

# AMAZON

## INTRODUCTION:

### Description

Amazon.com, Inc., is an American multinational technology company based in Seattle, Washington that focuses on e-commerce, cloud computing, digital streaming and artificial intelligence. It is considered one of the Big Four technology companies along with Google, Apple and Facebook.

Amazon is known for its disruption of well-established industries through technological innovation and mass scale. It is the world's largest e-commerce marketplace, AI assistant provider, and cloud computing platform as measured by revenue and market capitalization. Amazon is the largest Internet company by revenue in the world. It is the second largest employer in the United States and one of the world's most valuable companies. Amazon is the second largest technology company by revenue.

Amazon was founded by Jeff Bezos on July 5, 1994 in Bellevue, Washington. The company initially started as an online marketplace for books but later expanded to sell electronics, software, video games, apparel, furniture, food, toys, and jewelry. In 2015, Amazon surpassed Walmart as the most valuable retailer in the United States by market capitalization. In 2017, Amazon acquired Whole Foods Market for \$13.4 billion, which vastly increased Amazon's presence as a brick-and-mortar retailer. In 2018, Bezos announced that its two-day delivery service, Amazon Prime, had surpassed 100 million subscribers worldwide.

Amazon distributes downloads and streaming of video, music, audiobook through its Amazon Prime Video, Amazon Music, and Audible subsidiaries. Amazon also has a publishing arm, Amazon Publishing, a film and television studio, Amazon Studios and a cloud computing subsidiary, Amazon Web Services. It produces consumer electronics including Kindle e-readers, Fire tablets, Fire TV, and Echo devices. In addition, Amazon subsidiaries also include Ring, Twitch.tv, Whole Foods Market, and IMDb.

## ABOUT DATASET:

This is a list of over 28,000 consumer reviews for Amazon products like the Kindle, Fire TV Stick, and more provided by Datafiniti's Product Database. The dataset includes basic product information, rating, review text, and more for each product.

Our team attempted to clean, process and analyze the data and separated it into B2B and B2C relations. We also separated the fields representing Products, Orders, Manufacturers, Customers details.

### Dataset Description:

- **Products:** This dataset has important information about Amazon products, it consists of important fields like productid, product category, product price, etc.
- **Order:** The order's dataset has information about the orders placed by the customers like the order id, product id and the order date, etc.

- Customer: The customer dataset has information about the customer's who placed the orders. It has fields like the customerid, username, reviews details and region where they placed the order.
- Promotion: The promotions dataset contains information about the promotions offered in the year 2016-2017 and is linked to the product table by product id.

## W5H

### 1. WHO?

Our main focus is retaining the customers and try to find out reasons why a customer might have a bad experience with our site and many reasons why we might need to engage with our customers. Hence why relationship marketing and customer loyalty go hand in hand. It's important to think about your customers just as much as we think about all of your other marketing efforts.

With our main focus as customers, we have conducted the root cause analysis in order to come up to a solution that can improve customer retention.

We will provide this information to the marketing team so they can come up with better marketing strategies to fix the problem.

### 2. WHAT?

After a promotional campaign of sending out discounts and offers to our customers, we saw a peak in our sales, although the sales were uneven. We wanted to find out the main reason for the problem. Hence we implemented root cause analysis step by step and get proof and verification for changing our existing strategy.

### 3. WHY?

Our main purpose of conducting root cause analysis is to make sure that there is no recurrence of any problem in the future. We can present our report and findings of customer purchasing behaviour to our marketing manager. So that we can make changes in our current marketing campaign.

### 4. WHEN?

We perform, root cause analysis when we see a visible problem and we want to find the root cause behind that problem.

