Mathias Novais da Silva

Software Engineer | Development, Automation, Integrations & Applied AI

Barra Olímpica, Rio de Janeiro - Brazil
(21) 96972-2090
mathiasnovais1@hotmail.com
linkedin.com/in/mathiasnovais
github.com/mathiasnovais

PORTFOLIO / SELECTED PROJECTS

Explore my projects ↗

https://portifolio-mathias.montedev.workers.dev/en

PROFESSIONAL SUMMARY

Software Engineer with a bachelor's degree in Computer Science, experienced in full-stack development, process automation, and enterprise integrations. Production systems include a university fair management platform with more than 600 concurrent users and an institutional evaluation platform used across the entire school network. Skilled in JavaScript, TypeScript, Node.js, React, Deno, PostgreSQL, n8n, REST APIs, and TOTVS RM, as well as offline-first applications, dashboards, and generative AI.

PROFESSIONAL EXPERIENCE

Alfacem | Software Engineer 2025 - Present

- Developed internal systems from requirements gathering to production deployment; contributed to the corporate intranet for support tickets, purchasing requests, documents, and institutional resources.
- Integrated n8n, TOTVS RM, REST APIs, and legacy systems, building end-to-end automated workflows and advanced PostgreSQL/SQL queries and reports.
- Automated the enrollment pipeline, including lead qualification, corporate calendar scheduling, notifications, and progress tracking.
- Built generative AI solutions and chatbots for customer support and data analysis.

FEATURED PROJECTS

University Fair | Event Management Platform | *600+ concurrent users*

- Developed an end-to-end platform for registration, QR-coded badge creation and distribution, entry management, exhibitor lead capture, and session attendance tracking.
- Built a real-time attendance dashboard used by organizers to monitor visitor flow throughout the event.

Technologies: JavaScript, Node.js, PostgreSQL (PL/pgSQL, RLS, triggers, JSONB), offline-first PWA with Service Worker, html5-qrcode, BarcodeDetector API, jsPDF, JSZip, and SheetJS.

Institutional Evaluation | Team Management | *used organization-wide*

- Built conditional evaluation forms, employee-specific and comparative dashboards, team/role-based access controls, and a consolidated management dashboard for executive leadership.
- Added feedback records ready for signature, dynamically updated ratings and metrics, AI-assisted analytics, and integrated leave and team management modules.

Technologies: JavaScript, n8n (webhooks as APIs), PostgreSQL (advanced SQL, JSONB), TOTVS RM integration, and SVG dashboards.

FEATURED PROJECTS | CONTINUED

Sentinela | Database Observability

- Built a dashboard that reads the logs of every PostgreSQL database in the organization with a single token, showing requests, latency, errors and the origin of each access, refreshed every 60 seconds.
- Built a React 18 (hooks) application featuring a Canvas-rendered 3D globe, orthographic projection, and real-time day/night visualization, without a mapping library.
- Implemented JavaScript serverless functions with caching and parallel queries, REST API integration, and log collection from PostgreSQL databases.

Technologies: React 18, JavaScript, Canvas API (orthographic projection), serverless functions, REST APIs, PostgreSQL.

P.A.A. | Scholarship Selection

- End-to-end process from public call to enrollment: online application, exam, automatic ranking, interviews booked by families on their phones (65 interviews with no phone calls) and enrollment with document upload.
- Developed a JavaScript and TypeScript application with Deno serverless functions and PostgreSQL, using RLS and PL/pgSQL.
- Integrated the Google Calendar API via OAuth 2.0 and JWT, and automated email notifications using SMTP.

Technologies: JavaScript, TypeScript, Deno, PostgreSQL (RLS, PL/pgSQL), Google Calendar API, OAuth 2.0, JWT, and SMTP.

OTHER PROJECTS

Teacher Recruitment: Eight-stage recruitment pipeline from application to hiring, with QR code-based exam attendance and role-based access limited to each principal's school level. (TypeScript, Deno, PostgreSQL/PL/pgSQL/RLS/triggers, jsQR, SMTP)

Student Photos: Mobile photo capture according to facial-recognition image standards, in-browser compression, and an automated workflow to store photos in each class's Google Drive folder. (JavaScript, Canvas API, n8n, Google Drive API)

Editorial Workflow: Risk-monitoring dashboard for hundreds of educational materials under review, assembled by n8n from spreadsheets. (n8n, Google Sheets API, Node.js)

Próximo Nível: Course sales landing page featuring a countdown timer, testimonials, FAQ, and checkout. (HTML, CSS, JavaScript)

TECHNOLOGIES & TOOLS

Development: JavaScript, TypeScript, Node.js, Deno, React, Python, HTML, CSS, and React Native.

Databases: PostgreSQL (PL/pgSQL, triggers, RLS, JSONB), advanced SQL, MongoDB, and data modeling.

Back-end & Integrations: Serverless functions, REST APIs, webhooks, n8n, Google Calendar API, Google Drive API, Google Sheets API, OAuth 2.0, and SMTP.

Front-end: Offline-first PWAs, Service Workers, Canvas API, SVG, and camera-based QR code scanning.

AI & Data: Generative AI, chatbots, prompt engineering, dashboards, and performance metrics.

Enterprise Tools: TOTVS RM, Power BI, and Google Workspace.

EDUCATION

Bachelor's Degree in Computer Science | Universidade Estácio de Sá (UNESA)

Graduated June 2026 | Academic Performance Index (CR): 9.3/10

COURSES & LANGUAGES

G4 Educação | AI and Management: Applications of AI across industries and business functions.

Fluent in English | WiseUp

Native Portuguese