

Final Report
Machine Learning – Unsupervised Learning
Hult International Business School
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The Problem:

Unsegmented users in the mobile application industry that is leading to problems for the marketing department.

Key Insights:

Assumption: There are two categories obtained from clusters in the data set:

1) 'The frugals' 2) 'App aficionados'

- Surprisingly people in the age group 65 and above have an average of 3.5 apps per person.
- Analysing by education, the maximum number apps is the same across all levels, minimum is 2 for college grad and post grad degree (Category – 'The frugals').
- Native Hawaiian have the lowest average minimum number of apps and the white people have the highest average maximum and minimum number of apps.
- Latino's have higher number of minimum apps.
- As expected, 15-20k Income group have the lowest number of apps, which is constant between 20-70k and then maximum after 70k with the same maxima and minima. People with the middle salary range of 40k-70k fall under the category of 'App aficionados'.
- Females have a higher number of minimum apps on their phones as compared to their male counterparts. (Category – 'App aficionados')

- People between the ages of 18-39 have a varied use for twitter as compared to Facebook, which not only suggests that they use twitter less but also means that Facebook is better to target for old as well as the young generations. . (Category – ‘App aficionados’)

Implementation and Recommendations:

The clusters were divided into multiple segments based on the extent of variance and 5 of them account for 80% of the variance, which indicated that they were well represented by a large extent of variance.

In factor loadings we call cluster number 0 as ‘The frugals’ because they do not like to spend money on apps or show off.

In factor loadings, the cluster number 2 is called as ‘App aficionados’ because they like to spend money on apps and like to show off their apps as well.

Cluster 1,3 and 4 consists of a mixed variety of respondents and hence will be ignored from the analysis recommendation.

I would like to suggest we focus on ‘The frugals’ as they would help us improve the apps and the app experience, which means they will be useful for honest feedback. We can achieve this by giving them freebies coupled with the apps so that they can start using it and then ask them for a feedback.

For the ‘App aficionados’ I would like to suggest we push more apps which are related to social networking in their features and encourage them to keep on downloading the content in the same manner.