Resourcify

ON

Submitted in partial fulfillment of the requirements
of the degree of

Bachelor of Engineering
(Information Technology)

By

Shraeyaa Dhaigude -Roll No (15)

Under the guidance of

Mrs. Dipti Karani

Department of Information Technology

VIVEKANAND EDUCATION SOCIETY'S INSTITUTE OF TECHNOLOGY, Chembur, Mumbai 400074

(An Autonomous Institute, Affiliated to University of Mumbai)

Vivekanand Education Society's
Institute of Technology
(Autonomous Institute Affiliated to University of Mumbai, Approved by AICTE & Recognised by Govt. of Maharashtra)
NAAC accredited with 'A' grade

April 2024

Certificate

This is to certify that project entitled

"Resourcify"

Group Members Names

Miss. Shraeyaa Dhaigude (Roll No. 15)

In fulfillment of degree of BE. (Sem. VI) in Information Technology for Project is approved.

Prof. Mrs. Dipti Karani **Project Mentor**	**External Examiner**
Dr.(Mrs.)Shalu Chopra **H.O.D**	**Dr.(Mrs.)J.M.Nair** **Principal**

Date: / 4/2025
Place: VESIT, Chembur

College Seal

Declaration

We declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea or data or fact or source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

- - - - - - - - - - -

(Signature)

Shraeyaa Dhaigude -Roll No (15)

Dept. of Information Technology

Abstract

Resourcify is a full-stack web-based Resource Management System that allows users to efficiently organize educational or informational content under topics and subtopics. The application enables secure authentication and intuitive interfaces for CRUD operations, resource uploads, and quick access via search. Designed using Flask for the backend and React with Tailwind CSS for the frontend, it ensures a responsive and modern experience. Cloudinary integration enables file management, while JWT-based login ensures user privacy and access control.

Contents

ACKNOWLEDGEMENT

The project report on ”Resourcify ” is the outcome of the guidance, moral support and devotion bestowed on our group throughout our work. For this we acknowledge and express our profound sense of gratitude to everybody who has been the source of inspiration throughout project preparation. First and foremost we offer our sincere phrases of thanks and innate humility to HOD Dr (Mrs.) Shalu Chopra, Deputy HOD Dr. Manoj Sabnis, Project guide Mrs. Dipti Karani for providing the valuable inputs and the consistent guidance and support provided by them. We can say in words that we must at outset tender our intimacy for receipt of affectionate care to Vivekanand Education Society’s Institute of Technology for providing such a stimulating atmosphere and conducive work environment

Chapter 1

Introduction

1.1. Introduction

The increasing volume of educational and technical content demands better organization and accessibility. Resourcify bridges this gap by allowing users to manage and access their resources easily under structured topics and subtopics.

1.2. Objectives

1.Allow secure user authentication using JWT.
2.Enable CRUD functionality for topics and subtopics.
3.Allow uploading of URLs and files as resources.
4.Provide filtering and search functionality for resources.
5.Maintain a responsive and user-friendly UI.

1.3. Motivation

The Manual resource organization is time-consuming and inefficient. Resourcify solves this by automating structure, enhancing searchability, and improving contnt accessibility for learners and educators alike.

1.4. Scope of the Work

The system supports authenticated user interaction, resource management via Cloudinary, and a modern frontend built with React. It supports all standard file types and provides real-time updates to the resource database..

1.5. Feasibility Study

The system is feasible both technically and operationally using open-source tools and can scale with increased user base and resource volume.

Chapter 2

Literature Survey

2.1. Introduction

*Existing resource platforms often lack user-level customization and topic-based structure. This project fills that void by introducing hierarchical resource management integrated with search and upload features.*Problem Definition

2.2. Review of Literature Survey

1. **Designing the Education Resource Management System Using Apriori Algorithm**
   Author: Xinlei Yuan (2022)
   Objective: This research aimed to improve the efficiency and organization of educational resource systems by using the Apriori algorithm.
   Work Done: The paper proposed a model where educational resources could be clustered and associated intelligently using rule mining, thus allowing better categorization, sharing, and retrieval of content across a digital learning environment.
   Conclusion: The use of Apriori enhanced the structure and usability of educational content, facilitating faster and more relevant access for learners and educators.
2. **Educational Resource Management System Based on JSP Technology**
   Authors: Qin Xu, Zhongli Zhou, Dexiang Yang (2018)
   Objective: The goal of this study was to design a JSP-based educational resource management system to streamline the uploading and sharing of academic content.
   Work Done: The authors implemented the system using Java Server Pages (JSP), structuring it to support backend processing and front-end interaction efficiently. They focused on modularity, scalability, and user access control.
   Conclusion: The system proved effective in improving educational content organization and simplifying user access to specific academic resources.
3. **Educational Resource Management System Design for Inclusive Education**
   Authors: Rahayu Widiya Sari, Arista Purba, Saharni Nasution, Lilik Hidayat Pulungan (2024)
   Objective: This paper aimed to design an education resource system that could accommodate inclusive education, especially for children with special needs.
   Work Done: The researchers developed a system that emphasized accessibility features, such as simplified interfaces, assistive design components, and flexible content access based on the learner's ability.
   Conclusion: The system made significant progress in addressing educational equity and enabling participation from students who are often underserved by standard platforms.
4. **Implementation of Electronic Resource Management System: A Case Study of Central Library, IIT Delhi**
   Authors: Vijay Kumar Verma, Aravind R Nair (2023)
   Objective: The objective was to evaluate the effectiveness of implementing an open-source ERMS (Electronic Resource Management System) in a large academic institution.
   Work Done: The authors conducted a case study on IIT Delhi's Central Library, where the CORAL ERMS was deployed. They analyzed the workflows, cataloging, and reporting functionalities.
   Conclusion: CORAL significantly streamlined the management of electronic resources, improving transparency, reporting, and resource tracking at the

