



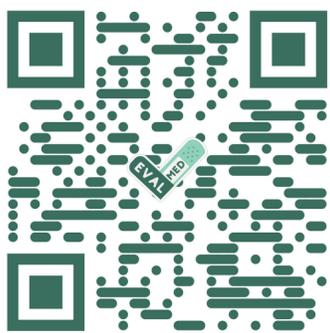
Entrusted Professional Activity Management System for Medical Training at UA

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Key words

Clinical responsibility · Competency · Supervision · Workplace-based learning · EPA · Medical education

Context

In 2024, the University of Aveiro launched a new Medicine program. A key feature of this course is the incorporation of **EPAs (Entrustable Professional Activities)**, enabling a practical and competency-focused approach to medical education. Currently, the evaluation process is carried out using a paper-based system, which is used throughout the academic year to record feedback and evaluations from both students and tutors on various clinical activities.

Design Goals

To support competency-based medical education, we identified and implemented several key system-level requirements, a few of which are outlined below:

- **Multi-tenancy** - Supports multiple institutions (e.g., universities, teaching hospitals) with secure data separation and custom configurations per tenant.
- **Yearly editions** - Allows the management of multiple editions of the same course (e.g., Clinical Medicine I 2025, 2026...), each with independent evaluations, tutors, and EPA structures.
- **Longitudinal Student Tracking** - Follows the student's progress across multiple curricular units and academic years, enabling continuity of EPA-based evaluation.
- **Cross-Curricular Analytics** – Offers insights into competency growth over time across courses.

Architecture

The system is designed around a modular architecture to ensure scalability, multi-tenancy, and data integrity.

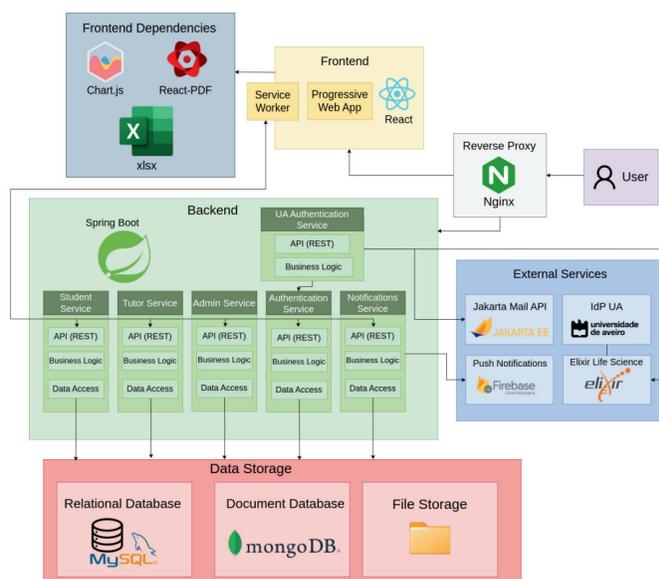


Fig 1 - Diagram of the architecture

Funcionalities

To support the outlined architecture and user workflows, the system includes the following core functionalities:

- Offline synchronization of minimum functionalities
- Voice to Text
- Multi-Language
- Authentication using LifeScience Login and OTT
- Push Notifications

User Roles and Supported Actions

The solution supports the following user profiles:

- **Students**
 - Self-evaluate upcoming assessments
 - Request evaluation of specific activities in future sessions
 - Request feedback from tutors
 - View performance statistics
 - Access educational materials related to various procedures
 - Check the location of upcoming evaluations
- **Tutors**
 - Evaluate students in real-time
 - Provide feedback upon request or voluntarily
 - View student statistics to monitor progress
- **Administrators**
 - Manage courses and associated EPAs
 - Import/export Excel file with course data
 - View overall course statistics

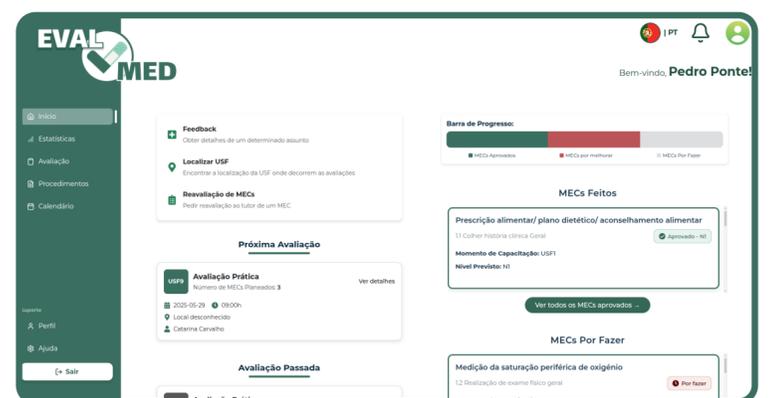


Fig 2 - Student Dashboard.

Usability Evaluation

Two usability testing sessions with medical students and tutors were conducted during the project, yielding **SUS scores of 81 and 89**, both reflecting great usability.

Conclusion

This system modernizes EPA tracking and feedback, providing real-time, accessible evaluation workflows. The prototype has demonstrated strong usability metrics and will be piloted at UA, with the potential for broader implementation adoption.

