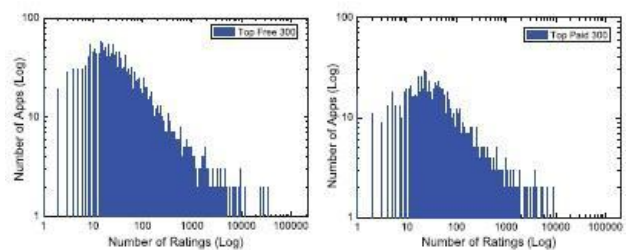


(a) Top Free 300 data set (b) Top Paid 300 data set

Figure 3(a) and Figure 3(b)



(a) Top Free 300 data set (b) Top Paid 300 data set

Figure 4(a) and Figure 4(b)

5. Conclusion

To develop a ranking fraud detection system for mobile Apps, we first discover that ranking fraud occur in leading sessions and provided a method for mining leading sessions for each App from its historical ranking records. In that case, we identified ranking based evidences, rating based evidences and review based evidences for detecting ranking fraud. An optimization based aggregation method to integrate all the evidences for evaluating the reliability of leading sessions from mobile Apps is proposed. All the evidences can be modelled by statistical hypothesis tests for the unique perspective of this approach, thus it is easy to be extended with other evidences from domain knowledge to detect ranking fraud. Finally, we validate the proposed system with extensive experiments on real world App data collected from the Google play store. Experimental results showed the effectiveness of the proposed approach.

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