



Shaping Healthcare Possibilities

## Success Story

# Transforming hearing care with Machine Learning

[www.citiustech.com](http://www.citiustech.com)

© 2024 CitiusTech | Private & Confidential

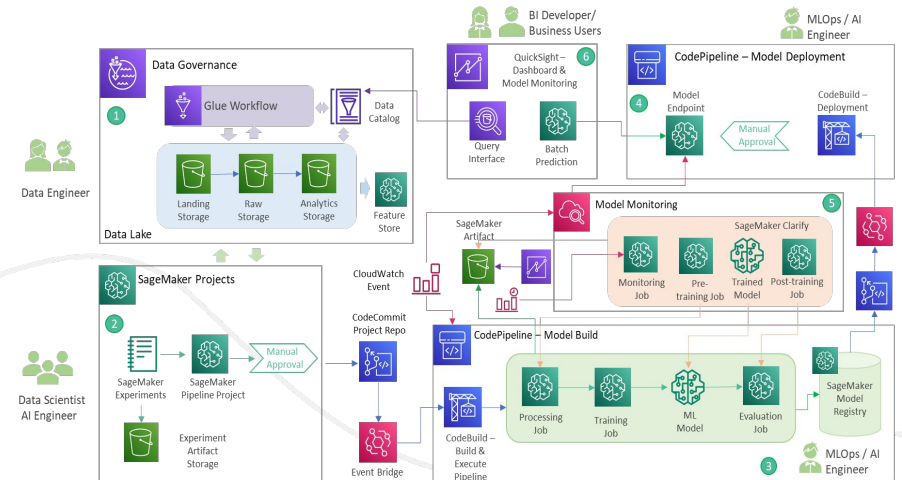




## The Challenge

- A leading Hearing benefit provider wanted to build an analytical platform to demonstrate the risk propensity of sensorineural hearing loss(SNHL) amongst member cohort
- The client want to analyze the utilization risk in context of hearing loss members Vs members without hearing loss.
- The client wanted the ability to be able to build member cohorts for executing hearing loss related care management

## Solution Highlight



## The Solution

### Predictive modeling

- Build a ML model for SNHL Hearing Loss Risk Score predictions and risk categorization for members above the age of 40 yrs. and without hearing loss
- Identified the factors contributing to hearing loss

### ML Ops Pipeline

- Leveraged AWS Sagemaker projects and pipelines to create E2E CI/CD automation for the developed models with lineage tracking and auditing

### Analytics Dashboard with model monitoring

- Dashboard to showcase distribution of members with and without hearing loss with different recognized aspects
- Model metrics & infrastructure metrics using AWS QuickSight

### Claim dollar utilization

- Computed the all claims PMPM utilization and hearing loss associated co-morbid condition (of fall, depression and dementia) and chronic diseases of Diabetes and Hypertension
- Computed Risk Adjustment Factor (RAF) to demonstrate recent health risk of members and co-morbid severity score in members with SNHL



## The Outcome

- ML model to compute hearing loss risk scores to identify members for audiology screening services and hearing aids
- Holistic risk evaluation of members health in context of hearing loss
- Facilitate relevant and superior care intervention for member based on risk score and utilization
- Facilitate increased partnerships with payer for hearing health benefit administration



Shaping Healthcare Possibilities

# Thank You

**CitiusTech - Shaping Healthcare Possibilities.**

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

[www.citiustech.com](http://www.citiustech.com)

© 2024 CitiusTech | Private & Confidential

