



HYPER PERSONALIZATION USING ATTRIBUTE ANALYSIS AND EVENT SEQUENCING

The newest development in customer engagement

Table of contents

01 Introduction

02 Hyper personalize or bust

03 Traits and techniques of hyper personalization

05 Taking a balanced approach

06 About the Author

06 About Wipro Ltd.

Introduction

PERSONALIZATION IS PASSÉ

Personalization, at the moment, appears to be the name of the game.

Digital technologies, Omni channel growth and rising consumer expectations are driving retailers, bankers, travel and hospitality specialists, healthcare organizations, media, telecom providers and just about everybody else to put personalization at the top of their priority list.

But look under the hood and what do you find? Most organizations are using a weak substitute for real and effective personalization. Today's digital technologies and data sciences make it possible to go beyond the

"Hi, [put your first name here]" emails and product suggestions based on earlier purchases or trends set by other shoppers. Advanced concepts and frameworks such as Attribute Analysis and Event Sequencing are now able to create one-on-one marketing strategies. It is hyper personalization - and not personalization - that should be on your priority list.

Here is what passes for personalization. You go online and buy a sports shoe for your workout and the website makes suggestions for you to buy even more shoes. This comes as a recommendation from the seller and looks something like this, "Customers who bought this item also bought..."

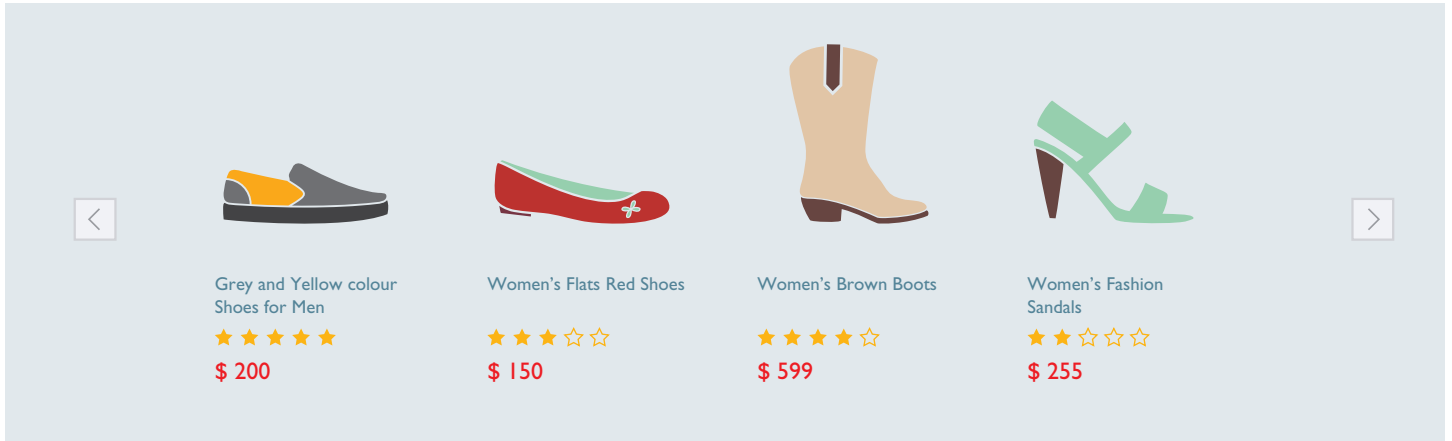


Fig 1: Product recommendations for cross/up selling on e-commerce websites: Instance 1

" You find there 5 to 6 pages of additional shoes. Why would you want another shoe when you just bought an eye-popping dream pair made from a single strand of micro-engineered yarn and polymer blades for bounce back?

Some sites are trying to make wider suggestions. They look into what other customers had in their basket along with the shoes you just purchased to make their recommendations. This is based on the technique of Market Basket Analysis.



Fig 2: Product recommendations for cross/up selling on e-commerce websites : Instance 2

These could also include running gear such as jackets and socks, skipping ropes, shoe deodorizers, energy drinks and weather resistant waist packs. Doubtless, these are sensible suggestions.

These suggestions can be filtered a level higher by looking into the

customer's purchase history, transaction records (what the customer placed in a cart or in a wish list), channel activity and clickstream data, the promotional emails opened, loyalty card records and even the customer's CRM interactions. With data from each one of these sources, the seller gets closer to the customer.

