CEPAP Project : Educational Dashboard
Project Documentation and Development Report

October 2025

Overview

Development of an interactive educational web platform.

Contents

Project Context and Goals

CEPAP is a community organization that supports French-speaking teachers in Ontario through mentorship, training, and resource sharing. The organization aims to strengthen pedagogical practices and build a collaborative network of educators.

This project digitizes pedagogical management by centralizing essential tools for teachers and administrators, moving from a static prototype to a deployed, secure, and database-connected web platform.

The platform provides

- An intuitive teacher interface for sharing educational documents and videos.
- An administration space to manage teachers, events, and registrations.
- A scalable architecture designed to support future expansion across subjects, school years, and media types.

Key Features

Teacher Management : Admin Interface

- Registration through Supabase Auth with custom email confirmation.
- Automatic appearance of confirmed teacher accounts in the list via a SQL trigger.
- Admin can view profiles, check active status, and delete accounts.
- Real-time management through a clean and efficient interface.

Authentication and Security

- Migration from a manual system to secure, standardized authentication.
- `supabase.auth.signUp` for account creation and confirmation.
- `supabase.auth.signInWithPassword` for login.
- Automatic synchronization between `auth.users` and the `utilisateur` table.
- Separate access flow for administrators secured with JWT.

Admin Interface : Real-Time Statistics

- Total number of registered teachers.
- Total number of created events.
- Total number of event participants.
- Statistics available immediately after admin login.

Event Management

- Creation and deletion of events directly from the admin interface.
- Events automatically displayed on the homepage and hidden after the event date.
- Teachers can register, and admins can view the list of participants.

Teacher Interface : Document Management

- Uploading documents with structured fields (year, subject, content type).
- Automatic visualization on the frontend with dynamic counters.
- Search bar and filters to navigate resources efficiently.
- Structured organization by school year, subject, and content type.

Video Module

- Upload, view, and download educational videos.
- Addresses a core need: supporting knowledge sharing and peer guidance among teachers.

Key Technical Achievements

- Overhaul of teacher authentication and access flow.
- Automated Auths.
- Real-time statistics integrated into the admin interface.
- Dynamic event management with participant tracking.
- Frontend and backend deployment .
- Secured access control and authentication redirections.
- Functional video module with upload, viewing, and download options.

Next Steps

- Advanced search with metadata filters.
- Pagination and infinite scroll for large document volumes.
- Expanded role and permission management.
- Multi-institution support.

Skills and Technologies

- **Frontend:** HTML, CSS, JavaScript, responsive design
- **Backend:** Node.js (Express), secure REST APIs
- **Authentication & Security:** Supabase Auth
- **Database:** PostgreSQL (Supabase), triggers and synchronization
- **Deployment:** Netlify (frontend), Railway (backend), Supabase (DB/Auth)
- **Software Engineering:** Structured user flows, modular architecture, process automation

Conclusion

The CEPAP project is a pedagogical web platform designed to meet real educational needs. It demonstrates my ability to:

- Design a coherent and scalable architecture,
- Implement secure authentication flows,
- Transform an initial concept into a working, deployed solution,
- Drive and execute a project from scratch as a full-stack developer.

Developer: Gamelle Megantche