institutional level.

5. **Digital Teaching Resource Management System for Higher Education**
   Author: Zhu (2024)
   Objective: This study focused on developing a scalable and structured digital system for managing teaching resources in universities.
   Work Done: A framework was created that combined digital access control, content hierarchy, and performance metrics to better organize teaching materials.
   Conclusion: The implementation resulted in improved accessibility and centralized content management, proving highly effective in university-level digital learning ecosystems.

Chapter 3

Design and Implementation

3.1. Introduction

This chapter presents the outcomes of the resourcify implementation, including cost estimates, feasibility study results, and a detailed analysis of the platform's effectiveness in enhancing community engagement. The observations and remarks highlight the key findings and recommendations for future improvements.

3.2. Requirement Gathering

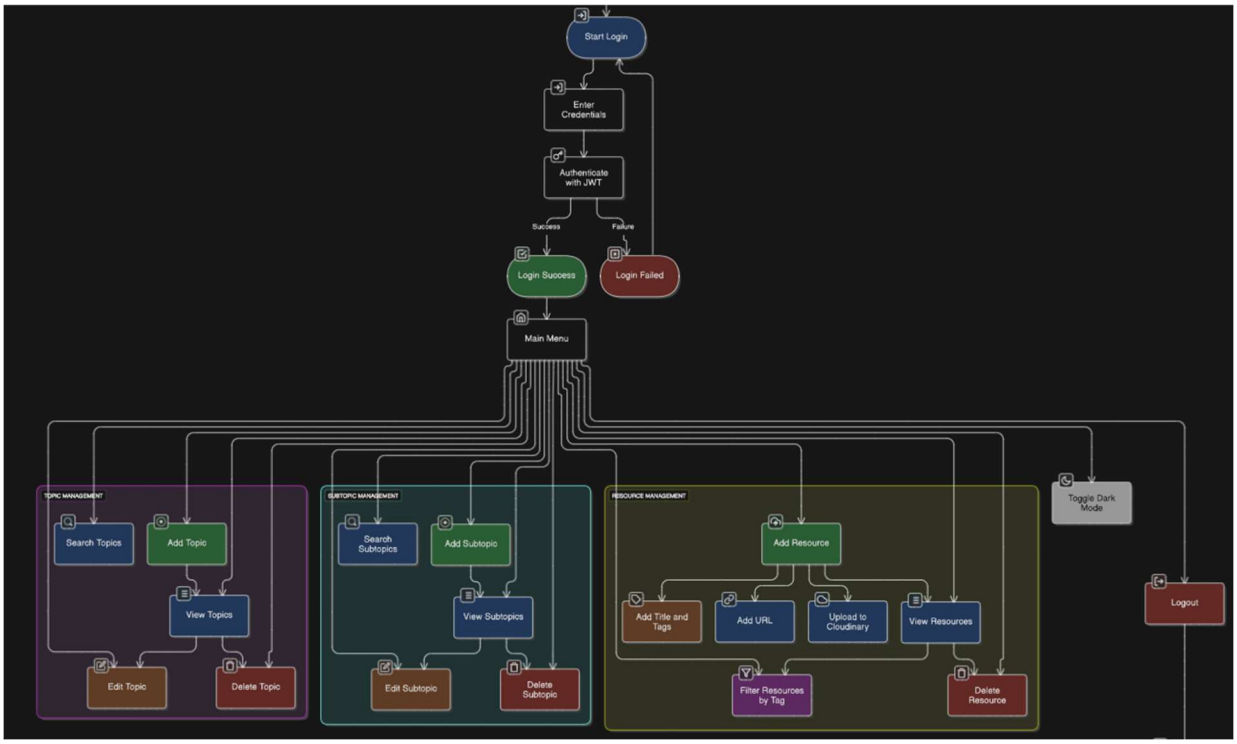
Functional Requirements:

- User Registration and Login
- Topic/Subtopic CRUD operations
- Resource Upload and Tagging
- Search by Name or Tags
- Dark Mode Toggle

