Step 1: Deciding (not) to Segment

Marketing segmentation is a long-term work strategy and includes research, fielding surveys, focus groups, designing multiple packages, advertisements, communication. Before deciding to use or not use this method or strategy one must check with constraints and requirements. The scheme must be more profitable than marketing without it, and net of expenses of developing and using the scheme itself.

Barriers:

They are some parameters we need to see before starting up the process of market segmentation. There are some obstacles between successful segmentation implementation.

1. **Senior Management:**
   Lack of leadership in implementation and decision making will cost much to the company as investments are done for these segments. Lack of commitment and involvement will cause loss.

2. **Organizational culture:**
   A proper culture is needed to be developed in the organizing committee. Where there is a lack of consumer orientation, no new ideas, no creative thinking, bad communication, short term thinking, politics and the unwillingness.

3. **Lack of training:**
   Necessary marketing and analytics training is not provided then lack in performance will cause loss to implementation of market segmentation.

4. **Inadequate financial resources:**
   While entering or implementing marketing segmentation we sometimes need to make changes in infrastructure or product details and designing too. Hence, we need financial investments to go further. If not, adequate resources are available then it may cause an obstacle between implementation of segmentation and running them.

Then what's required first?

1. Sense of purpose
2. Dedication
3. Patience
4. Willingness

Step 2: Specifying the Ideal Target Segment

In Step 2 the organization must determine two sets of segment evaluation criteria. One set of evaluation criteria can be referred to as knock-out criteria. These criteria are the essential, non-negotiable features of segments that the organization would consider targeting. The second set of evaluation criteria can be referred to as attractiveness criteria. These criteria are used to evaluate the relative attractiveness of the remaining market segments – those in compliance with the knock-out criteria.

Step 3: Collection Data

While collecting the data we have to look up on these points. The need of the useful data is important while collecting because it plays a major role for accurate results. we have to do market segmentation based on the data driven Technique. In our case McDonald's dataset contains features Age, Like, tasty, Gender etc. The term segmentation variable refers to the one measured value such as Gender in our dataset etc.

Dataset:

	yummy	convenient	spicy	fattening	greasy	fast	cheap	tasty	expensive	healthy	disgusting	Like	Age	VisitFrequency	Gender
0	No	Yes	No	Yes	No	Yes	Yes	No	Yes	No	No	-3	61	Every three months	Female
1	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	+2	51	Every three months	Female
2	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	No	+1	62	Every three months	Female
3	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes	+4	69	Once a week	Female
4	No	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	No	+2	49	Once a month	Male
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1448	No	Yes	No	Yes	Yes	No	No	No	Yes	No	Yes	I hate it!-5	47	Once a year	Male
1449	Yes	Yes	No	Yes	No	No	Yes	Yes	No	Yes	No	+2	36	Once a week	Female
1450	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes	No	No	+3	52	Once a month	Female
1451	Yes	Yes	No	No	No	Yes	Yes	Yes	No	Yes	No	+4	41	Every three months	Male
1452	No	Yes	No	Yes	Yes	No	No	No	Yes	No	Yes	-3	30	Every three months	Male

3.1 Segmentation Criteria:

Segmentation involves creating similar groups made up of individuals with identifiable common characteristics. These might be place of residence, how usually they buy our Product, age, expenditure, lifestyle or even how they behave on your Market. The individuals within a same segment are supposed to have the similar expectations and buying on our products and should react in a similar when we kept the offer and when we ask about Feedback. There are four 4 major Segments in which we make a Criteria.

1. **Geographic Criteria**:

This type of segmentation is based on the geolocation, Weather, Day etc.

Ex: The international Clothing Company plans to sells Sweatshirt for its consumers according to their geolocation and local weather. It suggests Sweatshirts that meet the immediate needs of visitors. They see two different offers depending on their local temperature a Sweatshirt rated 100$ where temperature is <-10°. And another jacket Price is 200$ withstand temperatures of -30°.

2. **Socio-Demographic Criteria**:

Demographic segmentation is the most commonly used criteria, this criteria Includes more specific information about us like Gender, Age, Expenditure, salary, Education, in this we can retrieve Information Easily and target the Customers

Ex: Fashion Applications targeting the consumers based on Gender, salary etc. which product has to recommend (If the person was studying in a prestigious college and have a high purchasing from the application then it will recommend costly items compare to another consumers)

3. **Psychographic Criteria**:

When people are segmented based on their Interests, beliefs and preferences these comes under psychographic criteria

Ex: For example, people who are in young or newly married couples' primary motivation to go on vacation to Maldives and enjoy in the beaches these kinds of people have a high likelihood of taking leave on summer.

