Step.6 Profiling Segments

1. **Identifying Key Characteristics Of Market Segments:**

   There are 2 main types of market segmentation

   a. **Commonsense Segmentation:**
      - The profiles of the segments are predefined for commonsense segmentation
      - For example - age is a segmentation variable for the commonsense segmentation and the resulting segments will be age group.
      - Profiling segment is not necessary for commonsense segmentation

   b. **Data-Driven Segmentation:**
      - Profiling means in simple words get the knowledge of market segments from the resultant data from the extraction step.
      - This step is important because if no natural segments exist in the data, then either a reproducible or a constructive market segmentation approach has to be taken into consideration.
      - Data-driven market segmentation is not easy to interpret. Even experts and managers find many difficulties in interpreting segment results correctly.

2. **Traditional Approaches To Profiling Market Segments:**
   - The Australian vacation motives data set was used to extract segments using the neural gas clustering algorithm, with varying numbers of segments and 20 random restarts.
   - Data-driven segmentation solutions are often presented as high-level summaries or large tables with exact percentages for each segmentation variable.
   - However, these tables can be difficult to interpret and provide a quick overview of key insights.
   - To identify the defining characteristics of market segments, the percentage value of each segment for each segmentation variable must be compared with the values of other segments.
   - Sometimes, information is provided about the statistical significance of the difference between segments for each of the segmentation variables, but this approach is not statistically correct.

3. Profile Segmentation Using Visualization:

- Graphics are essential in statistical data analysis, particularly in exploratory statistical analysis like cluster analysis, as they provide insights into complex relationships between variables.
- Visualization offers a simple way to monitor developments over time and makes the results of a market segmentation analysis easier to interpret.
- A single two-dimensional graphical format is preferable to more complex representations that lack intuitive interpretations.
- Visualizations are useful in the data-driven market segmentation process to inspect one or more segments in detail, facilitate the interpretation of segment profiles, and make it easier to assess the usefulness of a market segmentation solution.
- The process of segmenting data often leads to a large number of alternative solutions, and visualizations of solutions assist the data analyst and user in this critical decision-making process.

3.1) Identifying defining characteristics of Market Segments:

- A segment profile plot is a useful tool for understanding the defining characteristics of each market segment. It visually represents the differences between each market segment and the overall sample.
- Another option is to order segmentation variables by similarity of answer patterns, which can be achieved by clustering the columns of the data matrix using Ward's method.
- The segment profile plot is a panel plot, with each of the six panels representing one segment.
- It is worth investing extra time in presenting market segmentation analysis results as a well-designed graph.
- Good visualizations facilitate interpretation by managers who make long-term strategic decisions based on segmentation results, which require substantial financial commitments to the implementation of a segmentation strategy.

3.2) Assessing Segment Separation:

- Segment separation plots are a useful tool for visualizing the overlap of segments in data spaces.
- They provide a quick overview of the data situation and segmentation solution.
- Examples of segment separation plots are provided in figure, based on two artificial data sets:
    - A data set with three distinct, well-separated segments and an elliptic data structure. And
    - The artificial data is two-dimensional, so no projection is required.
- For 20-dimensional data, a segment separation plot is created by projecting the 20-dimensional space onto a small number of dimensions. Different projection techniques, such as principal components analysis, can be used to maximize separation.
- The consumer data used for the plot shows a market segment that values unspoiled surroundings and nature.

4) Step 6 Checklists:

- Use the selected segments from Step 5.
- Visualize segment profiles to learn about what makes each segment distinct.
- Use knock-out criteria to check if any of the segments currently under consideration should already be eliminated because they do not comply with the knock-out criteria.
- Pass on the remaining segments to Step 7 for describing