GUVI-CHUBB: A Online Learning Platform for Skill Development

The GUVI-CHUBB Capstone Project is a dynamic and interactive online learning platform designed to foster skill development and knowledge sharing.

Project Architecture: Frontend

Angular 17

A robust, scalable, and modular frontend framework ensuring a high-quality user experience.

Tailwind CSS

A utility-first CSS framework offering a visually appealing and responsive interface.

Angular Material UI

Provides pre-built components for a user-friendly and accessible interface.

Project Architecture: Backend

ASP.NET Web API

A powerful and reliable backend system with a robust API architecture.

Models, Controllers, Migrations

Provides efficient data management and facilitates smooth data exchange between the frontend and backend.

API Integration

Leverages pre-existing APIs for enhanced functionality and integration capabilities.
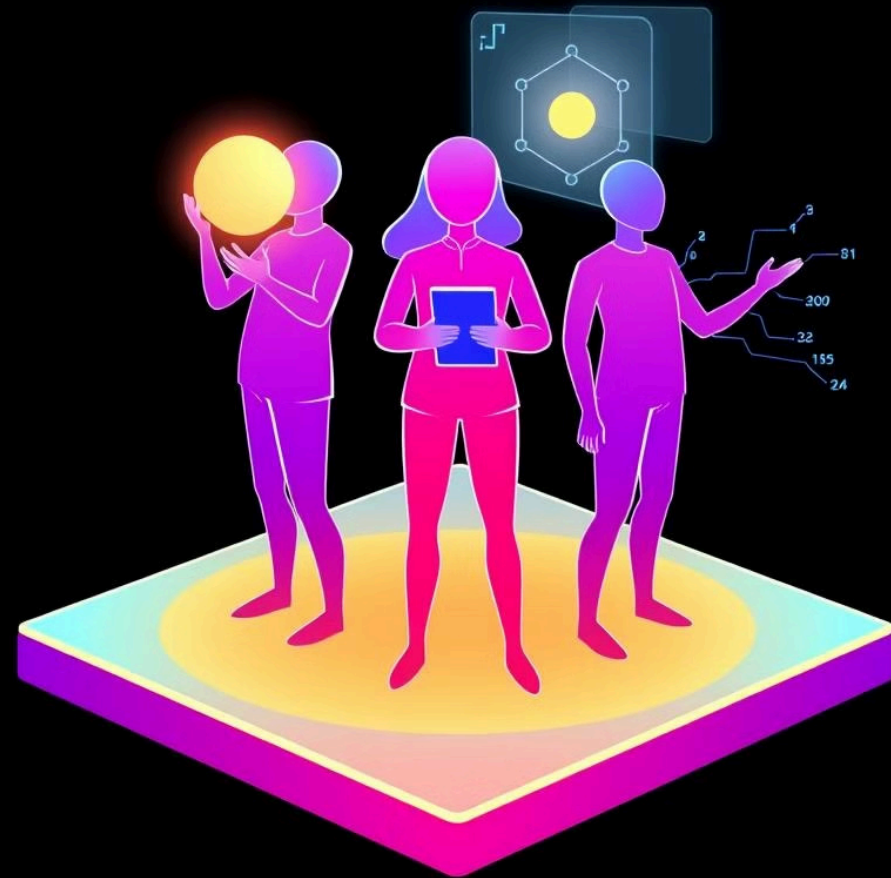
User Roles and Features

Administrator

Manage user accounts, view platform statistics, and monitor system performance.

Instructor

Create, upload, and manage course content, monitor learner engagement, and provide feedback.

Learner

Access a wide range of courses, track progress, and take quizzes and assessments.

Enhancing the Learning Experience

1 **Custom Quiz Generator**

Leverages the Grok/OpenAI API to generate dynamic quizzes based on specific topics.

2 **Real-Time Course Recommendations**

Personalized course suggestions based on learner behavior and interests, powered by machine learning models.

3 **Interactive Content Management**

Instructors can organize content for improved accessibility and engagement.