Hyper personalize or bust

Is this enough or do we want hyper personalization that lets you get down to a cozy, single-person level conversation across email, on your website, during a call center interaction or via chat?

Your universe of customers doesn't have to be categorized into broad segments any longer. You can now create communication and campaigns that are **CUSTOMER SPECIFIC**, persuasive and produce winning results.

Hyper personalization relies on additional dimensions about the customer. These dimensions relate to their:

- activity, interest, opinion (AIOs)
- attitudes
- values
- behavior

This information can be gleaned from sources such as social media (Facebook, Twitter, Instagram, LinkedIn, Tumblr, Wikipedia, Flickr, etc.), and surveys. The really smart sellers go even deeper, making suggestions based on the customer's circle of friends on social media. It is an ingenious way to target customers, and it works.

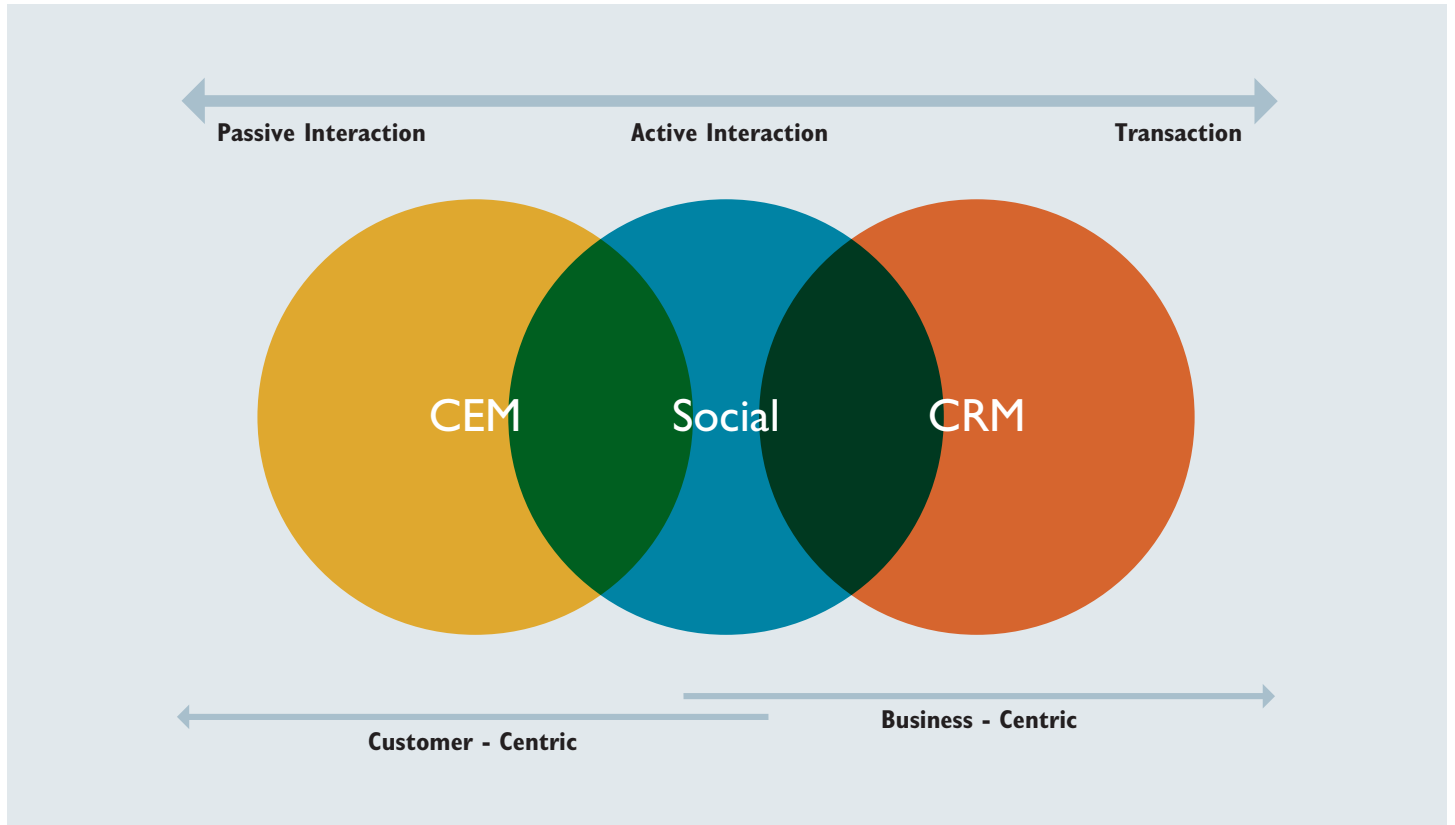


Fig 3: The new age customer interaction approach

Traits and techniques of hyper personalization

Hyper personalization is substantially different from personalization.

Let's go back to our hypothetical purchase of running shoes. Hyper personalization techniques are not limited to recommending adjacent products alone.

Let's take an instance. Hyper personalization will look at your gender (female), age (between 25 and 35), interests (health freak), social network (talks about health foods) and make a recommendation that includes low fat organic strawberries and blueberries or fiber rich complex carbs such as quinoa and black rice.

In essence, a deeper and richer profile of the customer is mapped against a broader set of products to meet the needs of customers. Social

streams create a vital addition to boost the results of hyper personalization. It is social data that makes the content and recommendations relevant.

Two computational techniques are used to achieve this – **Attribute Analysis and Event Sequence Analysis**. Both help bring the customer to the center of communications based on rich and reliable profiles.

I. ATTRIBUTE ANALYSIS: This technique breaks down a customer into a map.

The map describes every attribute of the person (example: female, between 25 and 35, educated, married, has a child, due for a promotion at work, prefers to use Uber, reads Daniel D'Silva on an e-reader, meets mother on weekends, makes it a point to visit art museums on vacations, prefers to use neutral language, etc.).

