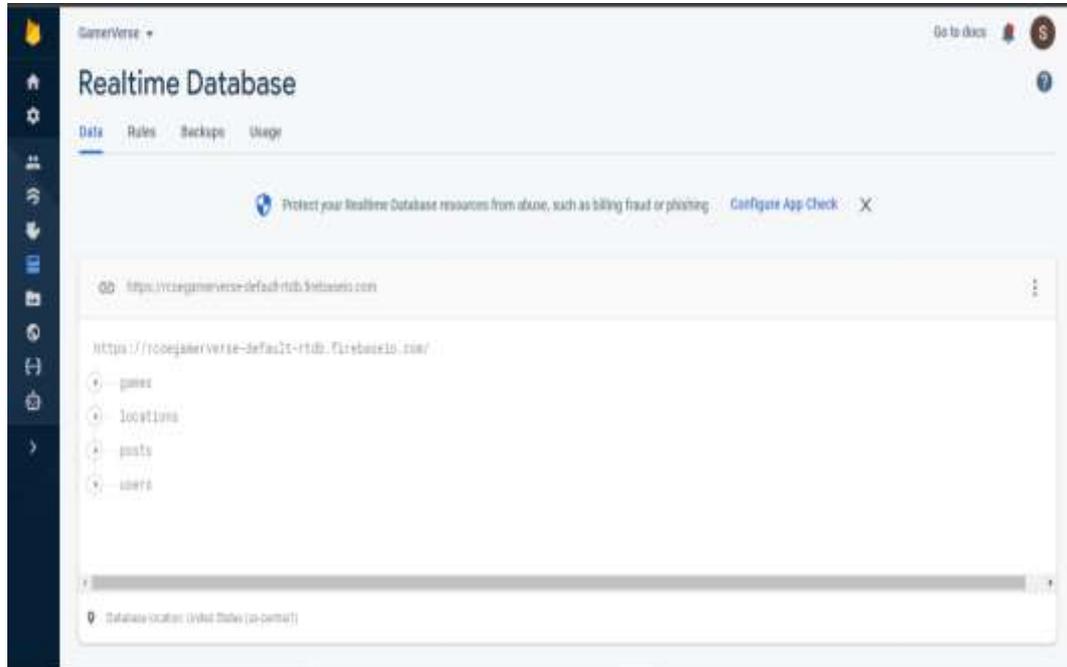


Figure 2: Firebase Database for GamerVerse

#### 4. RESULT

This section guides you through the various functionalities implemented in the project. The various functionalities of the website can be summarized in the following table:

Table 1: Different pages and their core functions in GamerVerse

Page	Functions
Introduction Page	This webapp has an animated welcome page. Whenever users want to access the website, they will need to click the portal animation. This portal shall check the login status of that device, if no users are logged in, it shall navigate to login page, if some user is logged in, it shall skip the login process and head to the home page.
Login/Register Page	After the intro page the user goes to the login page. Here, the user can login to their already created GamerVerse account using appropriate credentials. The user can login by either using their email address or use their google account to sign in. If either the email or password is invalid, an error is shown in red below the password field. Clicking on the Register button will navigate you to the registration page where you can sign up for a GamerVerse account. Here, you need to enter your email address, password, and then confirm the password. After that, a verification email will be sent to your account. You should click on the verification link to verify your account and then login using your email and password which will lead you to a page where you can create your profile. You can also sign up using your google account to make the sign-up process easier.
Create Profile Page	In this page, you need to fill your Name, Mobile Number, Location, and Discord ID to create your profile. You also need to choose a display picture for your account. Location can be chosen from one of the options suggested in the dropdown box. After clicking on 'Continue' your account will be created and you will be navigated to the Game Hub page.
Game Hub Page	This page is where all the games hosted on the web-app are displayed. Games hosted for Mobile, Computer and Console devices will be displayed. Users can choose the games they play from here to add to their profile.

Game Page	This page provides details of the game that was chosen. It shows an image, a description, rating, and tags in relation to the game. This page also has a follow button which, when clicked on, allows you to follow the game so that you can see posts related to the game on the homepage. You can also Unfollow the game if you no longer wish to see posts related to the game.
Profile Page	You can view and edit all information related to you on this page. It shows you your display picture, name, phone number, email, location, and a list of games that you follow, it has an 'About Me' section where you can write a short introduction for yourself to let others know about you. You can also hide information from strangers using "Privacy Protection". My Posts leads you to a page that shows a list of all posts you have uploaded which you can delete.
My Games Page	Users can see the games that they have followed on My Games page.
Home Page	This page has posts related to the games you follow. Each post has the name of the user that posted it, an image, a like button, and a description of the post. You can click on the user's name or profile picture to navigate to their profile page. You can click on like button to like the post. You can click on the like button again after liking it to dislike it. Reporting inappropriate posts is also possible. You can also upload your own posts by clicking on the 'Upload' button. This page also has a list of your friends and all the pending friend requests you have. You can also Log out of your account using the 'Log Out' button.
Search page	There is a navigation bar on every page to navigate between pages. This bar also has a search panel. Users can search about other users, games, or locations. This shall take them to the search page. If users want to search a particular location to see users of that location, suggestions will appear in a drop down, clicking on a location shall reveal all users in that location, helping the user to find friends in their region.

