

CASE STUDY

Weathering the storm of customer calls

Increasing business efficiency through
data-driven prediction of inbound calls



fractal 

The big picture

How much would you benefit if you could predict not only when your customers would call, but exactly what they would be asking?

Handling customer queries efficiently is essential for any business, and call centers account for the bulk of these interactions. But dealing with an influx of calls is a costly process – and large companies need a better way of managing their customers' requirements.

Handling customer calls is costly, but what is the alternative?



The challenge

Being better prepared for a downpour of calls

Our client, one of the largest property and casualty insurers in the US, wanted to see if there was a data-driven solution to their customer service process, specifically to reduce the sheer volume of calls that they received.

They knew that by using chat support alternatives where possible, they stood to save two thirds of the costs of running a call center. What they needed was an innovative way to use the data on their customers' digital activity to target and optimize the self-serve resources on offer to their client base.



The challenge

What the client needed

To predict the frequency and intent of calls, our client needed machine learning and deep learning models that could use the datasets that they had. With the insights derived from these models, they would be able to design interventions that would reduce the cost of their call center.

Fractal's customer genomics offering was the ideal tool for this challenge. Not only did it help reduce the model development time, it also offered state of the art deep learning algorithms to train data on.

Predictive models
helped to cut through
the fog of intent behind
customer calls

The transformative solution

The project began with an alignment on the problem statement with the key stakeholders – an important point since there was no existing benchmark for work in this domain – before we explored the data sets to gather the information at hand. From that point, ETL pipelines were constructed in order to transform the data into a format suitable for the customer genomics platform.

The platform then allowed us to create a full 360° view of their digital activity, which was used to create predictive models for customer calls.

The platform allowed us to create a 360⁰ view of their digital activity



Customer genomics was best suited for this project, being equipped to handle data from various assets and in different formats

A transformative solution

What we provided

Fractal's expertise in this sector allowed us to deploy our solution in a short period of time. The technology stack used consisted of the customer genomics platform, combined with Spark for big data processing and Python for data exploration and analysis.

Customer genomics was best suited for this project, being equipped to handle data from various assets and in different formats. Using the platform, we were able to utilize aggregated, unaggregated and sequence-based variables, before providing APIs for faster model development.

The results

The immediate impact

Through the developed clickstream-based model, we established that there was significant value in using the digital activity of customers to predict the likelihood and reasons for calling. The model helped the client to develop near real-time interventions for likely-to-call visitors, while the insights that were gained allowed the stakeholders a greater understanding of their digital channels.

Long-term benefits

Our client will see increased operational efficiency in the long-term, as alternative digital channels such as chatbots and chat support become the customers' go-to for queries and call volume decreases, meeting their need for call reduction and lowering costs.

With our customer genomics solution design and implementation, our client's data science team will feel the benefits long into the future.



Implementing alternatives
to call handling brought a
brighter outlook for the
business

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