4. **Behavioral Criteria:**

Behavioral segmentation criteria depend on the way visitors interact with the website. Some data depends on their immediate online behavior and giving positive feedback while other data depends on their past offline behavior or negative feedback.

Ex: The more the user visited the particular page and the time spent on that product etc.

In our case McDonald's market segmentation, we use mostly Geographic and Socio-Demographic data because psychographic criteria much not useful in this case

3.2 Data from Survey Studies:

1) Choice of Variables:

Selecting the right variables that are included commonsense segmentation and data-driven segmentation is critical to the quality of the market segmentation solution. while surveying the data we have to look upon these actions. If we use categorical values for representing gender or scale range from 1 to 10 for feedback on that specific item these comes under Response style. Sample data can be collected through surveys, experimental studies, or the company's internal data on particular item.

Step 6: Profiling Segments

6.1 Identifying Key Characteristics of Market Segments:

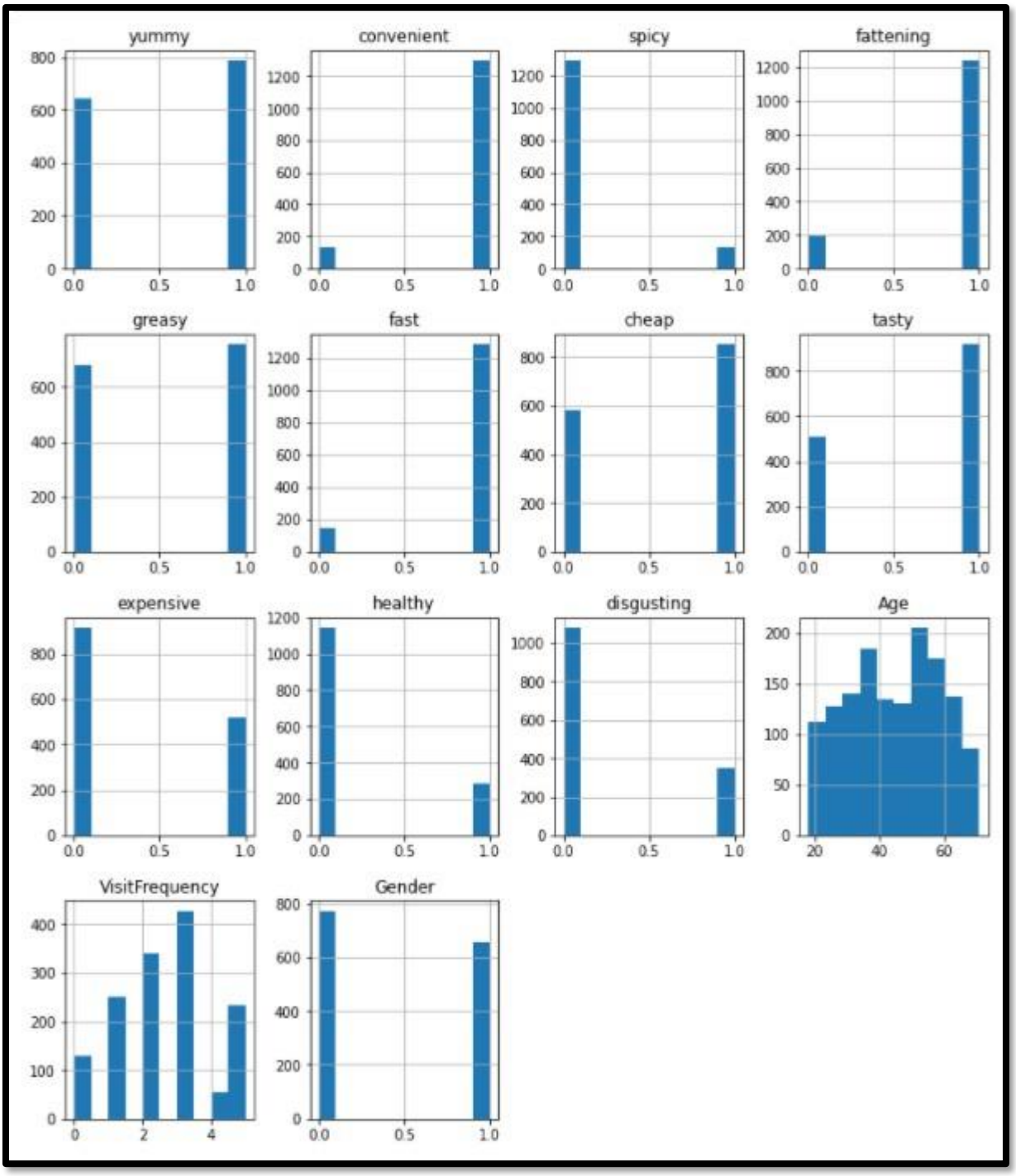
The profiling step aims to get to know the market segments resulting from the extraction step. Profiling is only required when data-driven market segmentation is used. For commonsense segmentation, the profiles of the segments are predefined. If, for example, age is used as the segmentation variable for the commonsense segmentation, it is obvious that the resulting segments will be age groups. Therefore, Step 6 is not necessary when commonsense segmentation is conducted.