Data Visualization and Insights
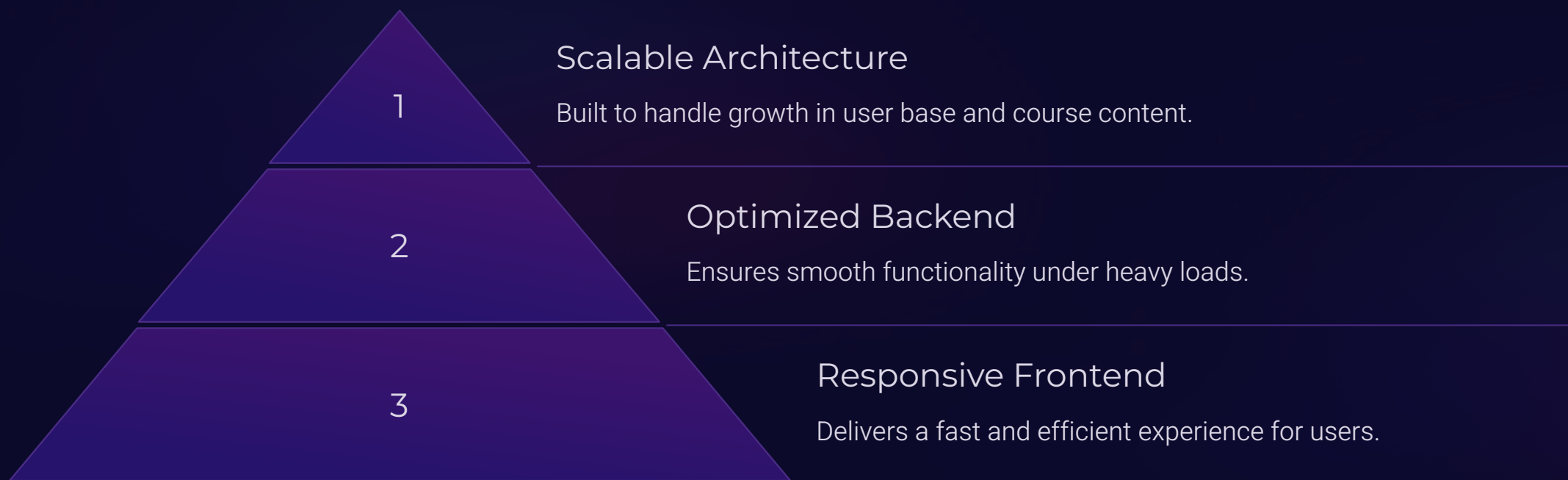

Real-Time Metrics

Provides actionable insights into user behavior and platform performance.

Data-Driven Decisions

Enables informed decision-making for administrators and instructors.

Scalability and Performance

1

Scalable Architecture
Built to handle growth in user base and course content.

2

Optimized Backend
Ensures smooth functionality under heavy loads.

3

Responsive Frontend
Delivers a fast and efficient experience for users.

Security and Privacy

1 Role-Based Authentication

Protects sensitive data and ensures authorized access.

2 Secure Protocols

Prevents unauthorized access and complies with industry standards.

