

INTRODUCTION :-

Overview:

The widespread impacts of Artificial Intelligence (AI) and machine learning (ML) in all segments of society have driven researchers to term the present day as the "AI Revolution". Despite their relevance, for many marketing researchers and practitioners, terms such as artificial intelligence and machine learning may seem akin to terms of a foreign language. ML can play a research method in the marketing field.

Artificial Intelligence is a method of making a computer, a computer-controlled robot, or a software think intelligently like the human mind. While Machine learning refers to the technologies and algorithms that enable systems to identify patterns, make decisions and improve themselves through experience.

FORMS OF MACHINE LEARNING

1) Supervised machine learning:-

Think of it as, "given a set of features x , we know the value of y ," and so in supervised learning, we create a function that approximate results based on data.

Unsupervised Machine Learning:-

In these there are two forms of unsupervised machine learning clustering and dimension reduction.

Reinforcement learning:-

In reinforcement learning we learn models over time.

Machine learning and deep learnings are subfields of AI

Artificial Intelligence contains many subfields including:

- 1) Machine learning: Automates analytical model building. It uses methods from neural networks, statistics, operations research.
- 2) Deep learning: Uses huge neural networks with many layers of processing units. Common applications include image and speech recognition.
- 3) Computer vision: Relies on pattern recognition and deep learning to recognize what's in picture or video.
- 4) Natural language processing: Is the ability of computers to analyze, understand and generate human language.

AI refers to a broader idea where machines can execute tasks "smartly". While machine learning should be able

to learn and adapt through experience.

Overview of the project.

Market segmentation is a marketing strategy that uses well-defined criteria to divide a brand's total addressable market share into small groups. Each group or segment, shares common characteristics that enable the brand to create focused and targeted products, offers and experiences.

Types of Marketing Segmentation.

- 1) Geographic
- 2) Demographic
- 3) Behavioral
- 4) Psychographic

* **Geographic** :- Geographic segmentation works by grouping potential customers by the areas in which they live or reside.

* **Demographic** :- Demographic segmentation works by grouping potential customers by their individual attributes such as age, ethnicity, education.

* **Behavioral** :- It works by grouping potential customers based on observed actions or behaviors.

Psychographic: It works by grouping potential customers based on their beliefs, values, lifestyle.

Purpose :-

Using market segmentation, companies are able to identify their target audiences and personalize marketing campaigns more effectively. This is why market segmentation is key to staying competitive. It allows you to understand your customers, anticipate their needs, and seize growth opportunities.

Uses :-

A travel company might segment its market by psychographics to target different types of vacations to different personality types.

A financial services company might segment its market by demographics.

Market segmentation enables us to achieve target to customers with the highest potential value first.

Forecast the sales using ARIMA.
understand the customer behaviour according to market flow

LITERATURE SURVEY:-

A market segment is a cluster of people or firms with similar interests, characteristics, or traits. The consumer may share the same expectations and needs.

