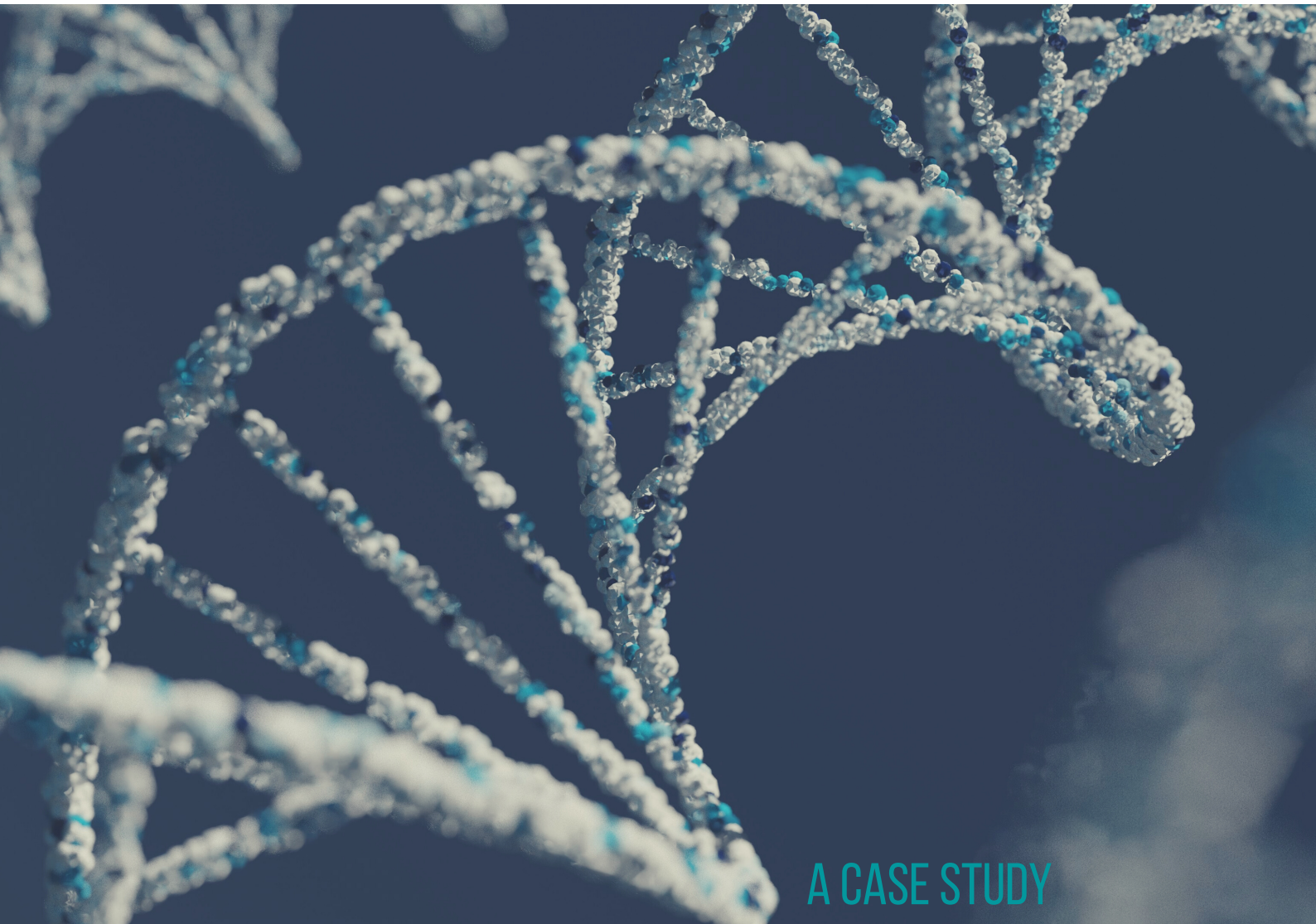


# INHERITED

*HOW ONE COMPANY'S SOFTWARE ENABLES DOCTORS TO  
BETTER TREAT THEIR PATIENTS*



A CASE STUDY



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# THE IDEA

## *HOW A PERSON'S FAMILY HISTORY MATTERS TO THEIR PRESENT HEALTH*

If you've ever scheduled a visit to a doctor's office, you have probably heard, "The appointment is at three, but get here twenty minutes early to fill out the paperwork."

You dutifully arrive early and begin to fill out the forms, but there's always the chance you might forget that your great-aunt had breast cancer before you were born or your cousin has Crohn's disease.

Some might shrug their shoulders and say, "It's good enough. Does a family health history really matter that much?"

The truth?

Yes. It matters a lot.

On the other side of the paperwork are doctors and other medical personnel who need to keep the information in the paperwork available, organized, and up-to-date. Missing information or lost paperwork could cause misdiagnosis or worse.

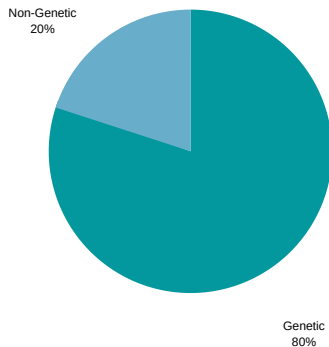
That's why one company decided to create software to enable family health history to become an integral part of treatment, eliminate paperwork and stress, and organize information to better treat patients.



