IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.301
Volume 3, Issue 1, November 2023

Identification of Fraudulent Reviews

Mr. Adithyan P S[1], Ms. Akshaya V A[2], Mr. Bhuvanesh A[3], Ms. Anitha R[4]
Students, Department of Computer Science and Engineering[1,2,3]
Assistant Professor, Department of Computer Science and Engineering[4]
SRM Valliammai Engineering College, Chennai, Tamil Nadu, India

Abstract: *This paper introduces a comprehensive system designed to bolster the trustworthiness of product reviews in e-commerce applications. Leveraging logistic regression, the system filters out fake reviews obtained through web scraping, providing users with an authentic product rating. The algorithm analyzes textual features to assign a probability score, effectively distinguishing genuine reviews from deceptive ones. The resultant authentic rating serves as a reliable metric for users navigating the crowded marketplace. In addition to enhancing review authenticity, the system integrates a comparative pricing feature. Multiple e-commerce links are scrutinized to compile and analyze pricing information, enabling users to make well-informed decisions based on both review credibility and cost-effectiveness. The user-friendly interface displays the authentic product rating alongside a graphical representation of the percentage of genuine and fake reviews, empowering consumers to interpret feedback reliability intuitively. The system contributes to e-commerce advancement by addressing the pervasive issue of fake reviews, offering users a sophisticated toolset for assessing product authenticity and making informed purchasing decisions. This research amalgamates machine learning, web scraping, and comparative analysis into a seamless framework, ultimately providing users with a holistic solution for navigating the intricacies of online shopping.*

Keywords: Logistic Regression, Web Scraping, Comparing Price, Machine Learning.

REFERENCES

[1] H. Tufail, M. U. Ashraf, K. Alsubhi and H. M. Aljahdali, "The Effect of Fake Reviews on e-Commerce During and After Covid-19 Pandemic: SKL-Based Fake Reviews Detection," in *IEEE Access*, vol. 10, pp. 25555-25564, 2022, doi: 10.1109/ACCESS.2022.3152806.
[2] M. Abdulqader, A. Namoun and Y. Alsaawy, "Fake Online Reviews: A Unified Detection Model Using Deception Theories," in IEEE Access, vol. 10, pp. 128622-128655, 2022, doi: 10.1109/ACCESS.2022.3227631.
[3] M. H. Arif, J. Li, M. Iqbal, and K. Liu, ''Sentiment analysis and spam detection in short informal text using learning classifier systems,'' Soft Comput., vol. 22, no. 21, pp. 7281–7291, Nov. 2018.
[4] Y. Xu et al., "Mining Weak Relations Between Reviews for Opinion Spam Detection," in IEEE/ACM Transactions on Audio, Speech, and Language Processing, vol. 31, pp. 152-162, 2023, doi: 10.1109/TASLP.2022.3221008.
[5] R. Mohawesh, S. Xu, S. N. Tran, R. Ollington, M. Springer, Y. Jararweh, and S. Maqsood, ''Fake reviews detection: A survey,'' IEEE Access, vol. 9, pp. 65771–65802, 2021.
[6] P. Kaghazgaran, J. Caverlee, and M. Alfifi, ''Behavioral analysis of review fraud: Linking malicious crowdsourcing to Amazon and beyond,'' in Proc. Int. AAAI Conf. Web Social Media, vol. 11, 2017.
[7] S. P. Rajamohana, K. Umamaheswari, and S. V. Keerthana, ''An effective hybrid cuckoo search with harmony search for review spam detection,'' in Proc. 3rd Int. Conf. Adv. Electr., Electron., Inf., Commun. Bio-Inform. (AEEICB), Feb. 2017, pp. 524–527.
[8] A. Mukherjee, V. Venkataraman, B. Liu, and N. Glance, ''Fake review detection: Classification and analysis of real and pseudo reviews,'' Univ. Illinois, Chicago, IL, USA, Tech. Rep. UIC-CS-03-2013, 2013.
[9] E. I. Elmurngi and A. Gherbi, ''Unfair reviews detection on Amazon reviews using sentiment analysis with supervised learning techniques,'' J. Comput. Sci., vol. 14, no. 5, pp. 714–726, May 2018.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.301
Volume 3, Issue 1, November 2023

[10] N. A. Patel and R. Patel, "A Survey on Fake Review Detection using Machine Learning Techniques," 2018 4th International Conference on Computing Communication and Automation (ICCCA), Greater Noida, India, 2018, pp. 1-6, doi: 10.1109/CCAA.2018.8777594.