



Streamlining Healthcare Authorization Processes with a Custom Multi-Tenant Application

Introduction:

In the fast-evolving landscape of business process outsourcing, our client, a distinguished US-based support provider for healthcare specializing in RCM, Medical Transcription, and Prior Authorization, embarked on a transformative journey. With a team of over 120 dedicated professionals, the client aimed to streamline their operations, overcome manual inefficiencies, and enhance compliance in the face of evolving regulations. This case study delves into the intricacies of our collaboration and the groundbreaking solutions we provided.

Project Scope:

The client aimed to develop a comprehensive multi-tenant web-based application to streamline gathering and managing critical patient information across partnered hospitals. The primary focus was expediting the authorization process by efficiently handling patient details, Electronic Health Records (EHRs), procedure dates, and relevant codes.

Workflow:

The proposed system involved hospitals inputting patient details into a centralized database. The backend team, equipped with distinct roles, would then collaborate with insurance companies to determine the necessity of prior authorization. A well-defined pipeline ensured the seamless progression of cases, and a centralized dashboard provided a holistic view of all ongoing processes.



Challenges in the Existing Process:

The client faced challenges at the project's inception due to a manual-heavy process. Initially, requests were limited, and information from hospitals arrived via mail or fax. Attempts to leverage existing software solutions were thwarted by their inadequacy in addressing the unique nuances of the healthcare industry. Moreover, concerns about Personally Identifiable Information (PII) and Protected Health Information (PHI) compliance posed risks.

Our Proposed Solution:

Tailored Multi-Role Application :

Our team has engineered a multi-role application to address the unique challenges faced by our client in healthcare BPO. The application ensures separate access for hospitals to create and monitor cases, updating information as required. To comply with stringent regulations, all information, including Electronic Health Records (EHR) and communications exchanged from the server, is encrypted with AES and transported using TLS.

-> Enhanced Data Security Measures :

To bolster data security, we employ AES 256 encryption for all data and files, converting them into .dat files. Only the assigned processor in the back office can access these encrypted files through secure authentication using JWT tokens, ensuring a robust layer of protection for sensitive information.



-> Auto-Assign Feature for Efficient Case Distribution:

Addressing the challenge of high volume, we have developed an auto-assign feature that optimizes the distribution of cases to specific teams. This feature utilizes round-robin logic based on multiple ranking algorithms, ensuring a fair and efficient workload allocation. A default validation process also assesses the need for prior authorization, leveraging historical data indexed with different identifiers.

-> Streamlined Prior Authorization Sub-Workflows:

Cases requiring prior authorization are seamlessly processed through sub-workflows, enhancing the overall efficiency of the authorization process. The application streamlines communication and collaboration between hospitals and insurance companies, ensuring a smooth progression of cases.

-> Role-Based Dashboards with Authentication and Authorization:

The multi-role application provides varied dashboards and screens tailored to the responsibilities of different stakeholders. Proper authentication and authorization mechanisms are in place to ensure that users can access only the information relevant to their roles. All user activities are logged with timestamps and object types, adhering to HIPAA compliance standards. These logs will be preserved for five years, contributing to a comprehensive audit trail.





Key Outcomes of Our Solution:

1) Full HIPAA Compliance:

Our application achieved full compliance with the Health Insurance Portability and Accountability Act (HIPAA), ensuring the secure handling of sensitive healthcare information.

2) Proprietary Self-Hosted Application:

The decision to opt for a self-hosted application resulted in substantial savings, eliminating monthly license costs. The organization gained the flexibility to scale users and hospitals without constraints.

3) 100% Customizable Software:

The tailored software allowed the client to customize features according to their evolving business requirements, providing a unique solution aligned with their needs.

4) Operational Efficiency and Cost Savings:

After three months of implementation, data correlations indicated a significant time-saving of 300 hours weekly in data handling and reconciliations. This translated to a weekly cost saving of \$6000, contributing to the organization's overall efficiency.

5) Real-time Updates and Enhanced Customer Satisfaction:

The new system ensured near real-time updates for hospitals and the client's back-office team, increasing customer satisfaction. The ability to track case statuses in real-time improved communication and responsiveness.



6) Increased Customer Onboarding and Trust:

By showcasing the advanced features of the custom software, the client experienced an uptick in customer onboarding. The increased efficiency and security measures instilled higher trust among existing and potential customers.

Conclusion:

In conclusion, our tailored multi-tenant application successfully addressed the client's challenges, providing an efficient and secure platform for managing healthcare authorization processes. The combination of role-based dashboards, strict data encryption, and significant cost savings positions this solution as a benchmark in the healthcare BPO industry. As the organization continues to enjoy increased efficiency, cost savings, and customer satisfaction, the custom software stands as a testament to the success of collaborative innovation in overcoming complex business challenges.