



Client Overview



Integrity CE sought to redesign their educational website and develop a customized Learning Management System (LMS) to centralize live and on-demand educational activities. The goal was to create a scalable, user-friendly platform with robust reporting capabilities and seamless integration across systems.

Current System Challenges

- **Outdated Website:** The current website did not meet industry standards.
- **Over-reliance on Plugins:** Numerous plugins created system inefficiencies and data fragmentation.
- **Lack of Scalability:** The system struggled to scale with growing user demands.
- **No AI Integration:** Absence of AI limited system innovation.
- **Fragmented Data:** Difficulty in collecting and mapping data from multiple plugins.
- **Mobile Unfriendliness:** The platform lacked mobile optimization, affecting user experience.

TechParrot Solution Approach

- TechParrot proposed a scalable, customizable platform that would improve the user experience and streamline backend management. Key focus areas included:
- Building a unified system for online learning, event registration, communication, administration, and reporting.
 - Delivering a consistent, seamless experience across all user engagement channels.
 - Orchestrating actions based on user activity for better insights and engagement.

Technology Stack

- **Next.js:** Ensures **SEO-friendly, scalable** web applications with fast load times and seamless user experiences.
- **Node.js:** Powers real-time features for a responsive, interactive **eLearning platform**.
- **Strapi CMS:** A secure **headless CMS** for easy, role-based content management of courses and media.
- **AWS S3:** Reliable **cloud storage** for videos, backups, and static files with global accessibility.
- **AWS EC2:** Provides scalable compute power for **high-demand eLearning workloads**.
- **AWS SES:** Ensures seamless, secure **email communication** for notifications and updates.
- **AWS ECR:** Streamlines containerized deployments for **faster and efficient application updates**.
- **Open LRS (SQLRS):** Tracks xAPI-compliant learning data for **real-time analytics** and actionable insights.
- **MySQL:** Efficiently manages large-scale learner data, ensuring **reliability** and scalability

Project Scope

1. **Website Setup & Customization:**
 - Technologies used: Node JS, Next JS, Strapi CMS, xAPI
 - Features developed: Home Page, Online Courses, Service Offerings, About Us, Contact Us
 - xAPI content setup for interactive course creation
2. **LMS Development:**
 - Centralized live/on-demand educational activities
 - Integrated reporting system with robust analytics
 - Scalable infrastructure to support future growth
3. **Integration of Zoom and AWS for Media Content and Emails**
4. **Zoom Media Content on AWS**
 - **Amazon S3:** Secure, scalable storage for Zoom media content (recordings, webinars), enabling seamless video streaming and reliable backups.
 - **Amazon EC2:** Scalable compute power for handling high-demand video conferencing and media delivery.
 - **Real-time Video Analytics:** AWS services like Kinesis Video Streams and Amazon Transcribe provide real-time insights into video quality, user engagement, and live transcriptions.
 - **Machine Learning Insights:** AWS ML services analyze media content for advanced features such as voice tone analysis, sentiment detection, and performance optimization.
4. **Integration of SQLRS with Our LMS Application**
 - By integrating SQLRS with our LMS, we enhanced real-time tracking of learner interactions with xAPI-compliant content like quizzes and multimedia, resulting in increases in course completion rates through data-driven optimizations. This open-source solution reduced operational costs by eliminating proprietary licensing fees. It also centralized data management for compliance with regulations like GDPR and provided a scalable, future-proof architecture that supports emerging eLearning standards, all while enriching the learner experience with personalized feedback and adaptive learning paths

Results & Benefits

- **Scalable Platform:** The new platform is highly scalable and future-proofed for growth.
- **Seamless User Experience:** Consistent experience across all devices and channels.
- **Improved Data Management:** Centralized data collection with enhanced reporting and analytics capabilities.
- **AI Integration Ready:** The new system is equipped for future AI integration to enhance learning experiences.

Unlock the Future of Learning with TechParrot's Expertise

TechParrot's unique approach combines cutting-edge technologies like Next JS, Node JS, Strapi, and AWS S3 to build a scalable, future-ready platform. Our expertise ensures seamless integration, real-time communication, and robust learning analytics with xAPI compliance. With this powerful stack, we deliver a customized, AI-ready LMS that grows with your needs while providing an exceptional user experience across all devices.

Partner with TechParrot to transform your educational platform today!

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