

## CASE STUDY

# Predictive Analysis



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#### ABSTRACT

One of our global Client experienced difficulties predicting outcomes of its marketing campaigns, success of its products, conducting research in a changing world, and managing its inventory. After interacting with consultants from Indus Net Technologies, Client has begun to realize the importance of data, and specifically, how data analytics can help predict business outcomes. Our consultants explained that big data analytics have become an everyday practice companies can no longer avoid. Indus Net Technologies' predictive analysis solutions helped the Client to foresee future trends, design marketing campaigns, come up with better products, engage in comprehensive research, and manage its inventory better. Indus Net technologies used programming languages such as R and S, and image analysis to bring predictive analysis solutions to the Client.

## HELPING THE CLIENT UNDERSTAND THE NEED FOR PREDICTIVE ANALYSIS

Initially, the Client was skeptical about using predictive analysis, though they were already familiar with Internet of things, and other emerging technologies. They also had access to data that was collected from devices and interfaces, small and large. As consumers continue to add to Big Data, companies and manufacturers such as our Client are in a unique position, in which they are able to engage in data mining and analysis to predict future market and financial outcomes.

Indus Net Technologies helped them understand that predictive analysis uses computational and statistical methods to harness information related to various trends, using Big Data. It became clear to the Client that engaging in predictive analysis was crucial to having a competitive edge. Our predictive analysis solution provided unprecedented insights into today's market, and tomorrow's situation, helping our client streamlines many of its processes.

#### Some of the features of our predictive analysis solutions were:

Dashboarding	Budgeting, planning & forecasting	Financial consolidation	Profitability modeling & optimization
Strategy management	Analysis & simulation	Reporting	Data exploration

#### Tools we used

K is a free open source programming language used for statistical computing and graphics. It is a GNU package and is written in C, Fortran and R. Unlike SPSS and other statistical tools, R is open source and free-to-use.

is another statistical programming language that quickly turns ideas and numbers into software. The current version is S4.

Predictive Analytics could be understood as a circle in which Reporting, Data Mining, Business Modeling, Statistical Analysis, Machine Learning and Pattern-Identification enable each other.

- Indus Net Technologies Employee

#### Predictive analysis helps the Client with sales and marketing

Our Client spent a lot of time gathering data, and creating sales campaigns that were quite out of touch with market realities. They were having a tough time understanding a new market that it wasn't familiar with, because of cultural and social differences. The client wanted to understand how to market their products to this unfamiliar market. This was mostly because; they did not harness the power of Big Data and predictive analysis, which could help them up with richer insights.

Indus Net Technologies helped the client with insights based on predictive analysis, which helped to convert social and cultural trends into objective data easily understood by marketing campaign developers. Cloud-based predictive analytics tools helped the Client with implementation of campaigns, operation of business and execution of marketing strategies in a simple and thoughtful way. In other words, predictive analysis helped the client to predict what ticked in this unfamiliar market.

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Indus Net Technologies used R & S programming languages to create tools that helped in accessing pre and post promotion analysis, baselines and coefficients and create calendars, by integrating various promotional tools such as invoice and shipping, spending, marketing, advertising, social media, automation tools such as ERP and CRM, etc. Predictive analysis helped the Client to design marketing campaigns that were culturally appropriate and the client could manage to touch the hearts of a new and unfamiliar market.

Though much of this information was saved in Big Data in a non-identifiable manner, our predictive analysis reports helped the Client to access rich insights that helped them to come up with marketing and sales campaigns that were on spot.

## OUR CLIENT USES AI AND PREDICTIVE ANALYSIS TO PROVIDE BETTER CUSTOMER CARE

As you may have already known, Internet of Things is changing the world at a rapid pace. Emerging technologies such as artificial intelligence (AI) and machine learning can help in designing products that are superior in quality and aesthetics. Big Data analytics help companies in developing products and services that are relevant and well-appreciated in the market. Most importantly, predictive analysis helps provide better customer care.

Our Client used an AI chatbot and customer service agent, which helped it to avoid human customer care to an extent. Yet, there were certain trends that were going missing because the chatbot wasn't able to identify conversational subtleties. The client wanted to identify such subtleties to ensure that prospects weren't going away. Indus Net Technologies helped the client to gain insights into AI conversations with customers, so that subtleties could be identified before customer closed the chat box. This was done with the help of predictive analysis.

Indus Net Technologies used statistical and programming languages to develop tools that integrated AI and predictive analysis to help the Client understand deeper meanings of words and contexts. Predictive analysis helped in foreseeing what an individual customer wanted during a conversation, whose subtlety may go missing or be misunderstood by AI chatbots.



Our predictive analysis solutions have helped the Client to identify trends and patterns in performance, notify when there are anomalies, becoming risk-aware and avoid lost sales and poor customer care. It became easier for the client to identify why certain conversations weren't effective, and it helped the client to program the AI bot accordingly.

