**Insights for K-Means Clustering**[**¶**](http://localhost:8888/notebooks/Documents/GitHub/ut_projects/Project%207%20-%20AllLife%20Bank%20-%20Sarah%20A%20Thomas.ipynb#Insights-for-K-Means-Clustering)

* **Cluster 0:**
  + Avg\_Credit\_Limit: median is about $25,000 (approx. range $6,250-$100,000). This seems to be the middle range of all the clusters.
  + Total\_Credit\_Cards: median is about 6 (approx. range 2-7). This seems to be the middle range of all the clusters.
  + Total\_visits\_bank: values range from approx. 1-6 in this cluster, more than in the other clusters.
  + Total\_visits\_online: values range from approx. 0-3, less than in the other clusters.
  + Total\_calls\_made: values range from approx. 0-4. This seems to be the middle range of all the clusters.
* **Cluster 1:**
  + Avg\_Credit\_Limit: range is approx. $5,000-$12,500, the lowest range of all the clusters. (outlier(s) at $50,000)
  + Total\_Credit\_Cards: range is approx. 1-3, the lowest of all the clusters.
  + Total\_visits\_bank: range is approx. 0-2. This seems to be the middle range of all the clusters.
  + Total\_visits\_online: range is approx. 1-5 (with outlier(s) at 10). This seems to be the middle range of all the clusters.
  + Total\_calls\_made: range is approx. 1-10, the highest of all the clusters.
* **Cluster 2:**
  + Avg\_Credit\_Limit: Outliers exist ranging from approx. $87,500-$100,000. Primary values are above the $100,000 ranage, the highest of all the clusters.
  + Total\_Credit\_Cards: range is approx. 5-10, the highest of all the clusters.
  + Total\_visits\_bank: range is approx. 0-1, the lowest of all the clusters.
  + Total\_visits\_online: range is approx. 6-15, the highest of all the clusters.
  + Total\_calls\_made: range is approx. 0-3, the lowest of all the clusters.

**Insights from Hierarchical Clustering**

* **Cluster 0:**
  + Avg\_Credit\_Limit: median is about $25,000 (approx. range is $6,250-$100,000). This seems to be the middle range of all the clusters.
  + Total\_Credit\_Cards: median is about 6 (approx. range 2-7). This seems to be the middle range of all the clusters.
  + Total\_visits\_bank: values range from approx. 1-5 in this cluster, more than in the other clusters.
  + Total\_visits\_online: values range from approx. 0-4, less than in the other clusters.
  + Total\_calls\_made: values range from approx. 0-6. This seems to be the middle range of all the clusters.
* **Cluster 1:**
  + Avg\_Credit\_Limit: range is approx. $5,000-$12,500, the lowest range of all the clusters. (outlier(s) at $50,000)
  + Total\_Credit\_Cards: range is approx. 1-3, the lowest of all the clusters.
  + Total\_visits\_bank: range is approx. 0-2. This seems to be the middle range of all the clusters.
  + Total\_visits\_online: range is approx. 1-5 (with outlier(s) at 10). This seems to be the middle range of all the clusters.
  + Total\_calls\_made: range is approx. 1-10, the highest of all the clusters.
* **Cluster 2:**
  + Avg\_Credit\_Limit: Outliers exist ranging from approx. $75,000-$105,000. Primary values are above the $100,000 range, the highest of all the clusters.
  + Total\_Credit\_Cards: range is approx. 5-10, the highest of all the clusters.
  + Total\_visits\_bank: range is approx. 0-1, the lowest of all the clusters.
  + Total\_visits\_online: range is approx. 6-15, the highest of all the clusters.
  + Total\_calls\_made: range is approx. 0-3, the lowest of all the clusters.