At the profiling stage, we inspect several alternative market segmentation solutions. This is particularly important if no natural segments exist in the data, and either a reproducible or a constructive market segmentation approach has to be taken. Good profiling is the basis for the correct interpretation of the resulting segments. A correct interpretation, in turn, is critical to making good strategic marketing decisions.

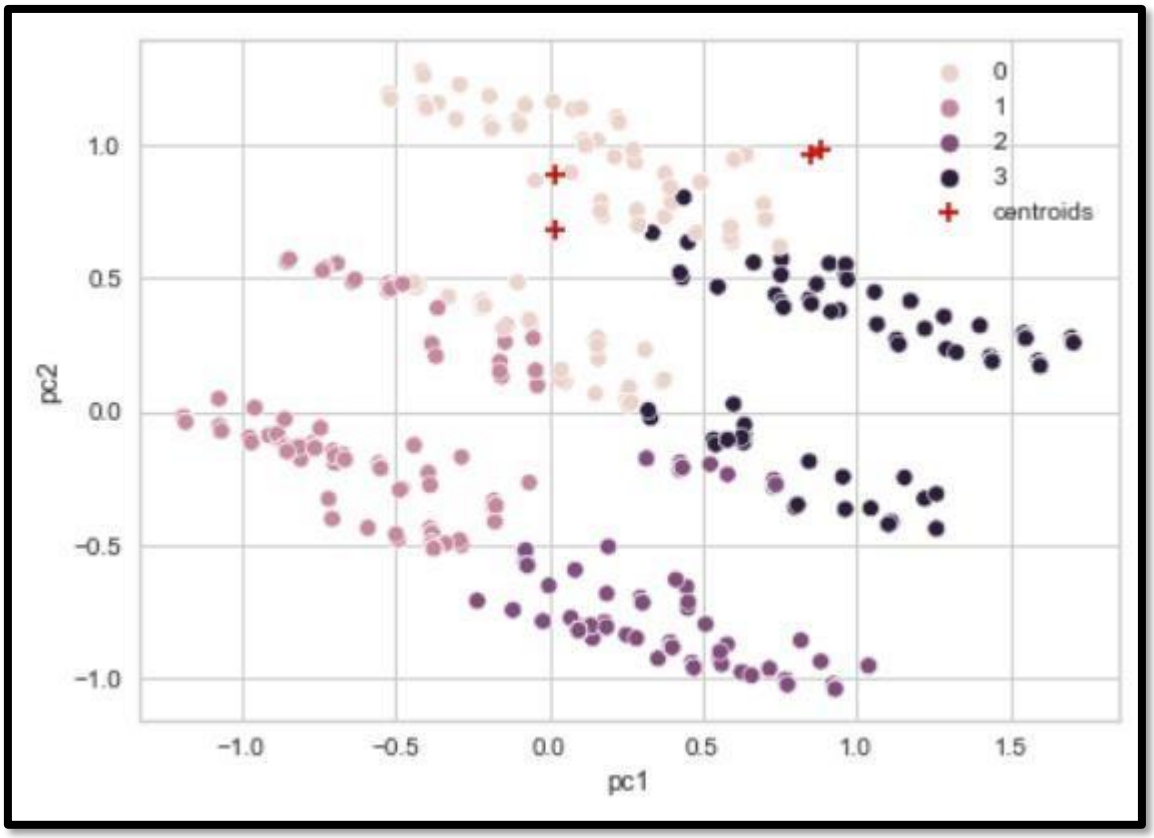
6.2 Segment Profiling with Visualizations

Neither the highly simplified, nor the very complex tabular representation typically used to present market segmentation solutions make much use of graphics, although data visualization using graphics is an integral part of statistical data analysis

Visualizations are useful in the data-driven market segmentation process to inspect, for each segmentation solution, one or more segments in detail.