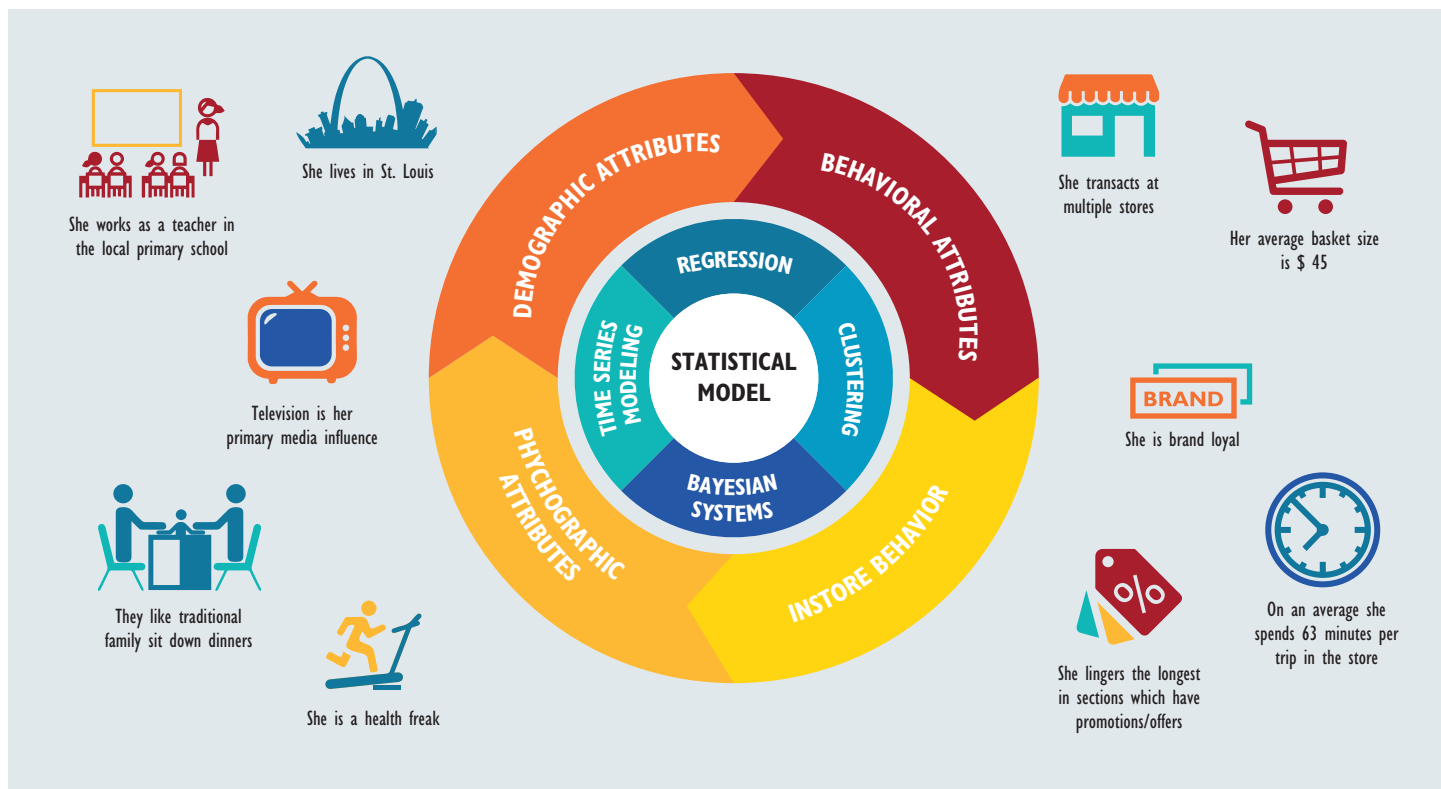


Fig 4: Attribute Mapping for customers

Attributes can be captured and organized by type – demographic, physical, psychological, functional, professional, aspirational, etc. Each attribute then can be mapped on to a product, service, or piece of communication related to the original query/interaction.

Attribute Analysis has become simpler and more reliable with the growth in social listening technologies. This means when a customer today says she is 'eco-friendly', retailers can translate that interest into energy efficient products or a bias towards stores that don't use plastic bags or proactively look towards reducing their personal carbon footprint by shopping online.

2. EVENT SEQUENCE ANALYSIS: This technique observes the sequence of events a customer goes through until the buy (or don't buy) decision is reached. The objective of event sequence analysis is to understand the lead indicators for certain positive action (for example buy) or negative action (attrite).

For an e-tailer, the relevant events could be:

1. Method used for login (if it is via a Facebook ID or a Google ID, reasonably rich details about the customer become available)
2. Search terms used (example: refrigerator, power bank, LED lamps)
3. Adding items to basket or the wish list
4. Liking the Facebook page of the product

5. Crowdsourcing opinion by posting on Facebook (i.e. Apple vs Samsung)
6. Buying

Every event offers an opportunity for hyper personalization. These can be done by email, a chat bot, an immediate offer on the web page, providing discount coupons for select products and displaying items of interest.

This is achieved through a combination of Attribute Analysis and Event Sequence Analysis. Fundamentally, the goal is to make the right offer at the right time to ensure three things:

1. Making the shopping cycle easier and faster
2. Not losing upsell opportunities
3. Ensuring that the customer does not drop away at any stage

Attribute Analysis and Event Sequence Analysis make a powerful combination in businesses other than retail as well.

A bank can, for instance, use them to make sure a loan repayment does not lapse or a loan does not get cancelled by a customer. The bank can observe late credit card payments or an 'unlike' for the bank on a Facebook page to signal a customer's lapse in loan repayment. Early intervention, at each event, can ensure the customer doesn't lapse or move away.

