A3: Timed Unsupervised Learning Project Write Up
Team 6 - MSBA3
Machine Learning

Business Insight

Insight I
In the analysis, our survey participants divided into two groups, according to Big Five Personality and Hult DNA. Type I is defined as disliking changing and resisting new ideas, having no interest in others, disliking structures and deadlines, and preferring solitude, liking anti-socializing. Furthermore, they are negatively related to thinking, communicating and team building. Type II personalities enjoy socializing, love to be in the center of attention, care for others, feel empathy, dislike structure, and deadlines, be emotionally stable, deal with stress successfully, open to new ideas, and be good at thinking and communication and team building.

Insight II
In addition, we check each cluster's willingness to change rates (willingness to change their current laptop in the future). Cluster 1 has 18%, and Cluster 3 has a 23% changing rate, and these rates reflect the highest changing rates compared to the others. Both clusters include surveyees who have higher Type I and Type II values.

Insight III
In the analysis, we realize that Cluster 1 and 4 are mostly formed by DD (MBA & MSBA) students. They are having different preferences and actions compared to the One-year MSBA and DD (MIB & MSBA) students. The biggest difference between MBA students and others is age. MBA students are older because of their program requirements. McCrae et al. (2005)[1] found out that levels of Agreeableness and Conscientiousness are positively associated with age whereas levels of Extraversion and Openness are negatively associated with it. As a result, the age factor affects the personality test results significantly.

Recommendation

According to our segmentation, we will be focusing on Cluster 1 and 3. They create market opportunities for Microsoft by willing to use a different computer in the future and opening to change. They may not want to purchase a Windows laptop at first, but by applying personalized marketing campaigns to target segmentation, these students will purchase new Windows laptops in the future.

Furthermore, according to analysis, students, who are younger than 40 years old, are more willing to buy a different laptop in the future. They are more open to change compared to the students who

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[1] Ref. 1

are over 40 years old. The Big Five Personality test is frequently used by many companies to personalize their marketing campaigns. One of the biggest examples is Cambridge Analytica.[2]

However, based on our analysis, psychological researches[3] support that the Personality Test answers are significantly affected by age. Therefore, it will be more precise if companies consider the age factor in the Personality Test surveys.

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[2] Ref. 2
[3] Ref. 3, Ref. 4, Ref. 5

References

Ref 1: McCrae RR, Terracciano A. Universal features of personality traits from the observer's perspective: Data from 50 cultures. Journal of Personality and Social Psychology. 2005;88:547–561.

Ref 2: Resnick, B. (2018, March 26). Cambridge Analytica's "psychographic microtargeting": what's bullshit and what's legit. Retrieved from https://www.vox.com/science-and-health/2018/3/23/17152564/cambridge-analytica-psychographic-microtargeting-what

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Ref 3: Roberts BW, Walton KE, Viechtbauer W. Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies. Psychological Bulletin. 2006;132:1–25.

Ref 4: Terracciano A, McCrae RR, Brant LJ, Costa PT., Jr. Hierarchical linear modeling analyses of the NEO-PI-R scales in the Baltimore Longitudinal Study of Aging. Psychology and Aging. 2005;20:493–506.

Ref 5: Srivastava S, John OP, Gosling SD, Potter J. Development of personality in early and middle adulthood: Set like plaster or persistent change? Journal of Personality and Social Psychology. 2003;84:1041–1053.