* Link to Azure Noteook : <http://bit.ly/2pXjMOd>

I have taken mean of 0.7 as a threshold in making my decisions.

Here is the Kmean run with K = 10.

Cluster means:

Home Products Search Prod\_A Prod\_B Prod\_C Cart

1 0.0000000 1.00 0.000 0.0000000 1.0000000 0.7894737 0.4736842

2 0.6875000 0.75 0.000 0.9375000 0.7500000 0.0000000 0.5000000

3 0.8000000 1.00 1.000 0.7000000 0.0000000 0.7000000 1.0000000

4 1.0000000 1.00 1.000 0.3333333 0.8333333 0.8333333 0.0000000

5 1.0000000 0.20 1.000 1.0000000 1.0000000 0.6000000 0.8000000

6 0.5000000 0.00 0.625 0.6250000 0.0000000 0.0000000 1.0000000

7 1.0000000 0.00 0.500 0.3750000 0.1250000 0.0000000 0.0000000

8 1.0000000 0.00 0.750 0.7500000 0.0000000 1.0000000 0.7500000

9 0.9285714 1.00 0.000 0.9285714 0.2142857 0.5000000 0.9285714

10 0.1000000 1.00 1.000 0.0000000 1.0000000 0.4000000 0.6000000

Here is the table when we compare the optimum cluster value of K with purchase data from session data.

0 1

1 11 8

2 9 7

3 4 6

4 6 0

5 2 3

6 2 6

7 8 0

8 2 2

9 8 6

10 9 1

* If a new user is observed to access the following pages:Home => Search => Prod\_B, according to your clusters, what other product should be recommended to this user?
  + Product A : On taking a mean of cluster data with a K of 10, one can clearly see that product A page is the highest visited page amongst the three products.
* What if the new user has accessed the following sequence instead: Products => Prod\_C?
  + Product A : On taking a mean of cluster data with a K of 10, one can clearly see that product A page is the highest visited page amongst the three products.
* Using clustering help us identify casual browsers ("window shoppers"), focused browsers (those who seem to know what products they are looking for), and searchers (those using the search function to find items they want)? If so, are any of these groups show a higher orlower propensity to make a purchase?
  + Clusters 4 & 7 are **casual browsers** with almost no purchases.
  + Clusters 1, 2& 9 are **focused browsers** with zero search and strong purchase history.
  + Clusters 3,5,6,8 & 10 are **searchers** with decent search and strong purchase history.
* Do any of the segments show particular interest in one or more products, and if so, can we identify any special characteristics about their navigational behavior or their purchase propensity?
  + Cluster 1 B & C
  + cluster 2 A & B
  + Cluster 5 A & B
  + Cluster 8 A & C
  + Cluster 9 A
* If we know that, during the time of data collection, independent banner ads had been placed on some popular sites pointing to products A and B, can we identify segments corresponding to visitors that respond to the ads? If so, can we determine if either of these promotional campaigns are having any success?
  + Cluster 1, 2,5,8 & 9.