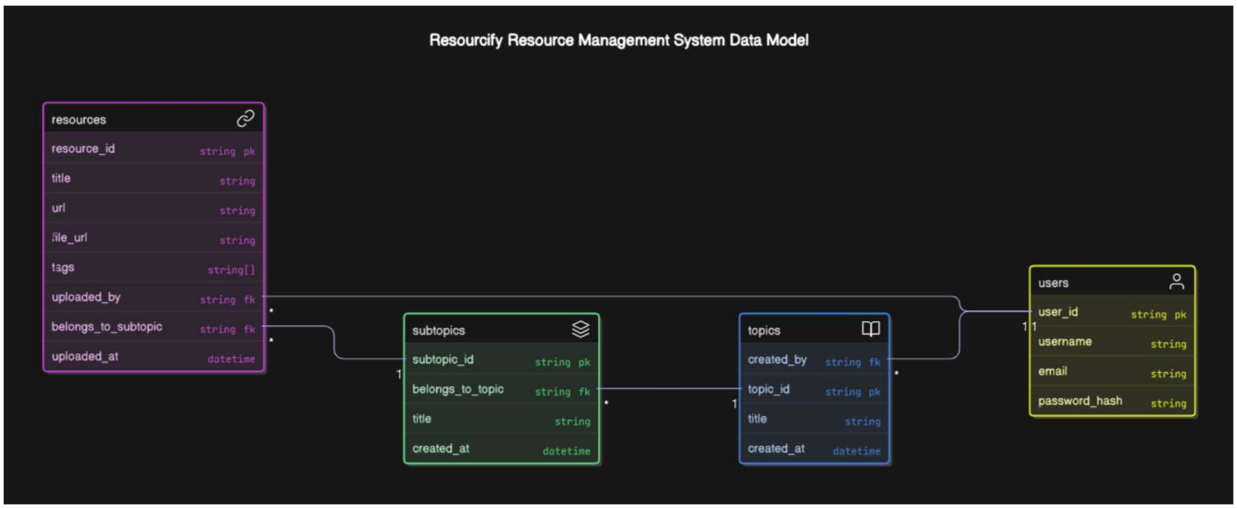
Performance Requirements:

- Smooth UX across devices
- Responsive UI
- Low latency in resource rendering

3.3. Proposed Design



3.4. Proposed System



3.5. Software Requirements

🔧 Tech Stack

Category	Technologies
Frontend	React, Vite, Tailwind CSS, Axios
Backend	Flask, Flask-CORS, Flask-PyMongo, Flask-Bcrypt, Flask-JWT-Extended
Database	MongoDB
Tools	Cloudinary (file uploads), dotenv (env management), xmgmt) JWT (authentication)

⚙️ System Requirements

Component	Requirements
Operating System	Windows, macOS or Linux
Processor	1 GHz or faster
Memory	2 GB RAM

Chapter 4

Results and Discussion

4.1 Home Page

Users can view, create, search, and delete topics. Dark mode enhances visual experience.

4.2 Topic Page

Displays subtopics under the chosen topic, allowing subtopic-specific resource management.

4.3 Resources Page

Users can upload files or URLs along with a title and tag. Filtering by tag enables efficient search.

4.4 Analysis and Observations

The application simplifies the management of large collections of learning resources. It ensures secure access and is intuitive enough for users with minimal technical knowledge.

Chapter 5

Conclusion

5.1. Conclusion

Resourcify simplifies the educational workflow by structuring content and enabling smooth navigation through topics and subtopics. With search, tag filtering, and a clean UI, it stands out as an efficient content manager. JWT authentication adds security, and the use of modern web technologies ensures performance and scalability.

5.2. Future Scope

Add role-based access control
Allow commenting or discussion threads under resources
Add auto-tagging using AI
Generate analytics for resource usage

Bibliography

1. Xinlei Yuan. *Designing the Education Resource Management System Using Apriori Algorithm*, Mobile Information Systems, 2022. https://onlinelibrary.wiley.com/doi/10.1155/2022/8307261
2. Qin Xu, Zhongli Zhou, Dexiang Yang. *Educational Resource Management System Based on JSP Technology*, Educational Sciences: Theory & Practice, 2018. https://jestp.com/menuscript/index.php/estp/article/view/152
3. Rahayu Widiya Sari, Arista Purba, Saharni Nasution, Lilik Hidayat Pulungan. *Educational Resource Management System Design for Inclusive Education*, EDUCTUM Journal Research, 2024. https://www.researchgate.net/publication/383253838_Educational_Resource_Management_System_Design_for_Inclusive_Education
4. Vijay Kumar Verma, Aravind R Nair. *Implementation of Electronic Resource Management System: A Case Study of Central Library, IIT Delhi*, SRELS Journal of Information Management, 2023. https://www.researchgate.net/publication/372147723_Implementation_of_Electronic_Resource_Management_System_A_case_study_of_Central_Library_IIT_Delhi
5. Zhu. *Digital Teaching Resource Management System for Higher Education*, Engineering Reports, 2024. https://onlinelibrary.wiley.com/doi/full/10.1002/eng2.13008