# Medical Records Analysis for Insurance Claims and Malpractice Lawsuits

## **Overview**

A comprehensive system that leverages machine learning models to analyze medical records and provide necessary insights to assess insurance claims and malpractice lawsuits. The system includes a dashboard that displays all the relevant information and predictions. The system architecture is built using AWS, which takes input from flat files stored in S3 and runs Lambda functions to finally display the analysis on QuickSight.

### **Problem Statement**

Assessing insurance claims and malpractice lawsuits can be a complex and time-consuming process. The traditional methods of assessing claims rely on manual reviews, which are prone to errors and can be subjective. The need for a more efficient and objective way of assessing claims led to the development of the system.

#### **CUSTOMER**

Country: USA Industry: Private Sector Customer Size: 500 - 1000 Publish Date: 24/02/2023 The system was developed to address the challenges faced in assessing insurance claims and malpractice lawsuits. The system takes medical records as input and leverages machine learning models to provide insights into medical, financial, and legal aspects of the claims.

The system architecture is built using AWS services such as S3, Lambda, and QuickSight. The input data is stored in flat files in S3, and the Lambda functions process the data using machine learning models to provide insights into various aspects of the claims. The QuickSight dashboard displays all the relevant information and predictions, making it easy for the users to assess the claims.

The machine learning models used in the system include regression models and deep learning models such as LSTMs. The models are trained using historical data to predict the cost of medical insurance claims accurately. The system also takes into account various factors such as the patient's medical history, the severity of the illness, and the cost of treatment to provide accurate predictions.

Technologies	Domain
AWS Lambda, AWS DynamoDB, Python, React.js, YOLOv5, AWS Textract, AWS Comprehend Medical, AWS S3, PyTorch, Beautiful Soup, OpenCV, Pandas	Computer Vision, Visualization, Analytics, ML models, Classification, Search engine

## Results

The system has been successful in providing accurate insights into medical, financial, and legal aspects of insurance claims and malpractice lawsuits. The machine learning models used in the system have been trained using historical data, which has led to accurate predictions of the cost of medical insurance claims.

The use of AWS services has made the system efficient and scalable. The system can handle large volumes of data and process it quickly, providing users with real-time insights into the claims. The QuickSight dashboard displays all the relevant information in a clear and concise manner, making it easy for the users to assess the claims.

The system has demonstrated how machine learning models can be used to analyze medical records and provide insights into various aspects of and insurance claims malpractice lawsuits. The system's architecture, built using AWS services, has made it efficient and scalable, making it a valuable tool for insurance companies and healthcare providers.



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