Education E-Platform for Vision Judicial Academy

Education & E-Learning

Course Management Student Engagement Live Streaming

SaaS For Education Data Analytics

OVERVIEW

Transformed an existing e-learning platform to support a more dynamic and user-centric learning experience. The new setup allows students to effortlessly browse and purchase courses, join live virtual classes, and revisit recorded sessions—all through a robust and scalable system. To make learning more interactive and efficient, we introduced real-time engagement features, customized dashboards, and smart notifications that keep learners informed and involved throughout their journey.

CLIENT

NDA Protected   **USA**

The client is an education technology company offering online courses for students across various disciplines. With growing enrolment and increasing demand for interactive learning, they sought a modernized solution to enhance student engagement and optimize course management.

REQUEST BACKGROUND

Building a Scalable E-Learning Platform for Enhanced Learning Experience

The client faced challenges with their outdated e-learning system, which lacked real-time engagement, automated processes, and seamless course accessibility.

Scalable Issue

As student enrollment grew, these inefficiencies led to difficulties in managing live classes, handling course purchases, and storing recorded sessions.

Manual Intervention

Their existing platform required significant manual intervention, making it challenging to scale operations efficiently.

Increasing Cost

Course recordings were managed through third-party cloud services, increasing costs and limiting control over content storage.

Reduced Engagement

The lack of real-time interaction reduced engagement, while the absence of an automated course management system resulted in administrative overhead.

The client aimed to implement a modern e-learning system that automates course management, integrates live streaming, and provides real-time engagement features to improve the overall learning experience.

CHALLENGES

The e-learning industry faces various challenges, including ensuring high-quality virtual classes, managing a growing student base, and automating administrative processes. Without a modernized system, our client risked lower engagement rates and inefficiencies in course handling.

Lack of Real-Time Interaction

The previous system did not support interactive video sessions, limiting student engagement.

Manual Course Management

Course management relied on manual operations, making it difficult to scale efficiently.
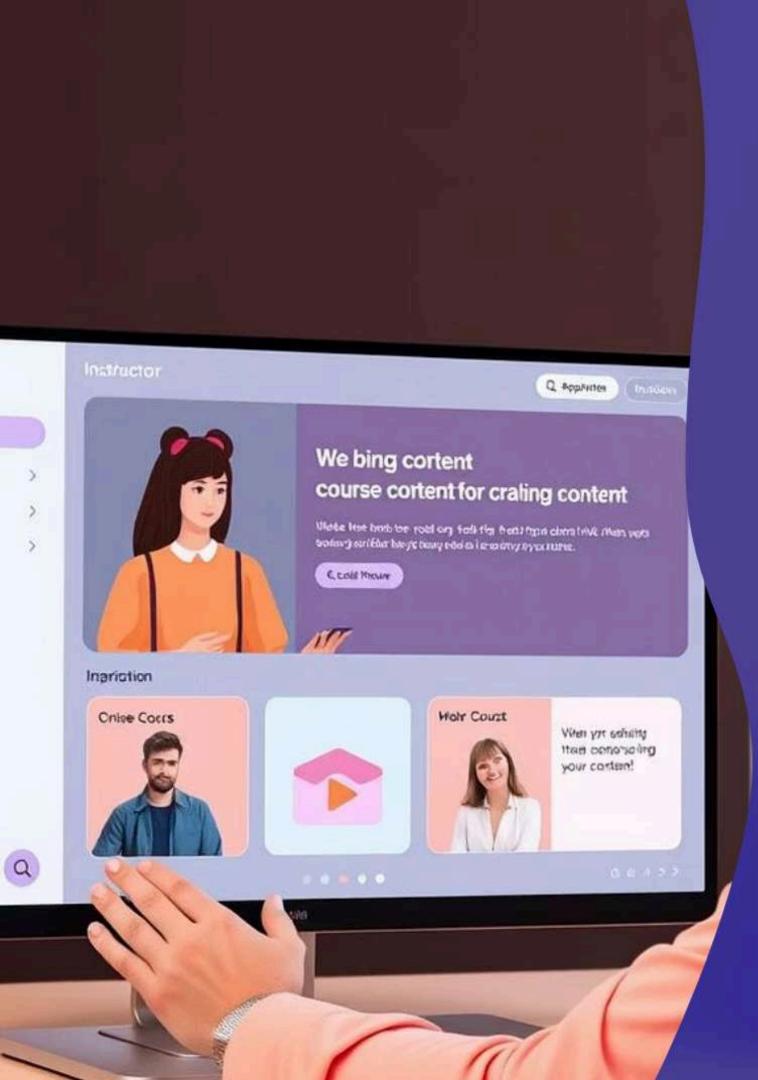
Third-Party Storage Dependency

The client relied on third-party cloud solutions for storing lectures, leading to high costs and limited flexibility in content management.

No Automated Notifications

Without an automated notification system, students often missed important updates about live sessions, deadlines, and new course additions.

GOALS

Develop a scalable e-learning platform

That supports live classes, course purchases, and automated content delivery.

Integrate a real-time engagement system

To improve student interaction during live sessions.

Implement browser-based video recording

To eliminate reliance on expensive third-party storage solutions.

Provide an intuitive student dashboard

For managing courses, tracking progress, and accessing materials.

Use data analytics

To track student performance, engagement levels, and optimize learning experiences.

SOLUTION

Technology Stack

.NET Core

ANGULAR

agora

stripe

aws

Duration & Resources

Time Taken: 10 months

Resources: 6 Specialists

Modernized E-Learning Platform with Live Streaming

To address the client's challenges, we began with a thorough analysis of their existing platform, identifying key areas for improvement. Our team designed a scalable architecture that supports high-quality live streaming, automated course management, and student engagement features.

Real-Time Live Classes

First, we integrated **Agora RTC SDK** for real-time live classes, enabling students to interact with instructors and peers seamlessly. This improved engagement and learning effectiveness.

Automated Course Management

To streamline course management, we implemented an **automated system** that allows instructors to create, update, and manage courses with minimal effort. Course purchases were integrated with **Stripe/PayPal**, ensuring a secure and seamless payment process.

Self-Hosted Recording

For cost-effective video recording, we utilized the **Media Recorder API**, allowing students to record live sessions directly from their browser and store them on a self-hosted server. This eliminated dependency on third-party cloud storage and reduced operational costs.

Dashboard and Notification Management

A **personalized student dashboard** was introduced, offering features such as progress tracking, course recommendations, and access to recorded sessions. This enhanced the overall user experience. Additionally, an **automated notification system** was implemented using **Firebase**, ensuring students received real-time updates about upcoming classes, new courses, and assignment deadlines.

OUTCOME

The Impact of the E-Learning Platform Modernization

35%
Increase in Student Engagement

Through real-time interactive live sessions

40%
Reduction in Administrative Effort

Due to automation of course management and notifications

30%
Cost Savings

By eliminating third-party video storage and implementing self-hosted recording solutions

80%
Higher Course Completion Rates

Due to improved tracking, personalized dashboards, and timely notifications

99%
Scalable Infrastructure

Supports growing student enrollments and additional course offerings

CLIENT FEEDBACK

"The new platform has made a big difference for us. Live classes are easier to run, managing courses takes less time, and a lot of things now happen automatically. It's taken a lot of pressure off our team. Really appreciate the great work by Autviz Solutions."