Classification of Fake Product Ratings Using a Timeline Based Approach

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***Abstract*— Detection of fake review and reviewers is currently a challenging problem in cyber space. It is challenging primarily due to the dynamic nature of the methodology used to fake the review. There are several aspects to be considered when analyzing reviews to classify them effective into genuine and fake. Sentiment analysis, opinion mining and intend mining are fields of research that try to accomplish the goal through Natural Language Processing of the text content of the review. In this paper, an approach that uses the review ratings evaluated along a timeline is presented. An Amazon dataset comprising of ratings indicated for a wide range of products was used for the analysis presented here. The analysis of the ratings was carried out for an electronic product over a period of six years. The computed average rating helps to identify linear classifiers that define solution boundaries within the dataspace. This enables a product specific classification of review ratings and suitable recommendations can also be generated automatically. The paper explains a methodology to evaluate the average product ratings over time and presents the research outcomes using a novel classification tool. The proposed approach helps to determine the optimal point to distinguish between fake and genuine ratings for each product.**

***Index Terms*: Fake reviews, Fake Ratings, Product Ratings, Online Shopping, Amazon Dataset.**