Existing Problem:-

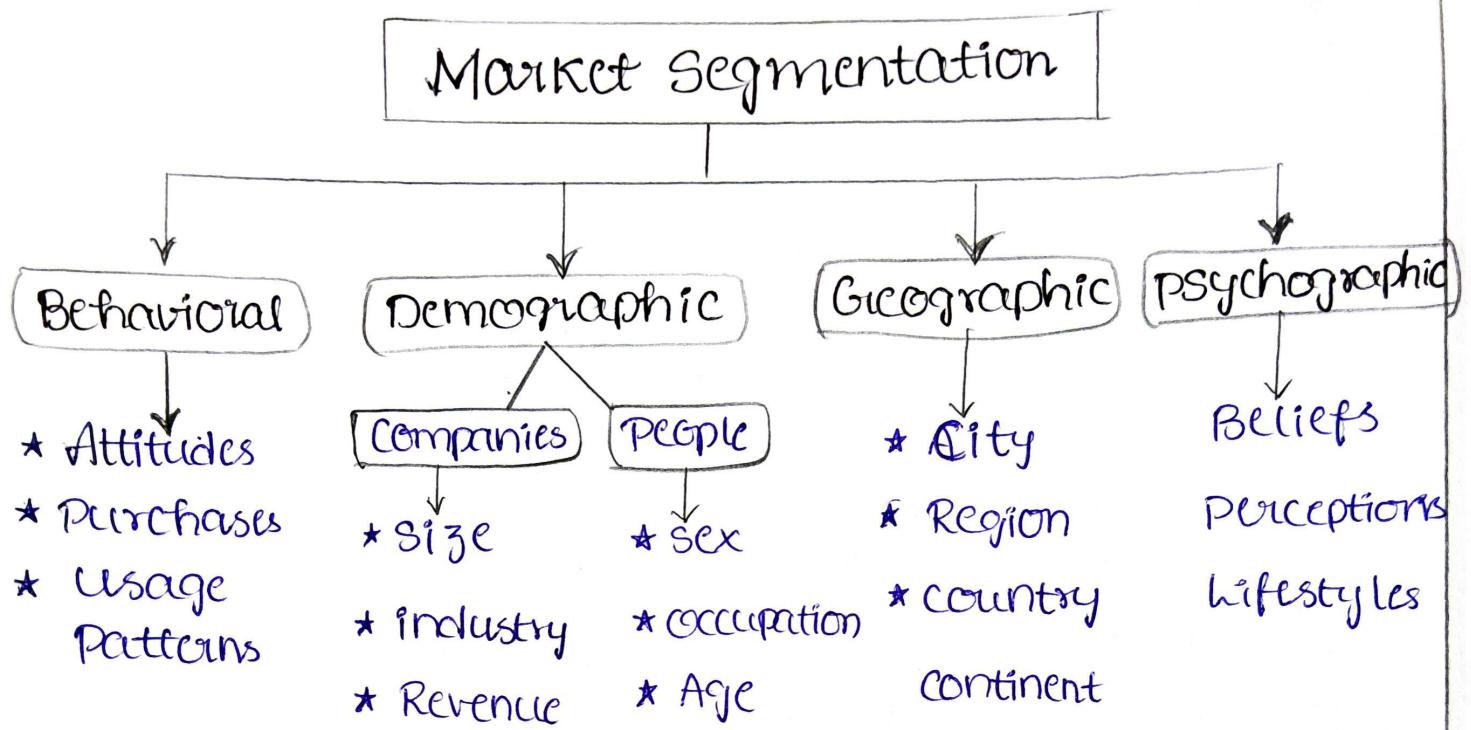
★ Challenge:

One of the biggest issues with customer segmentation is data quality - inaccurate data in source systems will usually result in poor grouping. For example, customers who are individuals, attributes like age, gender and marital status are frequently used.

Solution:-

There are some processes that can be implemented to provide improved data quality for customer segmentation maintenance. One of the important aspects of data quality is the concept of assigning resources to manage attributes for customers.

THEORETICAL ANALYSIS:



There are four primary types of market segmentation

Geographic: This approach groups customers by physical location, assuming that people within a given geographical area may have similar needs.

Demographics: It involves breaking the market into the customer demographics as age, income, gender, occupation etc.