Histogram for each attribute



Visualizing the cluster for pc1(yummy) and pc2(convenient)

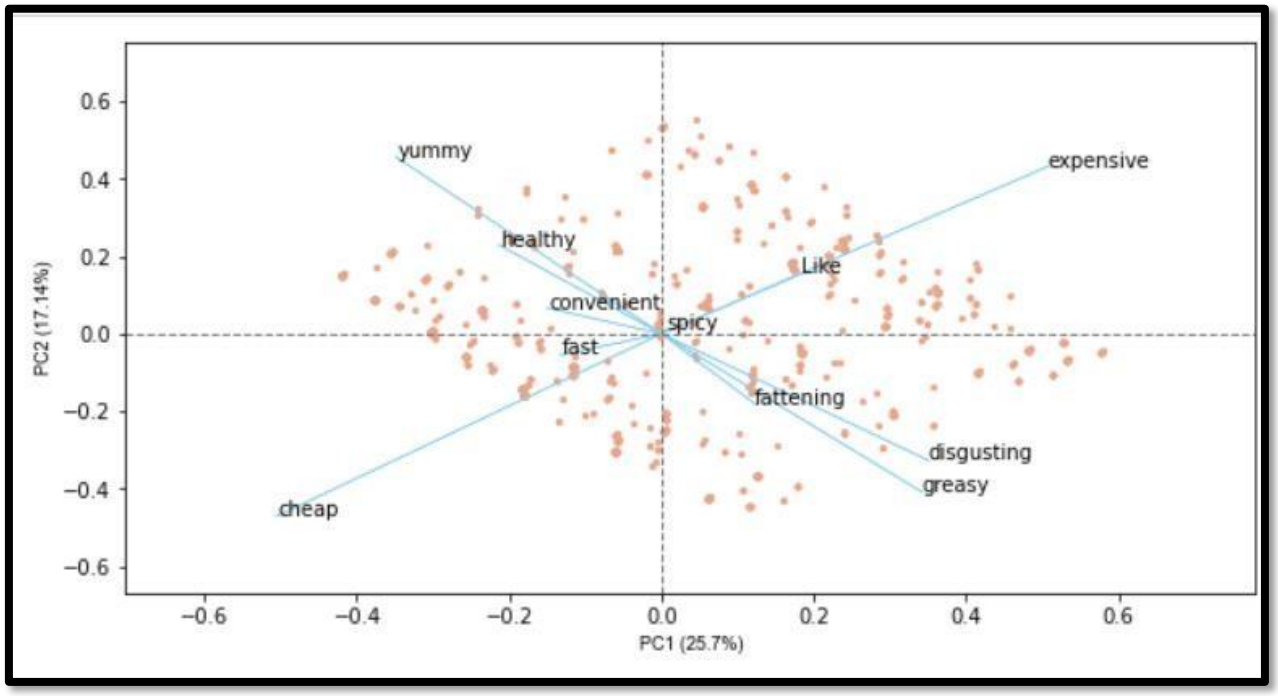
In the above visualization, the color of the small data points represents the cluster to which they have been assigned. The (+) marker are cluster centroids, with their color indicating the cluster that they represent.

first, we choose k in our case k=4, the number of clusters we want to find in the data. Then, the centers of those k clusters, called centroids, are initialized in some fashion.

Of course, there is still the problem of choosing k, the number of clusters. Usually, you don't know beforehand how many clusters the data contains, and usually you can't look at the data directly because it lies in a higher dimension than two or three. (Indeed, if you can look at your data and see obvious clusters as you can here, you may be better off clustering manually). So, in practice, people often try different values of k and see how their results vary.

1) Assessing Segment Separation

Segment separation can be visualized in a segment separation plot. The segment separation plot depicts – for all relevant dimensions of the data space – the overlap of segments. Segment separation plots are very simple if the number of segmentation variables is low, but become complex as the number of segmentation variables increases. But even in such complex situations, segment separation plots offer data analysts and users a quick overview of the data situation, and the segmentation solution.



Segment separation plot using principal components 1 and 2 for the MacDonald's data set

Due to the overlap of market segments, the plot above is messy and hard to read. The plot is still not trivial to assess, but it is easier to interpret than the segment separation plot

Each segment separation plot only visualizes one possible projection. So, for example, the fact that segments like and expensive in this particular projection overlap with other segments does not mean that these segments overlap in all projections. However, the fact that segments cheap and expensive are well-separated in this projection.