Fake Review Detection (Working Title)

Satheesh Joseph

Catherine Mou

Yi Zhang

Abstract—Abstract

I. INTRODUCTION

Introduction

II. BACKGROUND

Background.

- Benchmark control group paper [5]

- Survey paper [1]

- Data description [7]

- GAN Paper [4]

- Original data comes from [3] [2]

Other papers that we consulted [6], [8]

III. METHODS

Methods

IV. RESULTS & DISCUSSION

Results and Discussion

V. CONCLUSION

Example table

TABLE I. SUMMARY OF EXPERIMENTAL RESULTS

System	$\mid n \mid$	γ	Samples	mean	max
A	21	0.2	24236 (11%)	0.083	0.084
		0.15	43307 (20%)	0.081	0.081
		0.1	97440 (44%)	0.074	0.074
В	23	0.2	26332 (2.2%)	0.035	0.036
		0.15	46812 (4.0%)	0.026	0.026
		0.1	105326 (8.9%)	0.0068	0.0069
С	26	0.2	29289 (2.2%)	0.084	0.085
		0.15	52070 (3.9%)	0.084	0.084
		0.1	117156 (8.8%)	0.080	0.082
D	20	0.2	23375 (2.2%)	0.074	0.080
		0.15	41555 (4.0%)	0.034	0.037
		0.1	93497 (8.9%)	0.024	0.024

n =Number of features of system.

 γ = User specified maximum error.

Samples = Number & proportion of samples used.

mean = Average actual error from the 10 runs.

max = Maximum actual error from the 10 runs.

REFERENCES

- Rami Mohawesh, Shuxiang Xu, Son N. Tran, Robert Ollington, Matthew Springer, Yaser Jararweh, and Sumbal Maqsood. Fake reviews detection: A survey. *IEEE Access*, 9:65771–65802, 2021.
- [2] Arjun Mukherjee, Vivek Venkataraman, Bing Liu, and Natalie Glance. What yelp fake review filter might be doing? In Seventh international AAAI conference on weblogs and social media, 2013.
- [3] Arjun Mukherjee, Vivek Venkataraman, Bing Liu, Natalie Glance, et al. Fake review detection: Classification and analysis of real and pseudo reviews. UIC-CS-03-2013. Technical Report, 2013.
- [4] Gray Stanton and Athirai A Irissappane. Gans for semi-supervised opinion spam detection. arXiv preprint arXiv:1903.08289, 2019.
- [5] Xiaoya Tang, Tieyun Qian, and Zhenni You. Generating behavior features for cold-start spam review detection with adversarial learning. *Information Sciences*, 526:274–288, 2020.
- [6] Jingdong Wang, Haitao Kan, Fanqi Meng, Qizi Mu, Genhua Shi, and Xixi Xiao. Fake review detection based on multiple feature fusion and rolling collaborative training. *IEEE Access*, 8:182625–182639, 2020.
- [7] Xuepeng Wang, Kang Liu, and Jun Zhao. Handling cold-start problem in review spam detection by jointly embedding texts and behaviors. In Proceedings of the 55th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers), pages 366–376, 2017.
- [8] Chunyuan Yuan, Wei Zhou, Qianwen Ma, Shangwen Lv, Jizhong Han, and Songlin Hu. Learning review representations from user and product level information for spam detection. In 2019 IEEE International Conference on Data Mining (ICDM), pages 1444–1449. IEEE, 2019.