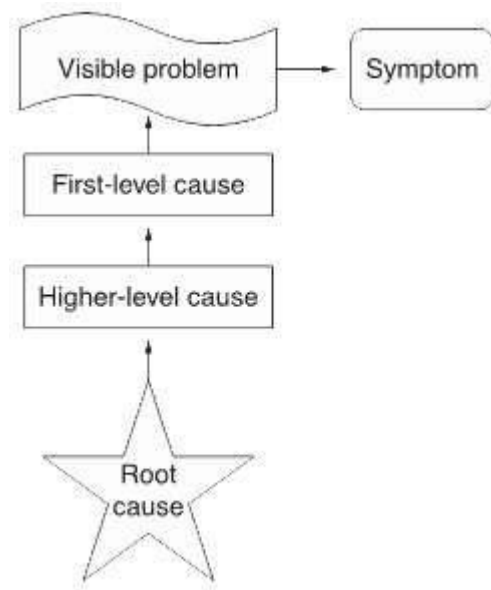
In our data, we could see that although there was a spike in sales after adding promotions, the average order per customer and the number of orders per customer within those regions were still low. This indicates that although customer's spent a lot of money buying our products and services, the number of customers doing so across various regions was less.

## 5. WHERE?

After getting the data insights, we can focus on our different segments of customers. Build different marketing campaigns accordingly to increase customer retention and hence increasing our revenue.

Segment	RFM Score	Description	Marketing actions
Champions	111	Customers who have purchased the most recently and the most frequently, and spent the most.	No price incentives. New products and loyalty programs.
Big Spenders	XX1	Customers who have spent the most.	Market your most expensive products.
Loyal Customers	X1X	Customers who have purchased most frequently.	Upsell higher value products. Ask for reviews. Engage them.
Recent Customers	1XX	Customers who have made a recent purchase.	Use new offers to appeal to customers.
At Risk	311	Customers who haven't purchased for a while, but who previously made frequent purchases and spent the most.	Offer aggressive price incentives, send personalized emails to reconnect, offer renewals, and provide helpful resources.
Lost Customers	411	Customers who haven't purchased for a very long time, but who previously made frequent purchases and spent the most.	Aggressive price incentives, attempts to win them back via renewals or newer products. Interact with these customers to keep them from going to the competition.
Lost Inconsequential Customers	444	Customers who haven't purchased for a very long time, purchased maybe once, and spent the least.	Don't spend too much effort trying to get these customers to return.

## 6. HOW?



We tried getting to the root cause by building Data Insights to find anomalies. We have used Average Order Value per region and Number of order made per customers to understand the purchasing behaviour of our customers. To dig more we implemented customer segmentation to get to the higher level cause of the main problem by performing RFM.

RFM segregate customers according to recency, frequency and monetary value of a customer. Though these metrics you can find out who your best customers, big spenders, loyal customers, at risk and lost customers are. After creating this segmentation, we can get a better insight into the purchasing behavior of the customers. Once, we do that, that can help us find the root cause of our problem with uneven sales.

#### DETAILED FLOW OF OUR ROOT CAUSE ANALYSIS:

##### STEP 1: Visible Problem

The visible problem with our system is that although adding the promotions helped spike the sales of our products and services, the distribution of sales was not consistent across various regions. We performed data insights to get a deeper understanding of what the root cause could be.

#### STEP 2:

##### First - Level Cause/Factor

To give more justification of the visible problem. We implemented two KPIs that are Average value Order and Order Per Customer. With these KPIs we got clear picture of the purchasing behaviour of the customers in different.

#### STEP 3:

##### Higher - Level Cause/Factor

To justify the above cause and to dig deeper on the purchasing behaviour of the customers in every region and to know what kind of customers we have implemented Customer Segmentation by using RFM inorder to segment the customers in respect their Recency, Frequency and Monetary of their purchase.

#### STEP 4:

##### Understanding the Root Cause

From the above factors, we could see that the percentage of our best buyers is low comparatively to Average and Inactive Buyers. Main reason for this root cause is ineffective promotion campaign. To mitigate the problem we need to build a campaign according to customer purchasing behaviour or segments.

#### TOOLS

We have build a marketing system on Google Cloud Platform and connected it to Tableau through BigQuery server. The following are the links of our implementation:

[https://public.tableau.com/views/Assignment2\\_15642654608450/SalesPerformance?:embed=y&:display\\_count=yes&:origin=viz\\_share\\_link](https://public.tableau.com/views/Assignment2_15642654608450/SalesPerformance?:embed=y&:display_count=yes&:origin=viz_share_link)