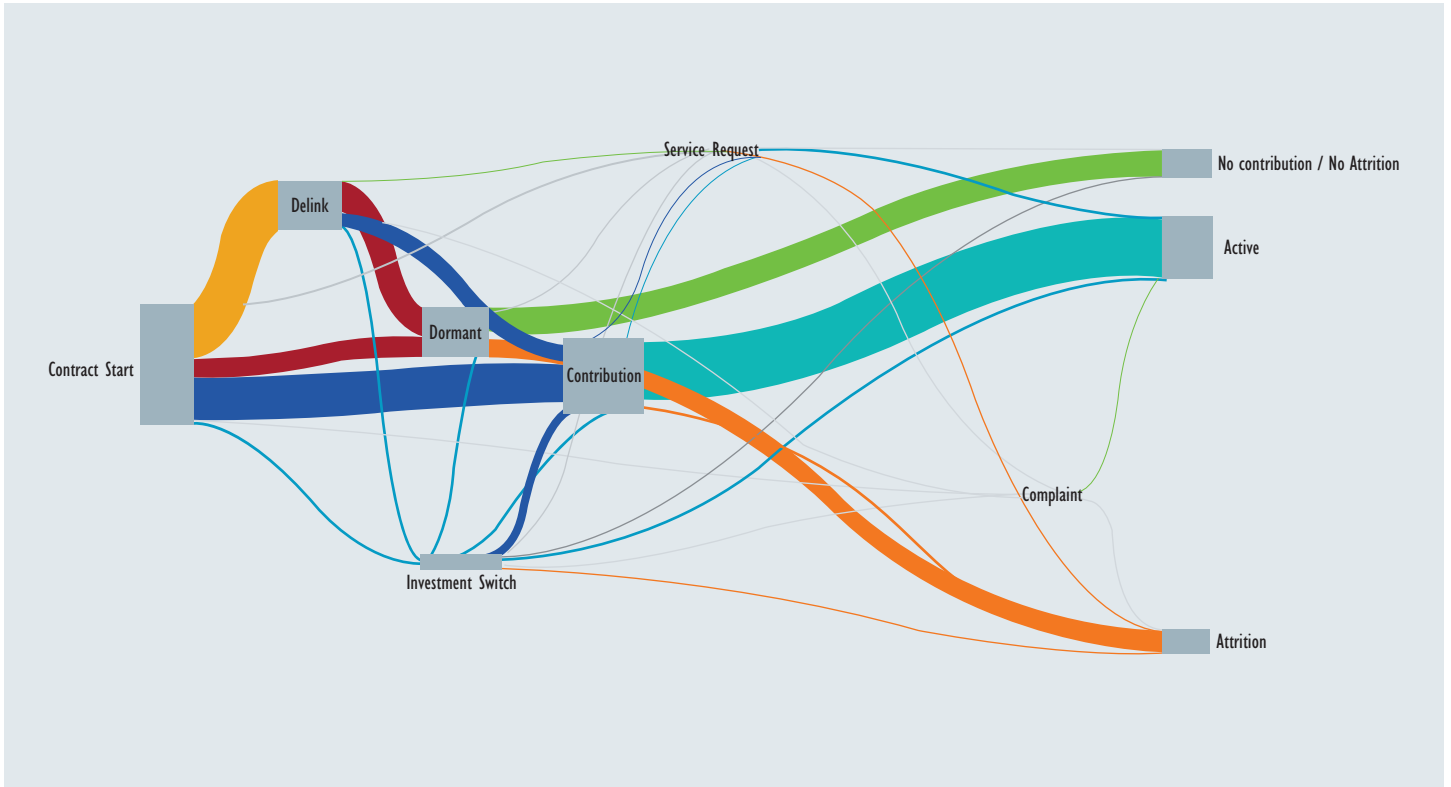


Fig 5: Event sequence analysis for a bank to understand Lead indicators

The interventions can be innovative. In the case of the bank, if the customer is known to travel frequently, the bank can offer a discount on the next foreign exchange transaction or even create travel insurance

Taking a balanced approach

Will the level of customer intimacy from hyper personalization result in customer delight or customer discomfort?

It depends on how sensitive the customer is, the type of customer data being used and the source for that data. Customers want to preserve their privacy and don't like the feeling that someone is watching them.

packages that are attractive to the customer. The interventions are hyper personalized to keep the business on track.

It is therefore best to choose the middle path. This is the path that helps the business maintain its credibility, not infringe on the customer's emotional and personal space and stay above the law.

But none of this implies that hyper personalization can be ignored. If an organization has not started on the path of hyper personalization, its customers will sooner rather than later move away to competition.

About the Author

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Vasu has over 19 years of experience as a Data Scientist and Analytics consultant. He has played various roles in the past including business development, consulting for some of the leading Fortune 500 companies, and leading complex product development initiatives. In his current role within Wipro Analytics, he is leading the Analytics Consulting group and heading the 'Data Discovery Platform' initiative.

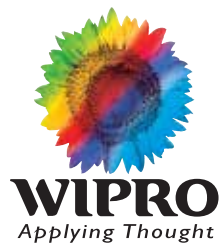
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