Data Science Methodology to understand a real world Email Marketing Campaign and solve the business related issues.

Emails - This assignment involve in-depth understanding of Email Marketing Campaigns.

Data science helps in understanding the key requirement to be involved in Email Marketing techniques to understand the below mentioned factors and generate revenue.

Assumption : We have gathered the customer information like Name, Email address, Phone numbers. In order to gather this information we need to post Ads on Facebook, Instagram, Websites, Blogs and other platforms of lead magnets.

1. Customer Segmentation

2. Predictive Analytics

3. Personalization and Content Optimization

4. Churn Prediction and Retention Strategies

5. Email Performance Analysis

6. Optimizing Send Time and Frequency

7. Spam Detection and Deliverability

Problem related to the topic

I'm a client from an E-commerce company, running a campaign to generate more revenue by selling more products by Email Marketing techniques.

We are unable to generate more revenue even though we are increasing productivity at work, marketing agents and providing offers. Most of our customers are unsubscribing to receive our promotional emails and we are unable to contact them again.

Phrasing the question to be answered using customer data

In order to understand the requirements to be made on the Email marketing campaigns, I want to understand how to work on the below factors.

1. Low open rates 2. High Unsubscribe rates 3. Deliverability Issues 4. Poor Segmentation and Personalisation 5. Email formats and pitching skills

Kindly describe the effects of these factors.

Business understanding : Email Marketing : We need to ask the clients about these basic questions to understand the below points. Once we understand this we can optimize and tailor the email content and formats.

- **Demographics** : Age, Gender, Location, Income level, Company they work with and other characteristics
- **Offers** : The best suitable offer based on the Upselling strategy, cross-selling and make competitive research
- **Traffic Sources** : From where we are collecting the lead information, like Websites, Blogs, Banner Ads, Social Media or Email etc
- **Ad Copy** : The content, brands, pictures, logos, designs that excites the targeted audience

Analytical Approach :

- This involves understanding various approaches to understand the effective elements like email formats, email content and subject line to different segments of audience. Analyzing the performance of each element determines which combination is suitable to create bait.
- Segmentation Analysis, Predictive Analysis and Analysing other metrics like open rate, click through rates, conversion rates, spam or junk email rates helps to tailor the email contents and formats appropriately.

Data Requirements :

- Data requirement should be divided again based on Demographic data (Age, Gender, Location and etc) , Behavioural data (Opens, clicks, conversions) , Purchase History, Device data (Laptop or Mobile phone) , Platform data (website user or app user) , Social Media behaviours, Industrial trends, Feedbacks and Surveys.

Data Collection :

- After we understand the data requirements we need to look out for various sources to collect the data from Surveys and Feedbacks. Other technical behaviours like open rates, clicks, conversion rates, purchase history, reply rates should be tracked and extracted from internal sources.
- The data which is not available (Future trends, human psychology about purchase decisions, attractive baits to increase purchases, creative designs, personal opinions about the products) should be gathered from external sources like Social Media comments, Market Research surveys and other external industry level data bases and sources.

Data Understanding and Preparation :

Data Understanding

- Perform iterative mathematical and statistical operations on the collected data. These statistics include multiple variables such as mean, median, minimum, maximum, and standard deviation.
- Missing values and invalid data should be replaced with relevant data and perform multiple iterative operations.

Data Preparation

- Data preparation involves cleaning of unwanted data to improve domain knowledge, sentiment analysis and effective points to improve open rates, clicks, conversion rates and reply rates to the promotional emails.

Modeling and Evaluation

- In data modeling we send emails to the audience and check if we are able to see any improvements in open rates, clicks, reply rates and conversions. We need to perform multiple trial and error methods to check for the most effective email formats, contents, subject lines and promotions which increases the revenue.
- In the Evaluation process we calculate the quality of the improvement, compare the results based on multiple segmentations, offers, data sources, email formats, contents and time at which we generated more leads and conversion rates. After comparing different combinations and respected results we can find the best suitable Email marketing model for this campaign to generate the expected revenue.