Anfertigen eines CAT bzw. PIKE

Kann … // Algorithmus x // exact … // (Kunden)-Problem … berechnen / lösen?
Yes, techniques like clustering help in customer segmentation.

Big Data / Data Mining / Data Science Kernaussage:
(P) roblem):
[Welcher Frage hat für die Lösung des Kunden / Auftraggeber die größte Bedeutung?]:

Customer segmentation, or grouping customers based on shared attributes, helps ecommerce companies send relevant, timely promotions to their users. Age, gender, location, browsing habits, interests, and even the devices we use, say a lot about our shopping habits.This projects aims on customer segmentation based on Gender,Age, Annual Income and their Spending Score.

(I) ntervention:
(Bibliotheken- und Algorithmen-Auswahl, … z.B. pandas für Finanzdaten …)
[Welche Berechnung erwäge ich vornehmlich?]:

The project is done in R using the Packages .Data preprocessing and visualization is done using Tidyverse ,Plotly and ggplot. To find the optimal number of clusters the library „factoextra“, „NbClust“ and „ClusterR“ are used. For customer segmentation Kmeans function is used.

(K) ontrollintervention
(falls erforderlich: Bliotheken- und Algorithmen-Auswahl … z.B. scikit-learn für Finanzdaten …)
[Was ist die andere Möglichkeit?]:

Other clustering methods can used for Customer Segmentation.

(E) rgebnismaß (Zielgröße(n)) – Die Evidence
[Was möchte ich / der Kunde erreichen? Z.B. Prädiktor oder Klassifikator erstellen …]:

Companies that deploy customer segmentation believe that every customer is different and require a specific marketing efforts to address them appropriately. Hence the grouping the customer according to thier needs becomes invietible for the companies to be in the completition. This way, they can strategize their marketing techniques more efficiently and minimize the possibility of risk to their investment.

Die Suche nach der besten Evidenz

1.Problem
To achieve Value Based segmentation , where it differentiates Customers by thier econonmic value and Spending Score which can be used to target them to provide positive experience and at the same time adding values to company buisseness.

2.Definition einer wichtigen suchbaren Frage
Does Kmeans clustering method groups the customers

3.Auswahl der wahrscheinlichsten Quelle für diese Evidenz
After finding the optimal number of clusters using methods like Elbow method , Silhouette method and Gap statistic and applying the number of of clusters to Kmeans function

4.Erstellung einer Suchstrategie

Different clustering methods can be implimented for customer segmention but in this project Kmeans clustering method is used

5. Zusammenstellung der Evidenzausbeute

Unsupervised Learning mainly deals with identifying the structure or pattern of the data. Here the Descriptive Analysis and Exploratory Analysis successfully categorize the customers to impliment marketing stratergies

6.Anwendung der Evidenz

The applied Kmeans clustering clearly differentiated the type of customers on the basis of their Annual Income and Their Spending Score .