

RETROSHARE

Google Summer of Code 2021

Proposal Idea (RS WEB UI)

PROJECT GOAL:

The project's main objective is to create a web interface for the Retroshare using JSON API, mithril, HTML and CSS so that nodes will use all the available features of Retroshare through Web Interface.

Mentors :

- [Csoler](#).
- [G10h4ck](#).

BASIC INFORMATION :

Contact Information:

- Name: Avinash Kumar.
- Email: avinashkumar.met18@itbhu.ac.in
- IRC/Gitter/Github : [Kumaravinash9](#)
- Retroshare Identity name : KumarAvi
- Phone number: +91 6204840373
- Country/ Region: Varanasi, India
- University : Indian Institute of Technology, Varanasi .

Skills:

- Strong command on Backend (FrameWork : NodeJs (express)) .
- Strong Command of HTML, CSS, Bootstrap and JQuery. (Frontend)
- Proficient in Data Structures and Algorithms.
- Strong command on C++ & STL .
- Depth Knowledge on Flutter, Firebase.
- Basic in Java.

Version Control

- Strong concepts of Git. I use Github and Gitlab a lot.

PRE-GSOC INVOLVEMENTS :

Contribution to Retroshare Web UI:

By thoroughly going through the code base for the **RetroShare Web UI**, I found some bugs, fixed some additional things that should be integrated into the repository on an as-needed basis. To make them and to overcome the issues I have presented various PRs and Issues:-

Some of my contributions are:

- [#21](#) : Made a login Page responsive .
- [#25](#) : Implemented Network -> sort friends Online / Offline.
- [#23](#): Logic code is not defined in People ->Edit identity for changing identity as well as fixed create identity feature.
- [#24](#): The checkbox is not aligned with its text and the Friend node profile pic is not aligned.
- [#23](#): People edit identity popup is not responsive.
- [#18](#): Updated Readme.md for Windows setup.
- [#28](#): After deleting the identity, the Web page still shows the deleted identity .

Currently working on People -> contacts UI improvement and discussing some additional features with mentors and other community members through the Retroshare Dev Forum which we can add to Retroshare WEB UI.

In addition to these, I will keep on contributing to the repository before the official time for the project starts.

Pervious Open Source Experience :

[Aossie Scholar](#) (A chrome extension which calculates proper metrics of Scholars) (Tech: Javascript, Postgres, Django and Chrome API)

- 7 merge requests.
- 10 Issues created.

[Aossie Monumento](#) (a cross-platform app that provides new way learning opportunity of popular monuments using Augmented Reality and LandMark detection API, Wikipedia content) (Tech: Flutter, Native android, Web View and Firebase)

- 13 merged Request.
- 17 issues created.

PROJECT OVERVIEW:

RetroShare provides a decentralized, encrypted connection with maximum security between nodes where they can chat, share files, mail, etc. Retroshare is available on all platforms like Android, Linux, macOS and windows.

The aim of the project is to implement all the features of Retroshare in a web interface.

Some of the features have already been created. My job would be to test all the features, fix bugs and develop the rest of the interface. I'll try to finish as many features as I can during my Google Summer of Code coding period and work on the rest after that as mentors and other members keep suggesting better ones.

TO DO LIST :

- Finding and Fixing bugs in the existing Codebase.
- Improving Home Screen UI.
- Improving UI of People -> contact list.
- Implementing UI and logic code for the Private Chat, Distant Chat and Main ChatWeb Page.
- UI improvement for the Config web page, Files Web page and Channel Web Page.

BASIC TO DO LIST :

- Adding Left Sidebar For Navigation Purposes.
- Removing Retroshare Certificate option and adding logic for connecting new friends through retroshare id.
- Implementing UI and logic for connecting new friends through PopUp in Home Screen.
- Adding logic for sorting friend in Online and Offline manner in Network -> sort friend web page.
- Adding Chat Widget in network Screen for Direct Chat.
- Implementing feature to start a mail /chat directly in Network -> Friend.
- Improving UI for Contact list as well as add features to start a chat and mail via the button.
- Writing tests.

APPROACH :

Retroshare automatically generates the boiler code to deal with JSON API from comments using Doxygen. All the routes are present in the libretroshare/src/retroshare folder in the Retroshare repository. After checking the libretroshare/src/retroshare folder, I will understand how many routes are available, their return type as well as their arguments. After knowing the information about the routes, I will do the API call using mithril and output their return type on the Web Interface accordingly using HTML, mithril and CSS.