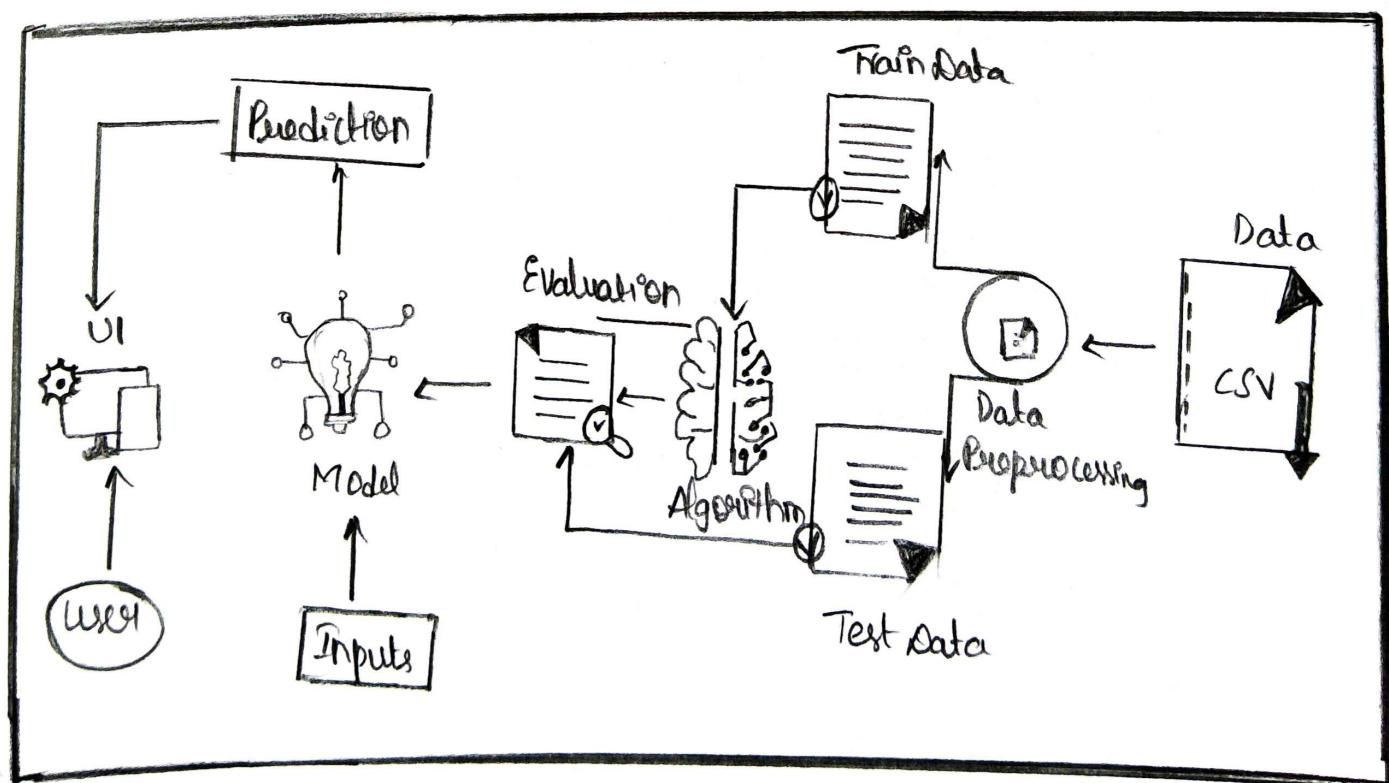
Psychographs: It strives to classify consumers based on their lifestyle, personality, opinions and interests.

Behavioral: This approach based groups consumers based on how they have

have previously interacted with markets and products. This approach assumes that consumer prior spending habits, are an indicator of what they have buy in the future.

Hardwares and software Requirements of the project

- ★ Hardware Required is laptop, Desktop
- ★ Software Required is Anaconda, Python.
- ★ System Required windows 10, 11, mac.



