

TRIBHUVAN UNIVERSITY INSTITUTE OF ENGINEERING PULCHOWK CAMPUS

**REPORT ON**

**MITRATA: A SOCIAL NETWORKING SITE**

**PRESENTED TO**

1. **PROFESSOR BIBHA STHAPIT**

**DEPARTMENT OF ELECTRONICS AND COMPUTER ENGINEERING**

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**ACKNOWLEDGEMENT**

First of all, we would like to express our sincere gratitude to our Data Structure and Algorithm teacher, Asst. professor Bibha Sthapit for encouraging us to work on a project work which would enhance our skills and our knowledge related to the Data Structure and Algorithm. Also, we would like to extend our sincere esteems to the Department of Electronics and Computer for providing us opportunity of collaborative undertaking which has helped us to implement the knowledge as project for second year, and developing project of our own which will greatly enhance our knowledge and provide us a new experience of teamwork.

With this project, we were able to apply our knowledge/skill of programming into a real-world problem, more specifically the use of data structures and algorithm. Also, from this project, we got to know some unique idea about project from our friends’ side too. It is because of those free and open source resource that many of our work became extremely easier.and those tedious bugs could be solved with ease.

Any kind of suggestion or criticism will be highly appreciated and we will try to address it as far as applicable.

**Regards,**

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**Introduction**

The main aim of this project was to deploy something that reflects the application of Data Structures in real life and also to enhance the knowledge of different searching and sorting algorithms that helps in easier data storage and retrieval.

Bringing the concepts of Data Structure and Algorithm and the need for a suitable medium of communication we decided to make a social networking site. We named this site ‘Mitrata’ which translates to friendship in English.

Mitrata is be a web-based app which provides the user with a platform to get to know other people and communicate with them. It is a social networking site like any other sites that exist like facebook or tinder. The main motive of this app is to help people find a friend and explore if they do have some compatibility or not.

**Objective**

This project did not aim to advance our Web development skills within a matter of days or weeks. Instead, the major objective of this project was to encourage us to implement data structures and algorithms into real life problems.The main objectives of the project were:

* To learn the concept of Data Structure and Algorithm
* To learn to implement backend server in python
* To learn to use front end framework like react
* To learn to implement database for an application
* To enhance communication skills and acquire s.kills to work in a teamremotely as well by the help of git

**Background on web development**

Web development involves a combination of programming, design, and content creation to produce a functional and visually appealing website.Web development can be divided into following main categories:

Front-end development involves creating the user interface of a website or web application, including the layout, design, and interactive elements. This typically involves using HTML, CSS, and JavaScript, as well as various front-end frameworks and libraries.

Back-end development, on the other hand, involves the server-side of a website or web application, including the database and server-side scripting. This typically involves using languages like Python,as in our case.

Databases are used to store and manage large amounts of data for web applications. Web developers use database management systems like MySQL, PostgreSQL, MongoDB, or Oracle to design, create, and maintain databases, as well as to write SQL queries to retrieve and manipulate data.

Application programming interfaces (APIs) are used to enable communication between different software applications. Web developers use APIs to connect front-end and back-end components, as well as to integrate third-party services like payment gateways, social media platforms, and geolocation services.

**Project flow**