## PREDICTIVE ANALYSIS IS IMPORTANT FOR DATA MINING, DESIGN AND RESEARCH

They also wanted an attractive sales brochure for a certain target audience in New York. The target audience was young and upwardly mobile CEOs who would buy the clients' products and services. It was difficult for the client to come up with a brochure design that was relevant not only for the current year, but also for the next couple of years. Predictive and image analysis helped the client to identify social and market trends, and popular design features to take a safe risk with respect to brochure design.



Indus Net Technologies has helped companies to mine data and engage in academic research, process numbers through statistical methods, and help arrive at solutions. We have also helped companies to design products, services and content that are top-notch, all thanks to predictive analysis. We helped the Client to design the aforementioned sales brochure based on what consumers in the target geo-location liked, and what their preferences were. This kind of hyper-specific information and trends can be made available only through predictive analysis.

Indus Net Technologies used predictive analysis to help the client measure the success of designs, how certain features of the brochure's design influenced sales, and we used this insight to zero in on design features that likely will be successful in future corporate documents. Indus Net Technologies used image mining, which helped to generate tags automatically. These tags included popular design features with respect to the target demographics such as fonts, colors, geometric and textual patterns, readability, etc.

Indus Net Technologies developed a predictive engine to help prefigure if a hypothetical brochure design is going to be successful based on image mining and analysis. In other words, we helped analyze a very subjective data in an objective manner, allowing the client to reduce risks in design failure. Our solutions helped them to impress upon its audience, and gain new consumers and clients. This was possible only because it based its brochure design on insights derived from predictive and image analysis.



## PREDICTIVE ANALYSIS HELPS THE CLIENT MANAGE ITS INVENTORY BETTER

Our Client had difficulties managing its inventory. They often purchased more than it was required, didn't understand the level of demand, and a few other items in the inventory were always in surplus, leading to wastage. The client wanted to ensure that their inventories were always full, but not overloaded with products.

Our predictive analysis solution helped them to keep their inventory under control, and ensure that there was always materials available on-demand, without them going to waste due to over-availability. It also helped the client to reduce inventory costs by matching inventory levels with demand, reduced working capital expenditure, enhanced productivity by making use of supplies available, predict order quantities and other such micro-data. In other words, our tool helped the Client to forecast inventory and demand.

Indus Net Technologies helped the Client to develop an inventory strategy and identify metrics. It also helped the client to collect useful information, analyze it, and predict outcomes. These insights and predictions were shared across departments, leading to increased communication and enhanced productivity. The client was able to include insights into the inventory process, which helped it to automate the entire process.

It was a challenge to come up with a mechanism to keep critical information secure. Role-based permission model helped to keep information and data secure, while revision history would provide information about revisions or edits made to a particular document.

- Indus Net Technologies Employee

#### GIVING CLIENT'S OPERATIONS A PREDICTIVE ANALYSIS BOOST

The Client wanted to understand why certain hurdles were always there in supply chain, especially in inventory management. Indus Net Technologies used predictive analysis to identify problems within supply chain, and also helped the company to foresee future hurdles. This identification helped the client to address roadblocks that were creating hurdles in inventory management, something that the ERP couldn't do.



ERP is never enough to take care of all backend operations. To have a smart and efficient supply chain, a company needs the predictive analysis magic. And the best part is, predictive analysis has got nothing to do with magic, and is grounded in cold hard facts, truth and numbers.

Indus Net Technologies used R & S programming languages to help develop predictive analysis tools that helped our Client to manage their inventories better, plan assortment and analyze their market basket. Our solutions have helped them to meet their ever-changing needs of a diverse market, while always bringing the latest statistical analysis to back up strategies.

## IT IS IMPERATIVE TO INCLUDE PREDICTIVE ANALYSIS IN EVERY ASPECT OF YOUR BUSINESS

As the world grows larger in terms of data, there will also be a lot more information to analyze and mine. Predictive analysis helps companies to gain access to insights and trends that they otherwise couldn't have. Analysis helps to device better marketing campaigns, develop superior product and service catalogues, engage in research and grow to be a better business.

Indus Net Technologies has been at the forefront of bringing predictive analysis and Big Data analytics to clients across the world. To learn how you can boost your business with the help of predictive analysis, give us a call today.





#### ABOUT INDUS NET TECHNOLOGIES

Indus Net Technologies is a Kolkata-based IT consultancy and web service provider. The company specializes in analytics, cloud computing, mobile and web app development, and various other enterprise level solutions. In a world that is changing quickly, Indus Net Technologies has helped companies to adopt predictive analysis and Big Data analytics to gain rich insights and perform better. Indus Net Technologies has helped companies to market better, develop better solutions for their clients, choose the right digital strategy, and adopt analytics at a deeper level. With more than 2 decades of experience serving clients globally, Indus Net Technologies is the right choice for all your technology requirements.





#### ABOUT THE CLIENT

Our Client is a major MNC that makes and sells B2B products and services. It has clients from all over the world, and has sought to bring products and services packaged in a hyper-local context. The company continues to target CEOs, CFOs and other C-level executives to market its modern technology and services.

