

Project Summary

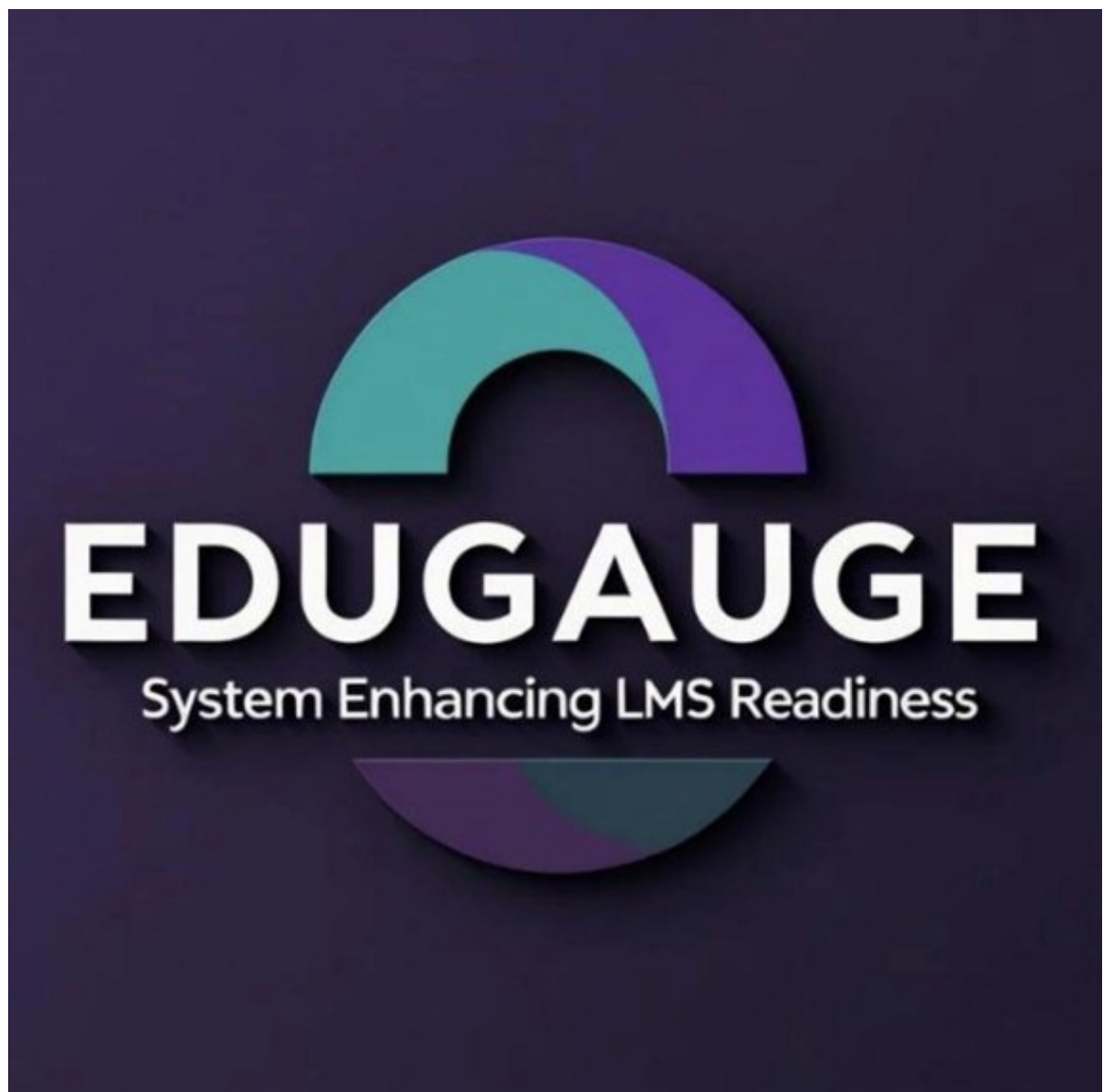


Table of contents

1. Project Overview and Objectives	1
2. Users	1
<i>Students.....</i>	<i>1</i>
<i>Lecturers.....</i>	<i>2</i>
<i>Administrators.....</i>	<i>2</i>
3. Core Functionalities	3
4. System Architecture.....	3
5. Team members	4
<i>Project manager.....</i>	<i>4</i>
<i>Software developers</i>	<i>4</i>
6. Project Documentation & External Resources	5

1. Project Overview and Objectives

Edugauge is a web-based application developed to help students evaluate their readiness to use the university's Learning Management System (LMS). The system aims to bridge the gap between students' current digital abilities and the skills required to effectively engage in online academic activities.