TIMELINE :

Duration	Milestone
April 13, 2021 - May 17, 2021.	Application Review Period
<p>Note :</p> <p>April 23, 2021 - May 02, 2021. (Busy in Semester Examination)</p>	<ul style="list-style-type: none">● Will do an in-depth analysis of the codebase of the RS WebUI and Retroshare so as to get familiar with it and also find any more issues related to it.● Finding Bugs and creating issues.● Solve all the bugs and issues on the repository.
May 17, 2021 - June 07, 2021.	Community Bonding Period

<p>May 18, 2021 -May 24, 2021.</p>	<ul style="list-style-type: none">● Interacting with the mentors , other developers and getting their views regarding UI change and also the things they want to be included in the new UI.● Deciding UI for Web Pages. <p>Start Working on the basic To-Do list features</p> <ol style="list-style-type: none">1. Removing Retroshare Certificate option and adding logic for connecting new friends through retroshare id .2. Improving UI of People -> contact list.
<p>May 25, 2021 -June 7, 2021.</p>	<ol style="list-style-type: none">3. Implementing UI and logic for connecting new friends through PopUp in Home Screen .4. Adding logic for sorting friend in Online and Offline manner in Network -> sort friend web page.

<p>June 07, 2021 -August 16, 2021.</p>	<p>Coding Period Start</p>
<p>June 07, 2021 -June 25, 2021.</p>	<ul style="list-style-type: none"> ● Implementing UI and logic code for the private Chat, Distant chat and main Chat Web Pages .
<p>June 26,2021- July 12,2021</p>	<ul style="list-style-type: none"> ● UI improvement for the Config web page and Files Web page. ● Adding Left Sidebar Widget For Navigation Purposes. ● Improving UI for Contact list as well as add features to start a chat and mail vai button.
<p>July 12, 2021 -July 16, 2021</p>	<p>Phase 1 evaluation</p>

July 17,2021- July 27,2021	<ul style="list-style-type: none">• UI improvement for Mail Web pages.• Implementing feature to send mail from web pages.• Implementing feature to start a mail /chat directly in Network -> Friend.
July 28,2021- August 16,2021	<ul style="list-style-type: none">• UI improvement for Channel's web pages .• Adding Chat Widget in network Screen for Direct Chat.• Learning and Writing tests.• Completion of pending tasks if any.
August 16, 2021 -August 23, 2021	Submit Code and Final Evaluations
August 31, 2021	Result Announced

Apart from all these I would be very much interested in implementing any ideas suggested to me by the mentors in addition to these features.

Where do I plan to publish my source code ?

I will be working on a separate branch on git and uploading code to the forked repository almost on a daily basis, and will be creating pull requests when a complete feature is done.

ABOUT :

I am a third-year undergraduate student pursuing B.Tech from Indian Institute of Technology, BHU.

I have been doing web Development & App Development since my first year. I have experience in working with large codebases as well as making something from scratch through previous internships and my own projects. Along with that, I have a strong hold on Data Structures and Algorithms.

I believe I am the right choice for this project and will work on this full time over the summer. I will give weekly updates about my progress and ensure I deliver according to the timeline set.

Some of my other relevant *achievements/ experience* are:

- Worked as a **Flutter developer intern** at Jashara Private Limited :

During this internship, my job was to understand whole source code, find bugs, their solutions, Writing logic part, refactor codes, improving UI and helping the team to deploy the application successfully on the Playstore . Link : [Tax Whizzer](#).

- Worked as a **Backend Developer Intern** at Billbolo Private Limited (January,2021 to current) : (Tech : Node js , MongoDB) (Language : Javascript)

During this internship, my job was to create Apis for the merchant/customer android app in which i had created authentication apis, payment related apis, merchant & user banks related apis as well as store these information into mongoDb database and successfully deploying these apis on the AWS EC2 instance.

- Successfully cleared Uber HashTag First Round.
- Institute Rank under 30 on Geeks for Geeks . Link : [Link](#)
(Data Structure and Algorithm Platform)

MOTIVATION :

My inspiration for GSoC this year is making myself more familiar with open source Organization. when I saw this project, I felt that it was something I could do. I believe this project can definitely help me expand my boundaries, as this is the first time I will be working on an open source project. This possibility is very exciting for me.

I chose this particular organization because it is very well-aligned with my interests and also correlated to what I have worked in the past. Other than this, this project provides a good opportunity to apply my learning on a practical scale. This is my field of interest and therefore the natural inclination to this project.

AVAILABILITY :

The official GSoC period is from 17 May to 23 August. I can easily devote 25-35 hours a week till my college reopens and 20-25 hours per week after that I'm free on weekends . I intend to complete most of the work before my college reopens.

Other than this project, I have no commitments/ vacations planned for the summer. Also, I don't plan on doing any internships this summer. I shall keep my status posted to all the community members on a weekly basis and maintain transparency in the project.

AFTER GSOC :

Being a part of such a vast community is a great opportunity in itself and I would love to collaborate with others throughout my project timeline and even after that, as this is the true essence of Open Source culture. I'll be an active member in the community and keep contributing. My motivation would always be that I'd be able to contribute to something big and widely in use . This gives me a lot of satisfaction.

REFERENCES:

- <https://mithril.js.org/hyperscript.html>.
- <https://github.com/RetroShare/RetroShare>.

