



LARGE REVENUE CYCLE MANAGEMENT (RCM) PROVIDER ACHIEVES 4X EFFICIENCY IN PATIENT FORMS EXTRACTION AUTOMATION

30 MIN TO 7 MIN



AI Platform to

CAPTURE | **SEARCH** | **ANALYSE** | **AUTOMATE**

Documents & Web Data

ABOUT CLIENT

- ▶ A leading Revenue Cycle Management (RCM) service provider based out of the United States. The client works with healthcare providers to manage their back-office billing & claims function and handles end-to-end RCM for them.

BUSINESS SCENARIO

- ▶ The client handles over 100,000 medical documents a month manually with a large team (~400 FTEs).
- ▶ The medical reports are from hundreds of providers to whom the client provides RCM services – hence, are in varied formats – handwritten and/or printed documents & scanned images.
- ▶ RCM is a critical, administratively heavy process that includes patient registration, insurance billing, verification with payors, coding the claim, payment and collection.
- ▶ Errors and delays due to manual entry or checks across high volumes of documents leads to poor patient satisfaction; and delays in collections for the healthcare providers.

Manually extracting data and processing a claim within 30 min of receiving it – as per process - was challenging and liable to errors. ~100% accuracy is required in healthcare data; HIPPA Compliance also needs to be maintained.

BUSINESS CHALLENGES

01

Tedious & High Administrative Effort

Redundant, repetitive tasks – checking claims status, denial appeals, etc. that involve checking records, forms & data across systems and communicating with stakeholders – patients, medical staff, payors, billing & accounting units.

02

Manage Volume Spikes & Variations

Large volumes of medical records, insurance claim forms from hundreds of providers received in spurts; multiple formats of documents – this poses challenges in accuracy and turnaround times.

03

Potential Revenue Loss and Delays

Manual errors causing reduced or delayed reimbursement from payors & patients due to incorrect diagnose code, imprecise eligibility estimation etc., lead to high accounts receivable for the healthcare provider.

04

Poor Patient Service and Experience

Inability to correctly predict out-of-pocket costs vs. eligibility in the payor health plan, wrongly denied claims etc. are some pitfalls of disparate systems or a primarily manual process – leading to patient dissatisfaction (over and above the stress of having to deal with a health issue in the first place).



SOLUTION CONSIDERATIONS

- ⦿ Data from Electronic/Patient Health Records (EHRs/PHRs) often need to be duplicated in claims forms – automation of filling in missing data would save time.
- ⦿ The solution needed to scale to handle a variety of forms in multiple formats – and also identify the context based on sections of the document - medical data, coverage info, supporting data etc. to enable accurate extraction.
- ⦿ Given the sensitivity of healthcare data in handwritten forms and the need for regulatory compliance (HIPPA), solutions needed to be in a secure environment.

BOTMINDS SOLUTION

- ✓ A dedicated, secure, private cloud deployment of the Botminds AI platform to keep all medical and claims documents in the client's environment.
- ✓ Generic pre-trained AI models of the platform was able to handle the medical documents extraction and classification with efficiency of 60%.
- ✓ The Subject Matter Experts (SMEs) were trained in less than a week to use the Botminds AI platform to further train the models leading to higher accuracy - overall onboarding was accelerated, spanning 4 weeks.
- ✓ The automated end-to-end workflow from ingestion of medical records & forms to sending the extracted data to downstream systems (via APIs & webhooks available out of the box) was setup.



SOLUTION HIGHLIGHTS

- ◉ Template-free, AI-powered extraction and automated validation - ensured high (~100%) accuracy – and minimal human intervention.
- ◉ Powerful cognitive search for patient's details or a diagnose code etc. across 10000+ documents in an instant.
- ◉ In-built OCR and encryption capability ensured even password-protected medical record PDFs could be read within the platform.
- ◉ Analytics and Insights dashboards on the productivity of the team, number of claims handled, approved/denied etc. are tracked and available in the platform.
- ◉ One-stop solution for all document-handling processes of the PHRs & claims forms – encryption, validation, cross-checking information across documents, search, insights and workflow automation.

BUSINESS IMPACT

Increased & Timely Revenue Collection

Lesser delays and errors leading to fewer denied claims and timely reimbursement by payors to the healthcare institutions. Better estimation of costs not covered by health plan enabled timely collection from patients. The same team can handle 3X (~300,000 documents) the volume of documents.



Lower Cost to Collect

Time to pre-process a claim drastically reduced from 30 min to 5-7 min due to automated extraction, classification and high accuracy of output predictions; resulting in lesser errors and number of transactions & follow-ups between entities involved.



Improved Accuracy

Our Intelligent Document Processing (IDP) platform extracts and validates data points by leveraging an AI-first approach - requiring less manual corrections, and human-in-the-loop accuracy of over 95%.



High Patient Satisfaction

Few denials due to errors in claims data, faster claims processing, ability to track claim status better – resulting in better quality of service to patients.



Scalable Platform

Pre-trained models are extendible to all the form types the client processes across providers with minimal additional training.

VALUE DELIVERED

95%

Accuracy

4x

Process Efficiency

3x

Increase in
Volume Handled

75%

Reduced Time

90%

Onboarding Efficiency



AI-First
Approach



No-Code
Platform



Vertically
Integrated



End-to-End
Automation

AI Platform to

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For more information, visit us www.botminds.ai or email us at hello@botminds.ai