EXPERIMENTAL INVESTIGATIONS:-

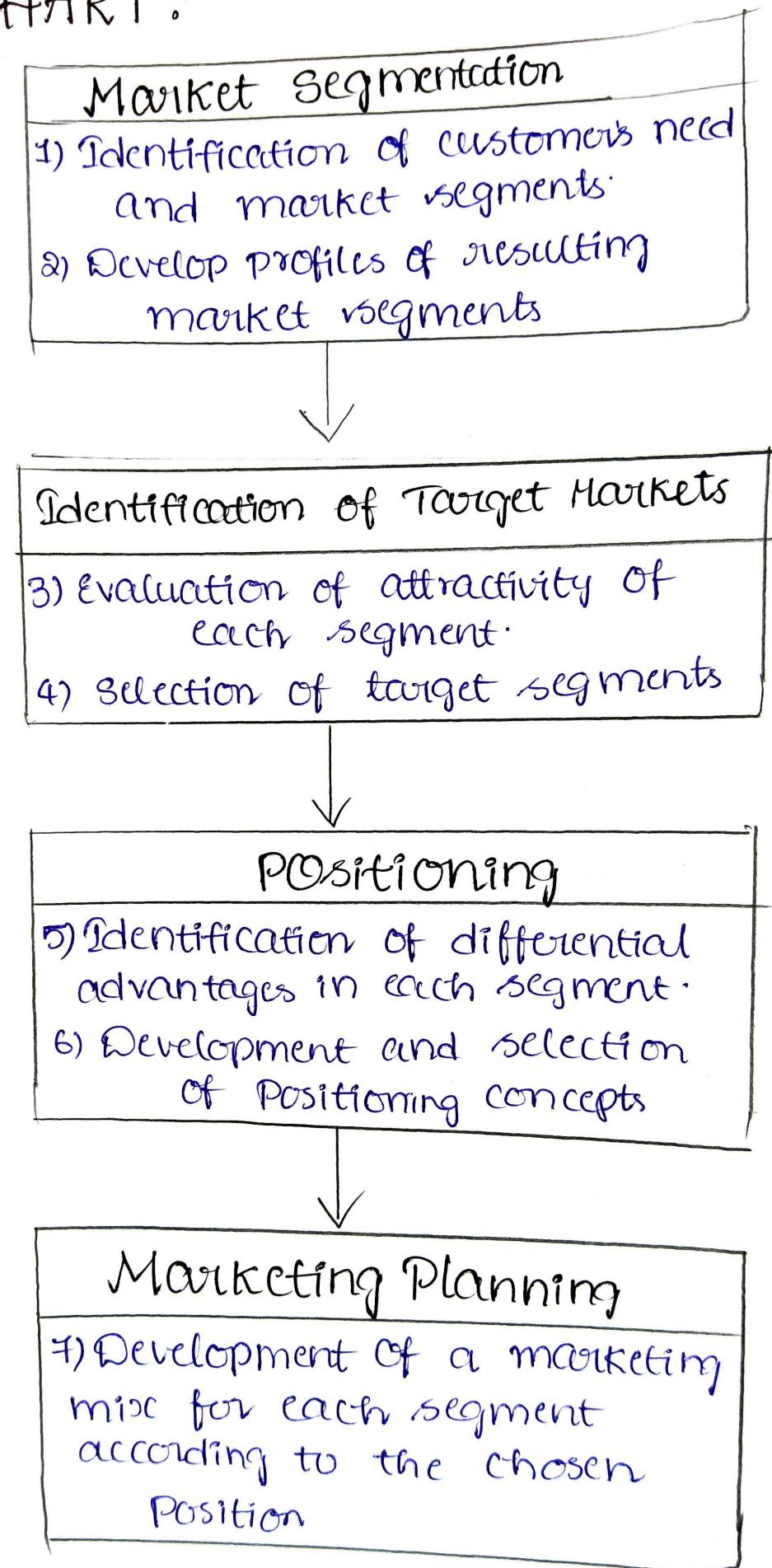
Marketing segmentation by means of machine learning is a process of dividing a customer base into particular groups with similar characteristics. There are countless ways to segment customers. It can be done demographically, or psychographically, sorting by: Age.

It also involves looking at a segmentation report and analyzing past customer behaviors to gain insight into how these customers may interact with product, services, or brands in the future.