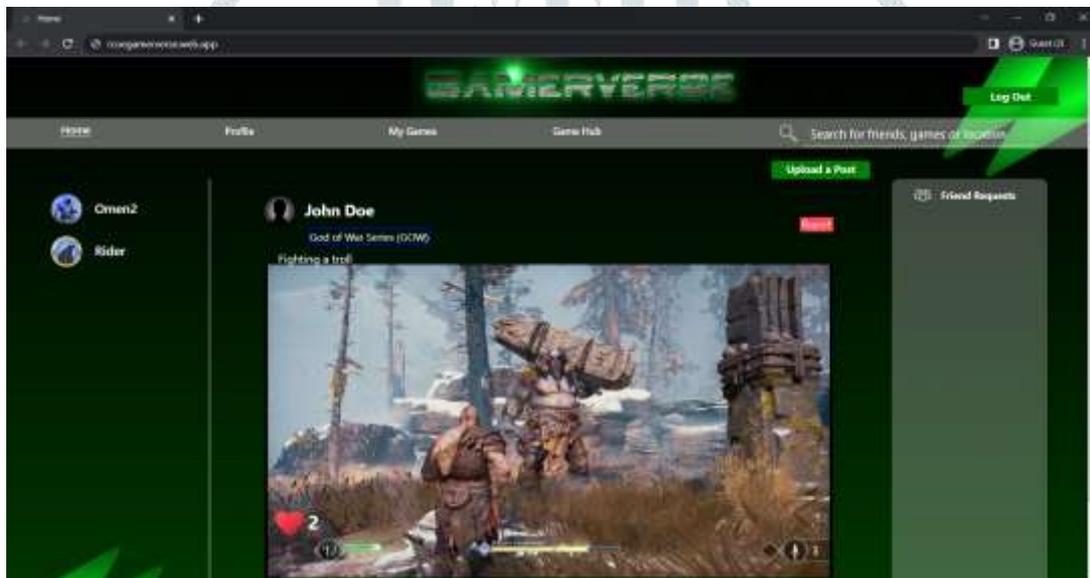


Figure 3: GamerVerse Homepage

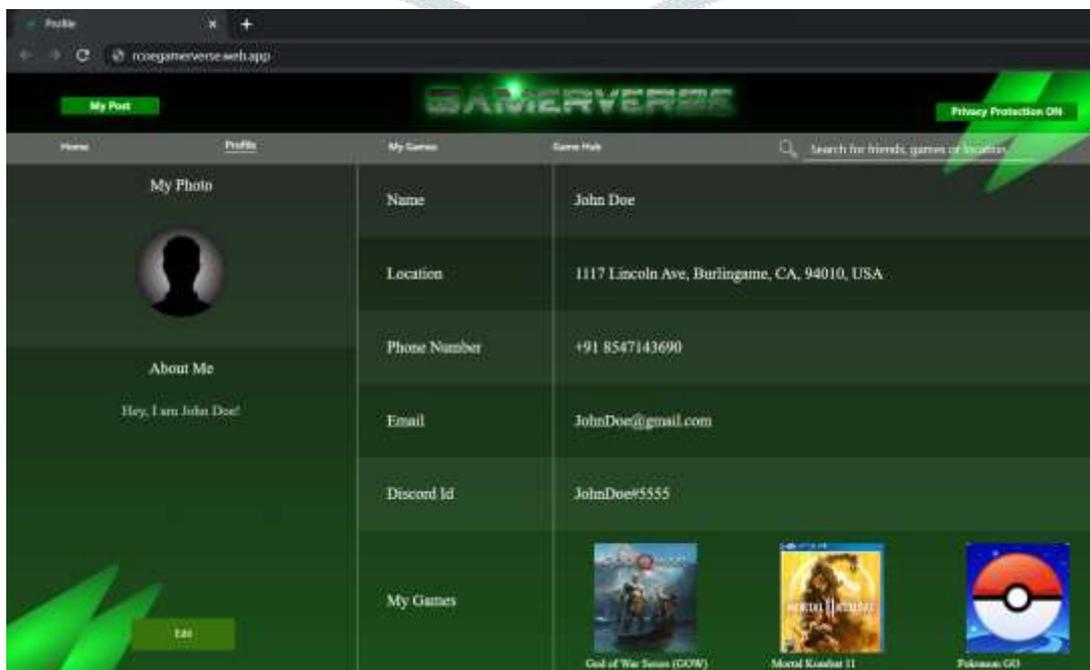


Figure 4: GamerVerse Profile Page

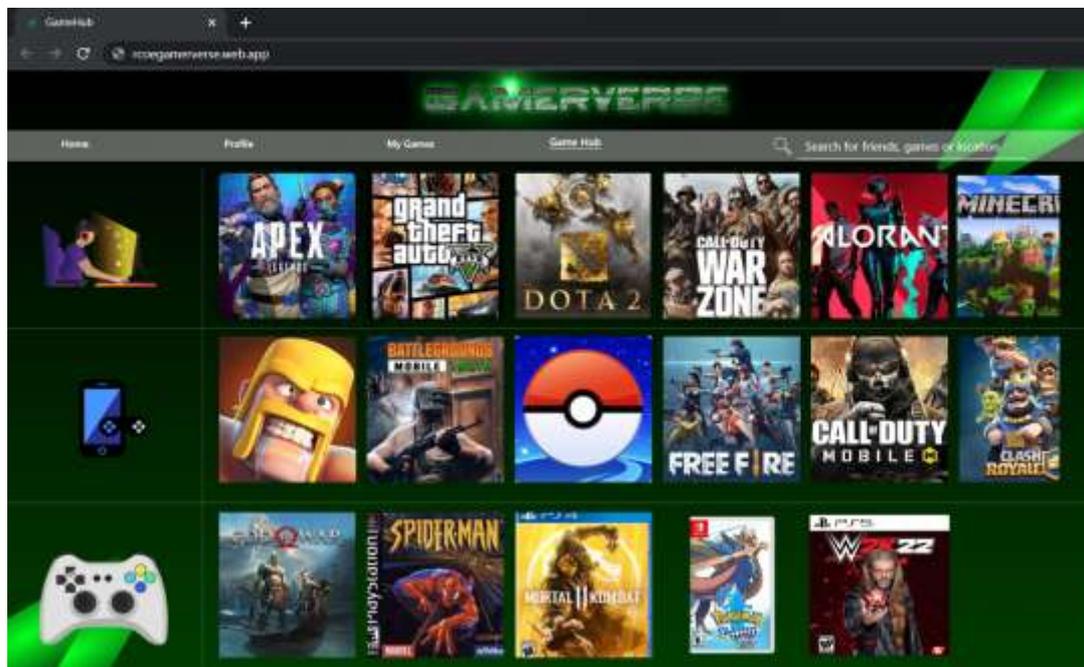


Figure 5: GamerVerse Game Hub Page

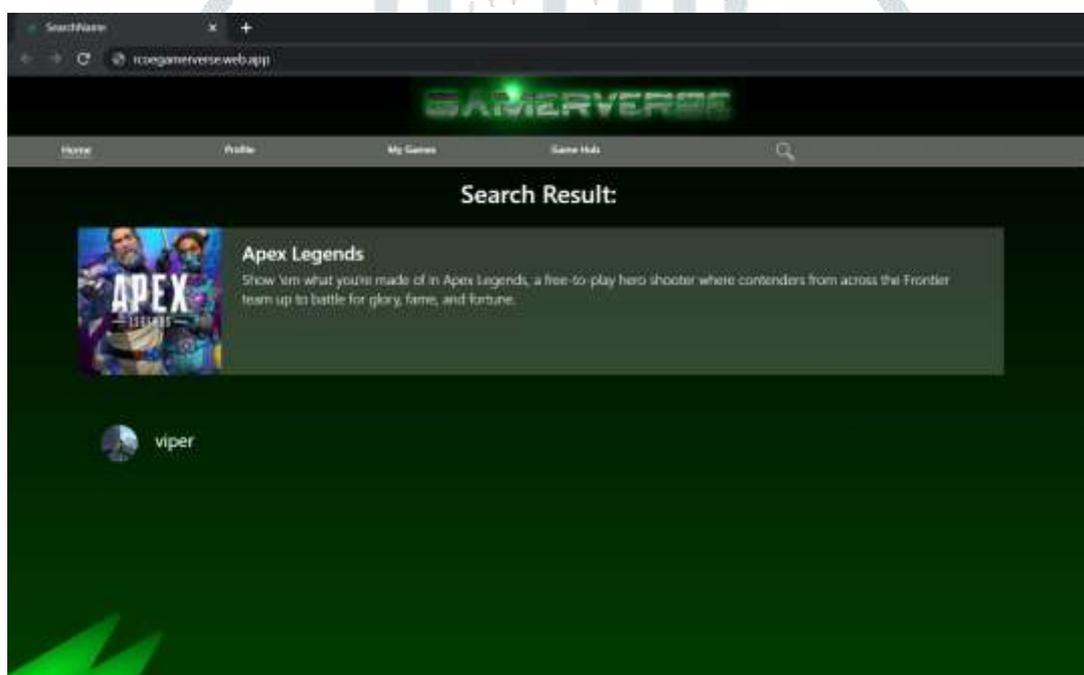


Figure 6: GamerVerse Search Page for the substring 'pe'

## 5. CONCLUSION

Thus, a fully functional web application that could help the gaming community to interact with each other was created. This web application will help people find others with similar gaming interests by connecting with people who either play the same games, live closer to their locality or are in the same time zones. This app can be further improved by including many more useful features. Features like chatting, supporting videos for posting, suggestions by user to add games, comments on post, sharing posts on other social media platforms, making gaming tags more interactive and useful, gaming suggestions based on history, filtering posts, and more kinds of notifications.

## 6. REFERENCES

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