# GENETICS

## THE ROLE OF GENETICS IN DISEASE

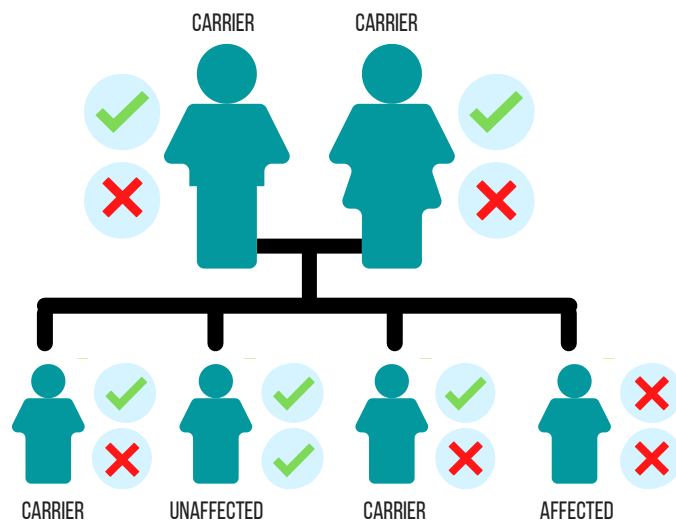
### RARE DISORDERS



Although not all rare disorders are genetic, around 80% of them are. Although a genetic mutation doesn't always guarantee that one will develop the disease, it does raise the risk.

Knowing one's family history and genetic risks can help one be aware of both their own health risks and those of their children. Recessive and dominant genes will have different inheritance patterns.

### AUTOSOMAL RECESSIVE INHERITANCE



### PEOPLE AFFECTED BY A RARE GENETIC DISORDER



Around one in seventeen to one in twenty people will suffer from a rare disease in their lifetime

# THE CLIENT

*HOW ONE COMPANY REALIZED SOFTWARE COULD BE THE KEY TO BETTER KNOWLEDGE AND BETTER TREATMENT*



The client wanted to create a way for patients to receive better treatment. With genetics playing such a major role in disease, they had an idea of how to do that.

By creating a way for doctors and other medical personnel to have extensive knowledge of a patient's genetic pedigree, they would empower those treating patients to identify risks and prescribe better treatments.

They determined to do this by providing clinics with a myriad of tools to:

- Import existing data into the software
- Collect family history online
- Run risks assessments for a variety of diseases.
- Order genetic testing
- Track genetic testing
- Manage data
- Enable custom reports
- Create letters
- Generate custom queries, reports, and spreadsheets
- Create genetic pedigrees
- Integrate with other medical services
- Identify high-risk patients for specialty clinic referrals
- Eliminate the constant need for data re-entry
- Create a secure and HIPPA-compliant environment
- Empower doctors with more information

# THE PROBLEM

*HOW A COMPANY REALIZED THEY NEEDED OUTSIDE DEVELOPMENT HELP TO KEEP PACE WITH THEIR NEEDS*

## SECURITY

As a company that dealt with healthcare, the security of the software was paramount. The patient care industry demanded complete privacy for both ethical and legal reasons. The software needed to be secure.



## RELIABILITY

The developed infrastructures needed to be reliable and fully supported from the very beginning. With patients' lives literally on the line, the software needed to be error-free and stable.



## TIMELINESS

Testing and maintaining the existing software while continuing to develop innovative cutting-edge solutions proved to be immoderately time-consuming. The client needed fully tested applications delivered in a time-conscious manner.



# DEVELOPMENT

*CREATING THE SOFTWARE THAT WOULD LEAD TO BETTER  
PATIENT TREATMENT*

## LANGUAGES



**JAVASCRIPT**

High-level, often just-in-time compiled, and multi-paradigm. It has curly-bracket syntax, dynamic typing, prototype-based object-orientation and first-class functions.



**SWIFT**

A general-purpose, multi-paradigm, compiled programming language.



**TYPESCRIPT**

A strict syntactical superset of JavaScript, which adds optional static typing to the language.



**PYTHON**

An interpreted high-level general purpose programming language, which emphasizes code readability with its use of significant indentation.



**SCSS**

A particular type of file for SAAS. It is more expressive and uses fewer lines in its code than CSS, which makes loading the code easier.

# FRAMEWORKS



**RUBY ON RAILS**

A server-side web application framework, providing default structures for a database, a web service, and web pages.



**REACT NATIVE**

An open-source UI software framework used to develop applications by enabling developers to use the React framework along with native capabilities.



**.NET**

A software framework that includes a large class library and provides language interoperability across several programming languages.

# THE TEAM

A team of developers was carefully selected to work with the client's own development team. The team was hired on a full-time-equivalent and month-to-month basis. This allowed the client company to grow or shrink the team as needed.

As the Swan team was integrated, the client company was able to assign them specific tasks that they needed to complete and accomplish their goals in a timely manner.

# THE TIME FRAME

The team has been working with the client company for several years. They continue to provide reliable and affordable help on a scalable basis. This enables the client company to always have the people they need to continue to grow and develop new products.

# THE RESULTS

## *HOW SOFTWARE MAKES THE WORLD A HEALTHIER PLACE*

Using the Swan team, the client was able to continue to grow and release new software to continue helping doctors and other medical personnel better treat their patients.

The company continues to grow and expand while meeting the needs of existing customers.

The software's ability to identify genetic risks empowers doctors to discover issues in their first stages or even predict a patient's genetic risk to develop a particular disorder.

With most diseases able to be better treated the earlier they are discovered, this means patients can receive treatment before the disease progresses, and with the knowledge of what diseases they are most at risk for, regular testing can be scheduled if necessary.

The client's goal is for every patient to receive the best possible diagnosis and treatment plan. Their application allows people to be healthier. And good health is priceless.



**PATIENT HISTORY**

For more information on how we can help you take  
your application from idea to reality, contact us.

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