

CASE STUDY

Enhancing Prior Authorization Workflows through Guideline Adherence Annotations

Streamlining Clinical Workflows with Precision and Compliance.



COMPANY

A R&D arm of a leading healthcare & insurance company



INDUSTRY

Healthcare



USE CASE

Streamlined Prior Authorization through Enhanced Data Annotation



OUR OFFERING

Clinical Data Annotation

KEY STATS

Volume

6,000 Labeled Records

Tools Utilized

LabelBox for PDF medical record annotations & InterQual for clinical guidelines questionnaires

Project Duration

6 months

INTRODUCTION

In the complex landscape of healthcare services, the prior authorization process is a critical step in healthcare service delivery, involving providers and payers to ensure the coverage and adherence to clinical guidelines of proposed treatments. This use case delves into the Shaip's role in refining this gateway through meticulous data annotation, thereby enhancing the efficiency and accuracy of prior authorization workflows for the client.



DETAILED DESCRIPTION OF SERVICES:

- **Case Annotation Handling:** Each prior authorization request to be annotated for each CPT code it covers.
- **Guideline Selection:** The Customer will specify the InterQual guideline version for each case.
- **Services & Work Product:** Shaip will refine Annotation Guidelines and prepare Labeled Records

CHALLENGES

The Client frequently encounter bottlenecks in the prior authorization process due to the intricate necessity of demonstrating adherence to evolving clinical guidelines. The challenge was to streamline this process, ensuring compliance with these guidelines while maintaining the integrity and confidentiality of patient data. Few of the challenges that we needed to overcome were:



Data Complexity and Volume

Handling 6,000 complex medical cases within a strict timeframe is a significant challenge, especially considering the nature of medical records & precision required for annotations.



Maintaining Accuracy

Ensuring high accuracy in annotations when dealing with medical terminologies and clinical guidelines requires specialized knowledge



Adherence to Clinical Guidelines

Staying current with the latest InterQual clinical guidelines and applying them to each case requires constant vigilance and adaptability, as these guidelines can frequently be updated.



Quality Control

Implementing a robust quality assurance process that can handle the volume of annotations while maintaining a high standard of accuracy is a complex task.



Training and Expertise

Recruiting and training annotators with the necessary medical background and ensuring they understand the nuances of clinical guideline adherence.



Regulatory Compliance

Ensuring all annotated data complies with healthcare regulations such as HIPAA, which requires strict data privacy and security measures.



Feedback Implementation

Managing and incorporating feedback from the customer within the workflow without disrupting the project timeline.



Arbitration Efficiency

Effectively resolving discrepancies in annotations between different annotators to maintain consistency and accuracy across all records.

SOLUTION

Shaip was engaged to annotate over 6,000 prior authorization cases, linking medical documentation to InterQual clinical questionnaires. This involved a detailed annotation process where evidence from medical records was meticulously correlated with questionnaire responses, ensuring compliance with specified clinical guidelines. Some of the challenges we successfully overcome are:

- » **Data Complexity and Volume:** Despite the complexity and volume of 6,000 medical cases, the project was managed within the strict timeframe.
- » **Maintaining Accuracy:** High accuracy in annotations was maintained throughout the project. This was achieved by employing annotators with specialized knowledge in medical terminologies and clinical guidelines, supported by continuous training and development programs.
- » **Adherence to Clinical Guidelines:** The project team successfully stayed current with the latest InterQual clinical guidelines. Regular updates and training sessions were conducted to ensure annotators could accurately apply these evolving guidelines to each case.
- » **Quality Control:** Implemented a robust quality assurance process, capable of managing a high volume of annotations while ensuring accuracy; however, the incorporation of a dual blind vote annotation system along with an arbitration mechanism proved crucial for maintaining quality.
- » **Training and Expertise:** Annotators with the necessary medical background were recruited and received comprehensive training. This ensured a deep understanding of the nuances of clinical guideline adherence and the ability to apply this knowledge effectively.
- » **Regulatory Compliance:** All annotated data was compliant with healthcare regulations such as HIPAA. This was ensured through stringent data handling protocols, regular compliance audits, and secure data management systems.
- » **Feedback Implementation:** Customer feedback was seamlessly integrated into the workflow without disrupting the project timeline. A structured feedback mechanism allowed for quick assimilation and implementation of suggestions and improvements.
- » **Arbitration Efficiency:** To effectively resolve annotation discrepancies between different annotators & maintain consistency and accuracy, a workflow was utilized where each document was annotated by two independent annotators. This was followed by an arbitrator who reviewed a merged copy of these annotations, making corrections & providing feedback where necessary.

In conclusion, through strategic planning, skilled resource allocation, and the adoption of robust processes, the project overcame significant challenges to meet its objectives successfully.

THE OUTCOME

The Shaip's Clinical Annotation services led to a more streamlined prior authorization process for the customer, characterized by improved accuracy in adherence to clinical guidelines and a more efficient workflow, ultimately contributing to better patient care outcomes and operational efficiency for healthcare providers.

CUSTOMER TESTIMONIAL



Partnering with Shaip has been transformative for our prior authorization process. Tasked with annotating 6,000 cases in six months, Shaip delivered with exceptional accuracy and diligence, adhering to stringent InterQual guidelines. Their team's deep medical knowledge and consistent communication through bi-weekly updates were pivotal in our project's success. Shaip's contributions have not only enhanced our workflow efficiency but have also laid the groundwork for future healthcare innovation.



Shaip provides high-quality data across multiple data types (text, audio, image & video) to companies looking to build unbiased and high quality AI/ML models. Shaip licenses, collects and annotates data for Healthcare, Conversational AI, Computer Vision and Generative AI/LLM use cases. Going beyond data, Shaip offers a complete Responsible LLM Toolkit to align, evaluate, and enhance large language models using reinforcement learning from human feedback (RLHF). Headquartered in Kentucky with offices in Silicon Valley and India, our global team blends data science expertise with deep industry knowledge. Visit us at www.shaip.com.