

Customer Analytics - Hw 3

Mandatory tasks:

Part (A) Product affinity based segmentation:

1. Compute and report the characteristics of the affinity based segment for Product 3.

```
"IPr": 25.95775874652452,  
"lin": 11.139006287734293,  
"ICp": 12.199317748106541,  
"ICI": 21.128709302194856,  
"lcn": 16.6485854968437,  
"IBr": 12.966525811255126,  
"*pPr30": 25.95775874652452,  
"*pPr10": 130.14303794733212,  
"*pPr05": 181.70431122567163,  
"*pln0.5": 11.139006287734293,  
"*pln1": 45.23905197807785,  
"*pln3": 77.97304401414016,  
"*pCp12": 44.349315464711644,  
"*pCp20": 68.43949287812991,  
"*pCp32": 40.63131289481547,  
"*pCID": 21.128709302194856,  
"*pCIF": 104.5052515507547,  
"*pCIE": 147.90096511536402,  
"*pCnSI": 16.6485854968437,  
"*pCnSp": 65.85682923669701,  
"*pCnLk": 116.54009847790579,  
"*pBrA": 50.52084991092335,  
"*pBrB": 46.44674579805799,  
"*pBrC": 58.216260680579964,  
"income": 57.74319700505691,  
"age": 46.47329509813119,  
"sports": 0.4482840902158169,  
"gradschl": 0.4483729142554785
```

2. Repeat step for A and B

(log-lift csv is in the zipped folder under `log_lift_part_a.csv`)

```
"Seg.1.mean": {  
  "IPr": 18.047791555157957,  
  "lin": 13.356014871603174,  
  "ICp": 16.36039988577688,  
  "ICI": 18.474952805617836,  
  "lcn": 20.656957856859677,  
  "IBr": 13.116932021674636,  
  "*pPr30": 18.047791555157957,  
  "*pPr10": 92.47262705857163,  
  "*pPr05": 126.33454088610573,  
  "*pln0.5": 13.356014871603174,  
  "*pln1": 56.649890149649686,  
  "*pln3": 93.49210410122228,  
  "*pCp12": 60.1953046610705,  
  "*pCp20": 92.89159597452182,  
  "*pCp32": 54.30227549260925,  
  "*pCID": 18.474952805617836,  
  "*pCIF": 92.91988405119811,
```

```

    "I*pCIE": 129.3246696393248,
    "I*pCnSI": 20.656957856859677,
    "I*pCnSp": 84.13160486455884,
    "I*pCnLk": 144.59870499801767,
    "I*pBrA": 71.89933895042947,
    "I*pBrB": 45.84762775788239,
    "I*pBrC": 39.43841062104963,
    "income": 60.16627601915799,
    "age": 46.71115358503179,
    "sports": 0.4707449667910151,
    "gradschl": 0.3596188963597607
  },
  "Seg.2.mean": {
    "IPr": 38.98220003257785,
    "lin": 8.963663659176897,
    "ICp": 12.16314215940612,
    "ICI": 14.565828048392522,
    "lcn": 12.400454119341635,
    "IBr": 12.891389181424836,
    "I*pPr30": 38.98220003257785,
    "I*pPr10": 220.56462209081573,
    "I*pPr05": 272.8754002280453,
    "I*pln0.5": 8.963663659176897,
    "I*pln1": 38.659373461610535,
    "I*pln3": 62.745645614238256,
    "I*pCp12": 44.608830576437086,
    "I*pCp20": 68.05694053079897,
    "I*pCp32": 41.515778642438015,
    "I*pCID": 14.565828048392522,
    "I*pCIF": 76.96005177054457,
    "I*pCIE": 101.96079633874758,
    "I*pCnSI": 12.400454119341635,
    "I*pCnSp": 53.65352975469944,
    "I*pCnLk": 86.80317883539153,
    "I*pBrA": 36.92716956729727,
    "I*pBrB": 59.796373120304764,
    "I*pBrC": 56.70847696916169,
    "income": 49.635777809577235,
    "age": 42.849521708145986,
    "sports": 0.16813724703606134,
    "gradschl": 0.24788980580526931
  }
}

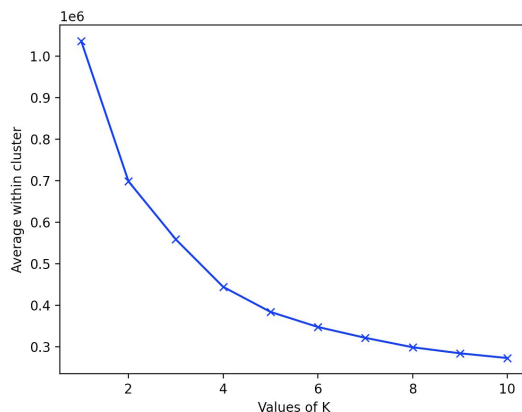
```

3. Verbal description that characterizes product affinity segment for Brand C.

We can say that the product affinity segment for Brand C is with people who lead a more healthy lifestyle and are slightly older to the average consumers. These people are also well settled and are more educated. They prefer to be on the move and place preference on the mugs attributes like cleanability, leak resistance rather than price. They also have a preference towards our brand and seem to enjoy the products we have delivered to them.

Part (B) Classical segmentation:

1. Segmentation characteristics are reported under `segment_characteristics.csv`
Profiling in terms of demographics are reported under `profiling_k_means.csv`



2. log-lifts for all variables for all segments are reported under `log_lift_k_means.csv`
3. Verbal description of each segment:
 - a. Segment 1: Is a younger demographic which has high price sensitivity due to low income and has some brand loyalty with us. They do not place preference on the types of mugs and mostly look for cheaper products.
 - b. Segment 2: consists of an older demographic who are less price sensitive and have a healthy lifestyle. They are also comparatively more educated and the most important factor for them is the cleanability of the mugs.
 - c. Segment 3: consists of people who like to drink in large volumes and prefer mugs which can contain a large volume. Additionally, they have comparatively less education and price is really not a factor of them. They do however have a brand preference A.
 - d. Segment 4: consists of people who are heavily into sports and prefer either hot/cold beverages. They are also comparatively more educated and are well off. For them, price is really not a factor and they seem to prefer brand A's mugs so far.
 - e. Segment 5: consists of people who like to drink in large volumes and prefer mugs which can contain a large volume. Additionally, they have comparatively less education and price is really not a factor of them. They do however have a small brand preference for A and they prefer an insulation time of 1 hour.
 - f. Segment 6: consists of people who are less price sensitive and are always on the move. They prefer playing sports and for them spill, splosh and leak resistant. They also have a strong loyalty towards brand A.

4. We should target segment 5. Segment 5 doesn't have that much brand loyalty with Brand A and can be converted to our customer. They are comparatively younger as well and prefer larger mugs. As our product is more suitable for someone like them, we should try to strategize our marketing plan across these people. For insulation, our mugs also perform better than what they expect.