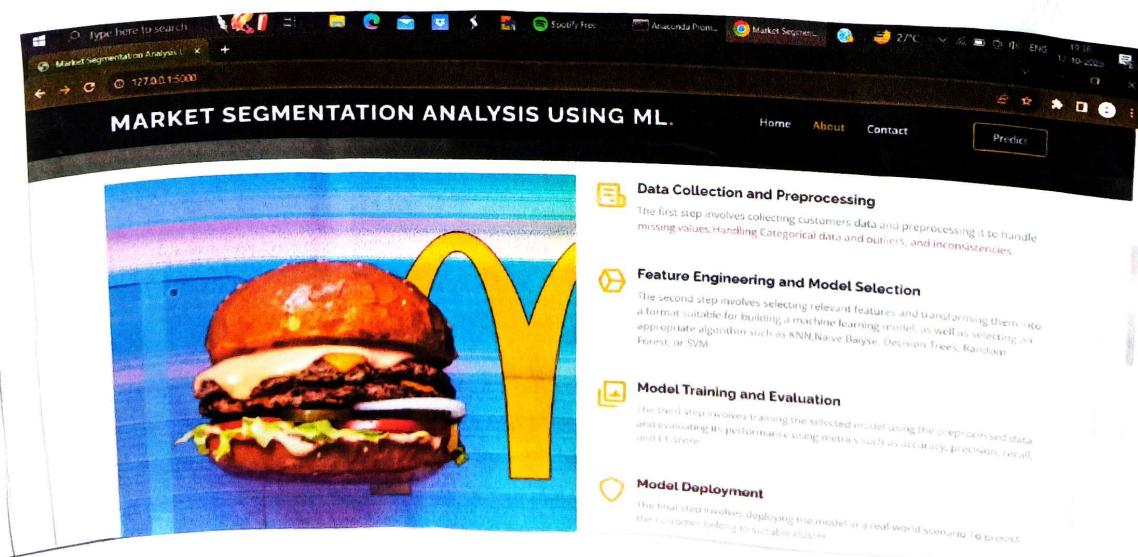
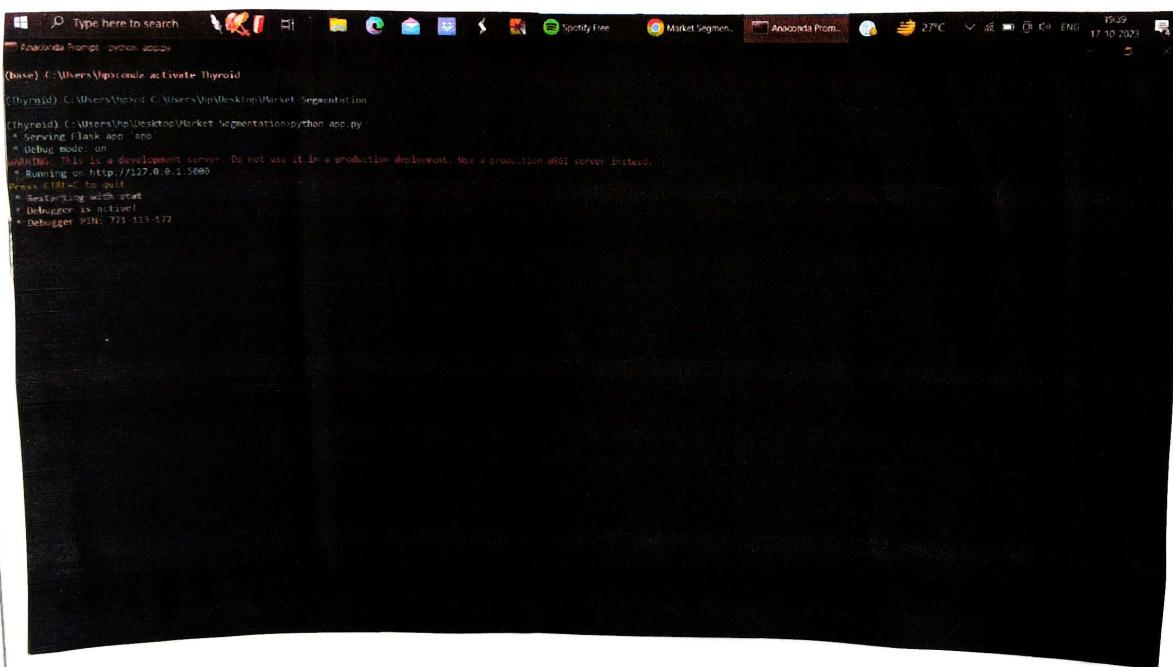
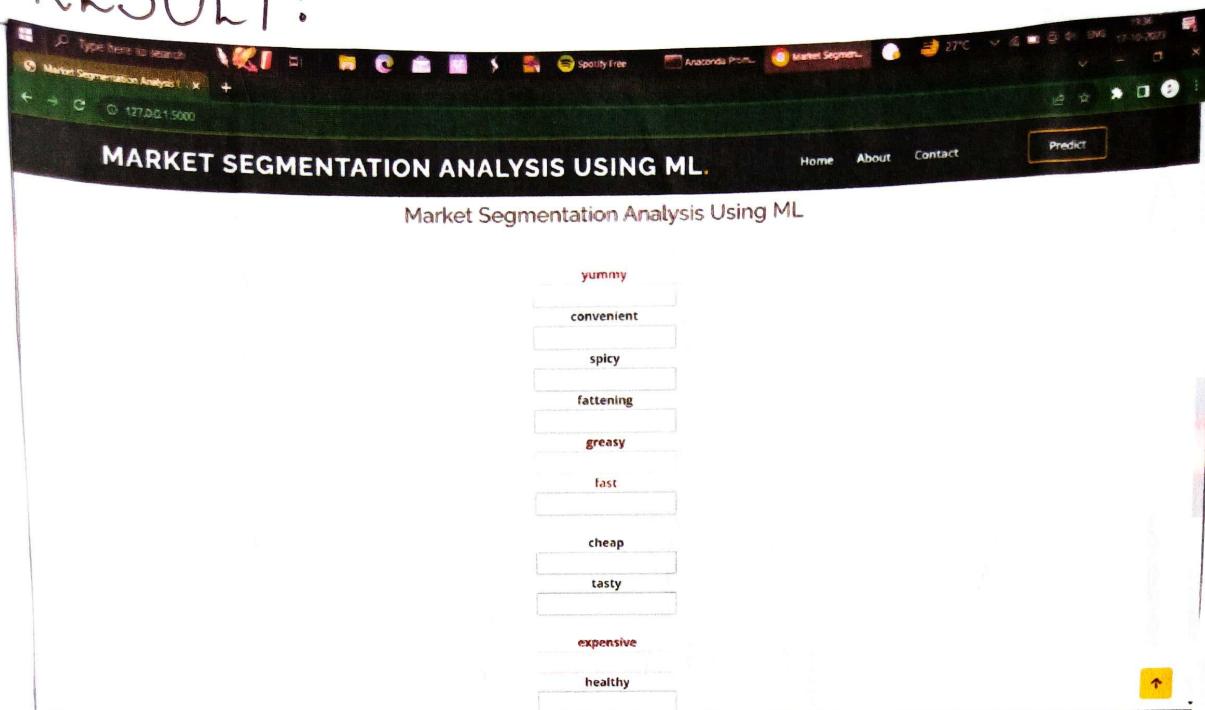
Market segmentation analysis support the following.