The primary objectives of the platform include:

- Assessing the digital literacy levels of new and existing students.
- Evaluating students' ability to navigate and use key features of the university's LMS, such as eFundi.
- Providing personalised feedback and recommendations to help students strengthen their digital skills.
- Offering lecturers and administrators insights into students' overall digital readiness through analytics dashboards.
- Promoting early intervention and targeted support to ensure a smooth adaptation to digital learning environments.

2. Users

The Digital Literacy and LMS-Readiness Assessment Tool is designed for use within the university's digital learning ecosystem. It is intended for three main user groups: students, lecturers, and administrators.

Students

Students are the primary focus of the platform, and their tools are centered around assessment and improvement.

- **Take Assessments:** Students are responsible for completing two main interactive tests: the Digital Literacy Test and the eFundi Readiness Test.
- **Track Progress via Gradebook:** They have access to a personal gradebook where they can view their test marks.

- **Access Personalized Resources:** Based on their specific test results, the system generates tailored learning resources (documents or URL links) in their gradebook to help them improve their digital skills.
- **General Resources & Profile:** Students can browse all general resources uploaded to the system and view their own read-only profile.

Lecturers

Lecturers use the platform to monitor student readiness and provide necessary learning materials.

- **Monitor System Statistics:** Lecturers have access to an analytics dashboard that displays visual reports of user performance, such as average scores and pass rates for the assessments.
- **Identify At-Risk Students:** They can access an "At-Risk" list, which highlights students who scored below the defined digital literacy threshold and might need extra support. They can search this list and export it to Excel.
- **Manage Resources:** Lecturers have the permission to upload helpful learning materials, such as document files (PDF, Word, Excel) or URL links, and provide descriptions for them. They can also edit, update, or delete the resources they have uploaded.

Administrators

Administrators possess the highest level of access to manage the system's users and content.

- **Full System Access:** Admins have full access to the system's statistics dashboards and the At-Risk student list, just like lecturers.
- **Manage Lecturers (Role Management):** A key administrative function is managing roles. Admins can add new lecturers to the system by entering their details (lecturer number, name, title, @lec email, and password). They can also search for, update the details of, or completely remove existing lecturers from the platform.

- **System-Wide Resource Management:** Admins have the ability to upload, manage, and remove learning materials across the system to support the student base.

3. Core Functionalities

- **Assessment Module:** The platform provides interactive diagnostic tests, specifically a Digital Literacy Test and an eFundi Readiness Test.
- **Results and Feedback:** The system provides automated scoring and personalised learning recommendations for each user based on their diagnostic outcomes.
- **Analytics Dashboard:** Lecturers and administrators are offered data visualisation and reporting features to track student readiness levels. * **At-Risk Monitoring:** The system features an "At-Risk" list that shows students who scored below the defined digital literacy threshold and may need additional support.
- **Resource Management:** Lecturers and administrators possess the permission to upload helpful resources, such as document files or URL links, directly to the system.

4. System Architecture

- **Frontend:** The user interface is built using React.js and Vite to provide an interactive experience for tests, dashboards, and reports.
- **Backend:** The application layer utilizes Node.js and Express.js to manage RESTful APIs, authentication, and database communication.
- **Database and Hosting:** The system is hosted on the Microsoft Azure cloud platform, utilizing an Azure SQL Database to securely store user accounts, assessment data, and results.
- **User Workflow:** A student logs into the system, navigates to their dashboard, completes the required eFundi and Digital Literacy tests, and then accesses their gradebook to view marks and tailored resources. Concurrently, lecturers and

administrators can log in to view statistical dashboards, monitor at-risk students, and manage platform resources

5. Team members

Project manager



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6. Project Documentation & External Resources

Edugauge User Manual: [Edugauge User Manual.pdf](#)

Edugauge Technical Manual: [Edugauge Tech Manual.pdf](#)

Video project demonstration: [Edugauge System Presentation.mp4 - Google Drive](#)

Website: [EDUGUAGE](#)