IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
IJARSCT onal Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.53
Volume 4, Issue 4, June 2024

Machine Learning-Based Fake Online Review Comment Detection

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Abstract: *The proliferation of online reviews has made them a vital source of information for consumers in making purchasing decisions. However, the prevalence of fabricated feedback has become a significant concern, undermining the trustworthiness of these platforms. This project aims to develop a machine learning-based system for detecting fake reviews[3] and assisting users in making informed choices. The Research study leverages a dataset consisting of labeled reviews, where each review is classified as fake or genuine[1]. This is used to train and judge the performance of a variety of machine learning models. The initial phase of the project involves preprocessing the textual data by applying techniques such as :*

- *tokenization,*
- *stop-word removal, and*
- *stemming to extract relevant features.*

Furthermore, the system incorporates natural language processing (NLP) methods:

- *to capture semantic and syntactic information, [2]*
- *enabling a depth knowing of the review content. [4]*

To increase the detection accuracy, the project explores the integration of additional contextual features, such as

- *User profiles,*
- *Review timestamps, and*
- *Review ratings.*

These above provided info for establishing patterns and identifying anomalies associated with fake reviews[3].

Keywords: purchasing decisions