

Unsupervised Machine Learning and RFM Analysis for Customer Segmentation in the Online Food Ordering Market

Rakeshkumar Umanath Upadhyay¹ and Prof. Nilesh Choudhary²

Student, Department of Computer Engineering¹

Professor, Department of Computer Engineering²

Godavari College of Engineering, Jalgaon, Maharashtra, India

Abstract: *This paper provides an overview of existing literature on the relationship between social media and mental health, particularly among adolescents. The paper discusses the various ways in which social media can affect mental health, including increased exposure to cyberbullying, social comparison, and decreased self-esteem. Additionally, the paper examines how social media can lead to addiction, which can have a detrimental effect on mental health. The findings of this study have important implications for parents, educators, and mental health professionals. It is recommended that efforts be made to raise awareness about the potential negative effects of social media use among adolescents and to develop strategies to mitigate these effects. This can include promoting digital literacy skills, encouraging healthy social media habits, and providing support for those who have been affected by cyberbullying or addiction.*

Keywords: Market segmentation, client, marketing, personalized marketing, machine learning, supervised learning, unsupervised learning, RFM analysis, clustering

REFERENCES

- [1] Langer, M., Oster, D., Speith, T., Hermanns, H., Kästner, L., Schmidt, E., ...& Baum, K. (2021). What do we want from Explainable Artificial Intelligence (XAI)?—A stakeholder perspective on XAI and a conceptual model guiding interdisciplinary XAI research. *Artificial Intelligence*, 296, 103473.
- [2] McCarthy, D. M., & Winer, R. S. (2019). The Pareto rule in marketing revisited: is it 80/20 or 70/20?. *Marketing Letters*, 30, 139-150.
- [3] Perrotta, C., & Selwyn, N. (2020). Deep learning goes to school: Toward a relational understanding of AI in education. *Learning, Media and Technology*, 45(3), 251-269.
- [4] Suh, T., & Chow, T. E. (2021). Developing a digital marketing tool for ethnic ventures' mixed business model and market-shaping: A design scientific approach of web demographics. *Industrial Marketing Management*, 93, 10-21.
- [5] Nayyar, G., Hallward-Driemeier, M., & Davies, E. (2021). *At Your Service?: The Promise of Services-Led Development*. World Bank Publications.
- [6] Prasad, S., Garg, A., & Prasad, S. (2019). Purchase decision of generation Y in an online environment. *Marketing Intelligence & Planning*, 37(4), 372-385.
- [7] Ikumoro, A. O., & Jawad, M. S. (2019). Assessing intelligence conversation agent trends-chatbots-ai technology application for personalized marketing. *TEST Engineering and Management*, 81, 4779-4785.
- [8] Dong, Y., Hou, J., Zhang, N., & Zhang, M. (2020). Research on how human intelligence, consciousness, and cognitive computing affect the development of artificial intelligence. *Complexity*, 2020, 1-10.
- [9] Pashaei, M., Kamangir, H., Starek, M. J., & Tissot, P. (2020). Review and evaluation of deep learning architectures for efficient land cover mapping with UAS hyper-spatial imagery: A case study over a wetland. *Remote Sensing*, 12(6), 959.
- [10] Cheng, F. Y., Joshi, H., Tandon, P., Freeman, R., Reich, D. L., Mazumdar, M., ...& Kia, A. (2020). Using machine learning to predict ICU transfer in hospitalized COVID-19 patients. *Journal of clinical medicine*, 9(6), 1668.
- [11] Rojlerjanya, P. (2019). Customer segmentation based on the rfM analysis model using k-means clustering technique: a case of it solution and service provider in thailand.
- [12] Dogan, A., & Birant, D. (2021). Machine learning and data mining in manufacturing. *Expert Systems with Applications*, 166, 114060