DrKumo telehealth eliminates chatbot delays using Amazon Lex and CloudHesive

Company Summary

DrKumo provides real-time remote patient monitoring and telehealth, providing accessibility and improved quality of life for chronic care patients. DrKumo's technology enables effortless home health monitoring. Its award-winning digital health solutions feature multicast data live-streaming to empower patients to manage their conditions at home, prevent cross-infection, address hospital overcapacity issues and maintain hospital readiness, reduce costs in healthcare, and optimize patients' health.

DrKumo supports home health care programs, including Remote Patient Monitoring, by digitizing flow of patient information such as blood pressure, heart rate, oxygenation, temperature, and more.

INDUSTRY

→ Healthcare

SEGMENT

→ Private

REGION

→ NAMER

THE CHALLENGE

Seeking efficient communication between Amazon Chime and Amazon Polly

To enable telehealth and patient monitoring, DrKumo was using Amazon Chime for video conferencing and Amazon Polly for text to speech. However, it was having interoperability issues between the two services. In particular, when used for Interactive Voice Response (IVR), Amazon Polly's response time was delayed by as much as 15 seconds, which caused confusion and frustration among customers. Additionally, reports showed a high percentage of hangups, likely due to callers being unable to reach the departments needed to get resolutions to their issues.

The company needed fast and seamless communications between doctors, nurses, and patients, so it turned to CloudHesive.

THE SOLUTION

Rebuilding communication architecture using Amazon Lex and SIP

To help solve its connectivity issues, DrKumo turned to CloudHesive. Using AWS best practices, CloudHesive rebuilt the DrKumo architecture, using Amazon Lex, a fully managed AI service for building conversational interfaces such as chatbots and virtual assistants into any application.

To ensure speedy and accurate IVR routing, CloudHesive deployed Amazon Chime SDK Voice Connector and a Session Internet Protocol (SIP) Media App and connected both to Amazon Chime video conferencing. It built and deployed a chatbot using Amazon Lex with Amazon Transcribe voice-to-text service and Amazon Polly text-to-voice service, using AWS Lambda functions to ensure seamless communications.

THE BENEFITS

Eliminating communication delays with Amazon Lex

The new infrastructure configuration eliminated the 10-15-second IVR delays; the Amazon Lex IVR responded immediately to caller inputs. By replacing Amazon Polly with Amazon Lex to determine caller intent, calls are now properly routed immediately, and customer hangups have decreased.

Services that Drive Success

DEVOPS

→ Developed and deployed a SIP media app to pass values from a SIP rule to a target AWS Lambda function

→ Deployment of Amazon Lex and Amazon Transcribe

→ Deployment of SIP media app, and Amazon Chime SDK Voice Connector

→ Built deployment scripts for environment deployment

Customer benefit summary

→ IVR response time decreased from 10-15 seconds to near zero

→ Fewer caller hangups

AWS Technologies used

→ Amazon Chime

→ Amazon Chime SDK Voice Connector

→ SIP Media App

→ AWS Lambda

→ Amazon Transcribe

→ Amazon Lex

→ Amazon Polly