

PROJECT SYNOPSIS REPORT
ON
Ed4U: An Interactive Ed-Tech Platform
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
FOR
Full Stack Engineering (22CS037)
Semester: 6th



SUBMITTED TO

Mr. Rahul

SUBMITTED BY:

Arshpreet Singh (2210991370)

Arsh Verma (2210991363)

Saksham Garg (2210992221)

Nishtha Pathania (2210991995)

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1. Problem Statement

In the evolving landscape of education, traditional methods often struggle to keep pace with the demand for interactive and personalized learning experiences. Students require a platform that offers seamless access to high-quality educational content and enables active engagement. Instructors face challenges in reaching a global audience and showcasing their expertise effectively. There is a need for an integrated ed-tech solution that not only facilitates content creation and consumption but also incorporates user feedback through ratings, thereby enhancing the learning experience for students and providing valuable insights for instructors.

2. Title of Project

Ed4U: An Interactive Ed-Tech Platform for Educational Content Creation, Consumption, and Rating

3. Objective & Key Learnings

Objective: The primary objective of Ed4U is to create a robust ed-tech platform that facilitates the creation, consumption, and rating of educational content. The platform aims to:

- Provide a seamless and interactive learning experience for students.

- Enable instructors to create, showcase, and distribute their educational content to a global audience.
- Integrate a rating system to gather user feedback and improve content quality.

Key Learnings:

- Understanding the MERN stack (MongoDB, ExpressJS, ReactJS, NodeJS) and how to leverage it to build a full-stack application.
- Designing a user-friendly interface that enhances engagement and makes navigation intuitive.
- Developing a scalable system for content management and rating mechanisms.
- Gaining insights into the challenges and solutions in creating a global educational platform.

4. Options Available to Execute the Project

The deployment process for the Ed4U ed-tech platform will involve hosting the application on various cloud-based services. The front end will be deployed using Vercel, a popular hosting service for static sites built with React. The back-end will be hosted on Render or Railway, two cloud-based hosting services for applications built with Node.js and MongoDB. Media files will be hosted on Cloudinary, a cloud-based media management platform, and the database will be hosted on MongoDB Atlas, a fully managed cloud database service.

5. Advantages/Disadvantages

Advantages:

- **Enhanced Learning Experience:** Provides a dynamic and interactive platform for students, improving engagement and learning outcomes.
- **Global Reach:** Enables instructors to connect with a worldwide audience, expanding their influence and impact.
- **User Feedback:** The rating system allows users to provide feedback, helping to continually improve the quality of educational content.
- **Modern Technology Stack:** Utilizing the MERN stack ensures a modern, efficient, and scalable solution.

Disadvantages:

- **Development Complexity:** Building a platform from scratch requires significant time and technical expertise.
- **Maintenance and Support:** Ongoing maintenance and support are needed to ensure platform stability and user satisfaction.
- **User Adoption:** Attracting and retaining users may require substantial marketing and outreach efforts.

6. References

- **MERN Stack Documentation:**
 - ReactJS Documentation

- NodeJS Documentation
- [ExpressJS Documentation](#)
- [MongoDB Documentation](#)
- **Development Best Practices:**
 - JavaScript Info: Best Practices
 - [MDN Web Docs: Best Practices](#)