3 Regular Monitoring & Updates

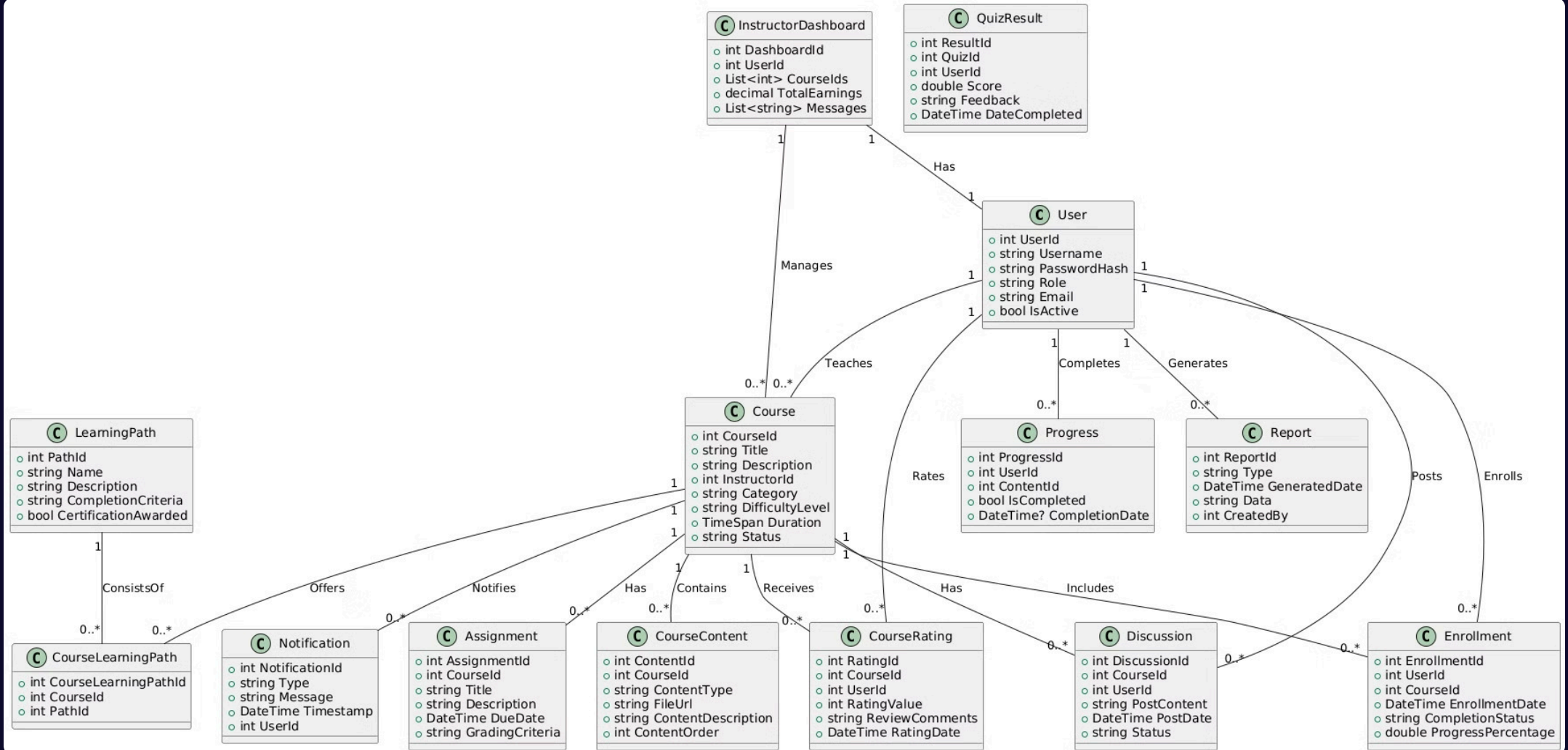Addresses emerging security challenges and ensures ongoing protection.

Conclusion

The GUVI-CHUBB Capstone Project represents a revolutionary approach to online learning, combining advanced technologies with a user-centric design.

Class Diagram Details

PUT `/api/Assignment/{id}`

DELETE `/api/Assignment/{id}`

GET `/api/Assignment/course/{courseId}`

Course

POST `/api/Course`

GET `/api/Course`

GET `/api/Course/{id}`

PUT `/api/Course/{id}`

DELETE `/api/Course/{id}`

CourseContent

POST `/api/CourseContent/{courseId}`

GET `/api/CourseContent/{courseId}`

Discussion

POST `/api/Discussion/discussion`

GET `/api/Discussion/discussion/{id}`

PUT `/api/Enrollment/progress/{courseId}/user/{userId}`

POST `/api/Enrollment/learningpath/{pathId}/user/{userId}`

GET `/api/Enrollment/{enrollmentId}`

GET `/api/Enrollment/user/{userId}/courses`

GET `/api/Enrollment/total/enrollments/count`

Feedback

POST `/api/Feedback`

GET `/api/Feedback/{id}`

GET `/api/Feedback/course/{courseId}`

GET `/api/Feedback/user/{userId}`

LearningPath

POST `/api/LearningPath`

GET `/api/LearningPath`

GET `/api/LearningPath/{id}`

PUT `/api/LearningPath/{id}`

Report

GET `/api/Report/user/{userId}`

POST `/api/Report/user/{userId}`

POST `/api/Report/course/{courseId}`

User

GET `/api/User`

POST `/api/User/register`

POST `/api/User/login`

PUT `/api/User/approve/{userId}`

PUT `/api/User/{userId}`

DELETE `/api/User/{userId}`