

Accelerating app development in healthcare industry



TECH STACK

Java | Spring | Hibernate | Angular | Bootstrap

Background

Our client is a health information company and one of the latest genetic testing labs in North America. They are a spin off from Mt Sinai Hospitals, and have a team of research scientists, doctors, bioinformaticians and lab specialists who work on genome based diagnostics. The client builds predictive models for complex diseases through the analysis of genomic and patient health data.

Problem description

As software slowly moved from enabling client's lab operations to impacting lab research outcomes, it formed the basis of their labs competitive difference. Additionally, the client needed unhindered control/ access to the research data they own.

Buying a packaged application (COTS) wasn't the best way forward since vendor customization for packaged applications are expensive and they are commercially available even for client's competitors to use (no competitive difference). They needed a custom application without the development delays and high costs that come alongside.

WaveMaker value-adds

Modernizing Lab Information Management software

WaveMaker helped modernize the legacy FoxPro based Lab Information Management software (LIS) called Medgis to a modern Java/Angular application. Low code methodology enabled the client to choose modernization over buying existing licensed software which would have restricted access to their data

As the client grows to be a software company, the importance of data and its accessibility was paramount. This data will be used for analysis and other intelligent operations which will create greater value for the client.

Medgis is the backbone which contains all the lab, patient and integration data. With the modernization efforts, LIS transformed to a web-based software equipped with Google API integrations, cloud based development, data encryption, interface engine integration, HL7/FHIR integration and HIPPA compliance. The modernized system had to handle the migration of all the old data (millions of patients and tests) with zero loss and duplication, improved data quality etc.. where WaveMaker services provided the expertise.

Enabling data lake creation

The client needed a data lake which aggregates patients' genetic and EHR data. Using this they can run machine learning models that correlate patient demographics, health history, and genomic variance.

To achieve this, WaveMaker helped the client build two separate platforms

Central Get Data Platform, which is responsible for integrating external EHR systems, building a database of patient health records and exposing them as a unified API to query and access data.

Oncology Suite – A suite of tools and a dashboard application which integrates different bioinformatics pipelines related to DNA testing, sequencing, and variance computation.

WaveMaker was used to automate almost every step in the life cycle of the DNA test. This reduced the turnaround time for a DNA test from **three days to a couple of hours**.

By speeding application development, automating ordered tests and simplifying integration with external systems, WaveMaker helped the client develop applications quickly and economically.

This accelerated their time-to-market - a necessary competitive edge in the world of genetic research where extent of technology leverage makes the difference between invention and discovery.

About WaveMaker

WaveMaker is the most open,extensible and flexible Low-code Platform that complements your enterprise application delivery while keeping in mind the requirements of Software Developers, Citizen Developers/Business Users, IT Architects and CIOs.

Start a 30-day, free trial today at www.wavemaker.com/get-started