CitiusTech

Shaping Healthcare Possibilities

Award-winning AI solution by CitiusTech transforms claims negotiation for US's largest PPO network Provider

Our client, a leader in the US PPO (Preferred Provider Organization) offers cost management solutions to Payers and data analytics services to identify patterns, trends in claims data, and opportunities for savings. They teamed up with CitiusTech, a long-time trusted partner known for their advanced AI/ML expertise, to build sophisticated models and up their game. Key to their strategy, the ML models generated a 'claim priority score' assisting negotiators in selecting claims with maximum success probability and highest savings. Leveraging proprietary data and algorithms from over 700 Payers and 40 years of claims history, these models offer a robust analytical foundation.

CitiusTech also helped the client navigate the evolving federal regulations, especially the No Surprise Act (NSA). This adaptability not only ensured compliance but also opened avenues for added value. The models provided insights into the Payer's probability of winning an Independent Dispute Resolution (IDR) and the maximum savings possible from disputes. The innovative, cutting-edge NSA solution was embraced by over 100 customers handling about 98,000 IDR requests, with a 62% success rate, in just one year.

CASE STUDY

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Difficulty in streamlining claim prioritization, adapting to AI/ML and changing regulations

The client used a set of predefined rules to pick out claims and decide on the best rates to negotiate with healthcare Providers. However, the claims weren't organized in a way that helped them understand which ones should be dealt with first. This method was inefficient, and the negotiators were facing a tough time establishing priority.

Though they already started to use AI and ML technologies, it was still in the early stages. They found it challenging to expand the processes for model development, deployment, and maintenance.

Healthcare trends, especially with COVID-19, were changing rapidly. A significant regulatory change came with the No Surprise Act (NSA). This Act introduced a new way to resolve disputes between Payers and Healthcare Providers about Qualified Payment Amounts (QPAs) — essentially, the fair amount to be paid for medical services. This process was time-consuming and expensive, adding more strain to the client's operations.

Advanced sustainable ML models to spot winning claims in the negotiators' list

CitiusTech created Machine Learning (ML) models that calculate a 'Claim Priority Score' (CPS) for each claim. This score helps negotiators to prioritize claims on their worklist. The team focused on five key areas in model development and maintenance:

- **Model Validation:** Automatic retraining of models necessitates automatic model validation. This involves comparing the performance of a new model with the current one and deploying the new model only if it shows better performance.

- **Model Deployment:** The models were deployed into the production environment, enabling them to be actively used for making predictions.

- **Model Monitoring:** Model performance is monitored by collecting data on the predictions made by the model and comparing these predictions to actual outcomes.

- **Defect Triaging and Resolution:** Defect identification and triaging to assess the severity of the defect and determine the best course of action.

- **Continuous Improvement:** In cases where there is a continuous decline in model performance as indicated by key performance indicators (KPIs), the models undergo retraining or reengineering to improve their accuracy and efficiency.

Model Management and Monitoring Activities: CitiusTech worked with the client's data strategy team to set up a sustainable system using the right processes, tools, and resources - jobs to handle defect triaging and resolution by implementing a system of automated email alerts and notifications for model degradation or data drift detection. This included a centralized dashboard to monitor the performance, daily/weekly reports, and incident management using ServiceNow.

The team also developed specialized models aligned to the latest healthcare trends and regulations. For instance, one model, designed for COVID claims, helps sort claims by value, so negotiators focus on the most important ones first. Another model, for the No Surprise Act, predicts how likely a dispute will favor the Payer and estimates the savings from resolving these disputes. CitiusTech focused on not just addressing the immediate needs but to equip the client with an entire system that can evolve with the future challenges and regulatory changes in an auto-mode.

BENEFITS DELIVERED

Cost-savings, lower manual effort, and stellar success rates

The ML models optimized the negotiation process, intelligently ranking claims by priority scores to guide negotiators. CitiusTech implemented practices that integrated the development and maintenance of ML Ops seamlessly. Additionally, the IDR models effectively raised the success rate for Payers winning IDR decisions by strategically selecting claims with a high probability for success and savings.

40% Cost Reduction with the implementation of ML models

60% Reduction in Manual Efforts through automation of the model monitoring and managing processes

10% Improvement in Model Accuracy using model retraining activities

~60% Faster Deployment due to a well-defined deployment and monitoring system.

More than 95% Success Rate of claims negotiated based on the CPS

With these advancements, the company not only enhanced its internal operations but also positioned itself as a leader in innovative healthcare cost management solutions.

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CitiusTech is a global IT services, consulting, and business solutions enterprise 100% focused on the healthcare and life sciences industry. We enable 140+ enterprises to build a human-first ecosystem that is efficient, effective, and equitable with deep domain expertise and next-gen technology.

With over 8,500 healthcare technology professionals worldwide, CitiusTech powers healthcare digital innovation, business transformation and industry-wide convergence through next-generation technologies, solutions, and products.

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