- * TO create new product that satisfy the needs of different consumers groups in the market
- * TO successfully position yourself against your competitors when entering a market or launching a project.

FLOW CHART :-



RESULT:



Advantages:-

Market segmentation has several advantages which are very beneficial for companies to later needs of consumers. Consumers are very materialistic, they generally opt for those products.

- * Enhances the focus and intensity of Marketing efforts.
- * Gives firms insight into several Markets.
- * Boost client happiness, resulting in longer customer retention.
- * Avoids the need to waste money

Disadvantages:-

Business should be aware of a few disadvantages of market segmentation before embarking on this marketing strategy.

- * Increase a company's rising costs. As a result of greater market segmentation, the company's overall expenses may be increased.
- * Production Problems - The company may have to incur additional costs to survive in the market.

APPLICATIONS:-

Market segmentation helps companies minimize risk by figuring out which products are the most likely to earn a share of a target market and the best ways to market and deliver those products to the market.

For example, an athletic footwear company might have market segments for basketball players and long distance runners.

The market segmentation strategy for a new video game console may reveal that most users are young males with disposable income.

The aim of Segmentation is to tailor marketing efforts to your ideal customer profile (ICP) i.e. The customers most likely to buy your product or service.

For example, a customer at an organic food shop is likely to have some or all of these characteristics : Gender : Male or Female.

CONCLUSION :-

The report about my internship program with smart-Bridge have discussed about every major aspect which I observed and perceived during my internship programme.

Registering in smartBridge in Artificial Intelligence and Machine learning through APSCHE-LMS portal has landed me into the pool of courses which are mainly focusing on the emerging technologies in the world. Out of many choices I opted for AI and ML virtual Internship sponsored by SmartBridge.

The result of this project to predict the data and give the strategic value to understand the customer satisfaction and retention to client.

To improve this business and the customer review.

FUTURE SCOPE :-

The future of Marketing segmentation will firstly, command emphasis on the Kaleido-density trend, where newer attributes will become critical.

- Increase in sales values.
 - Increase in marketing programmes
- Many Marketing professionals use market segmentation in their work. Some have to carry out analysis themselves while others use the analysis provided by other professional.
- ★ Brand managers are responsible for defining a brand's voice and managing its presence in the market place.
 - ★ Digital Marketing managers are responsible for marketing products or services using digital channels, such as search engine, email, social media

Marketing segmentation based on a richer portrait of potential customers through lifestyle, usage of products / services, transactional data.

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