

Success Story

Digitising Claim Verification Process for Authentic4D: An American Health-tech Company

Customer

Authentic4D

Country

United States

Industry

Healthcare

About The Client



Authentic4D is a visual analytics platform for injury claim assessment. It helps insurance carriers, plaintiffs, and self-insured corporations to reduce claim cycle time and expenses while achieving faster, more objective, and economically fair outcomes. The FDA-approved solution provides expert medical review in 48 hours and undeniable video evidence in 72 hours.

Technology Stack

 Laravel	 React	 php
 PostgreSQL	 aws	 HTML

Business Situation

Authentic4D has been managing complex and crucial claims verification processes in the health insurance domain for a decade. However, they were processing these claims manually which involved physical management and verification of the insurance claimants' radiology records by board-certified neuro and musculoskeletal radiologists.

As the company planned to scale, it primarily faced two challenges: transfer of records as hard copies to radiologists and storage of records. To overcome the shortcomings of manual processes, Authentic4D decided to digitize the claim management cycle.

For automating the claim verification process, Authentic4D chose Unthinkable for its experience in building healthcare apps with compliance and integrating them with modern technologies for the best outcome. The planned web application was to have the following capabilities:

- ✔ Develop an end-to-end solution for claims evaluation, onboarding of healthcare setups and transfer of claims records.
- ✔ Create a seamless work management tool for assigning claims evaluation records to radiologists based on their availability.
- ✔ Implement tenfold capacity for scaling higher volumes of records to boost the claims processing productivity.
- ✔ Provide flexibility in setting rules as per each onboarded organization's requirements and work parameters.
- ✔ Provide transparency in the entire process and find ways to reduce the time taken in the claims lifecycle.

In the first place, team Unthinkable performed a requirement analysis to shortlist data & analytics tools to generate insights and reports. On understanding the requirements such as the number of users, support to data sources, data visualization, cost, etc., Power BI by Microsoft was chosen to be the insights generator tool. Using BI services, the apparel wear brand wanted to analyze customer acquisition and retention trends for its marketing and sales department. Based on the requirements, the following insights were generated by team Unthinkable.

The Solution

The Unthinkable team had prior in-depth understanding of the insurance claims lifecycle and knew that Authentic4D needed ways to increase the efficiency of claims verification. The team analyzed the project requirements, and created an end-to-end development plan that would facilitate faster claims verification in a digitized workflow. The web application was created with PHP using the Laravel framework. The front-end development involved building user interfaces with React and dynamic elements enabled through DHTML.

The entire system, built on an underlying microservices architecture, consists of provisions for an admin from an onboarded healthcare organization or radiologist group to create user roles such as hospital staff, facility staff, concierge, radiologists etc. Each user role has certain access privileges and completely distinct user-friendly views of the web application. Radiologists who are board-certified in the same state as an insurance claimant can verify the veracity of the claimants' radiology reports. These reports consisting of diagnostic images can be viewed and managed on the application. Following a positive verification, a billings cycle report is generated that can be sent to the insurance provider for reimbursement. The major advantages of the web-application are the following:

Verification Of Diagnostic Images

Once the hospital staff creates an insurance claimant's case with all their details, their diagnostic images such as MRIs, CT scans, etc. are uploaded onto the system. Third-party HTML5 DICOM Viewers have been integrated with the system, making the diagnoses, viewing, archiving, and transmitting of medical images seamless and compliant with HIPAA file security standards. The viewer allows radiologists to search for required diagnostic images quickly, while the images are protected from any form of misuse or malpractices.

Reduced Claim Cycle Time

During the manual processing phase, Authentic4D faced the issue of aligning claims cases to the availability of radiologists. A radiologist who was assigned a case may not have verified it right away as they may have been busy with other tasks. To resolve this, radiologists can now turn their jobs queue on or off. This allows the Admin to assign cases to radiologists who could take up the verification task on priority, thereby reducing the claims settlement time.

Leveraging Cloud Storage

Each thin-slice MRI image of an insurance claimant could consist of hundreds of megabytes of data. Due to the strict retention policies under HIPAA storage on physical devices could be costly.

The Amazon S3 data-storage services employed by us provide a pay-as-you-go data storage and pricing model. Storage can easily be expanded or reduced as per the customer's changing requirements. The AWS cloud is also used for assigning individual security credentials and multi-factor authentication to control which operations each user can perform.

Compliance, Transparency, And Security

The Unthinkable team has made sure that Authentic4D's web application is HIPAA compliant, maintaining the confidentiality, integrity, and availability of electronic Protected Health Information (ePHI). There is end-to-end encryption to protect the patients' diagnostic reports during transmission. PostgreSQL manager with a built-in data encryption feature is used for the encryption of backups, the claims databases as well as logs. Additionally, there is proper cognizance of the healthcare institutions' policies and patients' consent before the use of their data on the web application so that proper transparency is maintained.



The Impact

The new Authentic4D web application has given insurers the ability to improve claims life cycles and reduce claim denials, thanks to its seamless functionality and workflow management for radiologists. This application has helped process over 10000 claims across all 50 states in the US and the results have been published in several peer-reviewed legal and medical journals. The Unthinkable team's journey to finding the right solution has been appreciated by Authentic4D for the attention to detail, strict adherence to timelines, and creative problem-solving that the team brought to the table.

Is there a digital platform you want to build or take to the next level?

Setup a personalized consultation with our technology expert.

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