

CSE438  
Task2  
Paper Report

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Section: 1

## **Paper Title**

Markov-Driven Graph Convolutional Networks for Social Spammer Detection

## **Paper Link**

[L. Deng, C. Wu, D. Lian, Y. Wu and E. Chen, "Markov-Driven Graph Convolutional Networks for Social Spammer Detection," in IEEE Transactions on Knowledge and Data Engineering](#)

## **1 Summary**

### **1.1 Motivation**

The paper aims to detect spammers on social media services. As we use social network everyday for communication, work, entertainment etc. It has become a place where now people can get easily influenced by any kinds of information. So, it is important to keep it safe and ensure no misinformation is spread.

Due to the spammers introducing different types of false information, enticing offers and such, people are led astray, and some are being harmed in more ways than one. Most of the time the harm can be viewed as minor but when a large mass is being led astray, it becomes dangerous for everyone. The goal of this paper is to identify those spammers using patterns to identify their behaviors and computational calculations.

### **1.2 Contribution**

The paper identifies problems of already established model and suggests a solution by adding more layers of computation so that the

error is avoided. The model proposed is also efficient and performance is higher than available models.

### **1.3 Methodology**

After acquiring an appropriate amount of dataset of labeled spammer text from twitter, the data is processed with graph convolution network (GCN) combined with ARMRF to ensure to avoid worst case scenario by GCN. Then merge it with conditional random field (CRF). Thus we get what the paper calls a Markov Drive Convolution Network.

### **1.4 Conclusion**

The paper establishes that it can detect spammer better than already available model by showing accuracy and score comparison. The theory was already there but this paper used an efficient model and removed the worst case and further improved the output.

## **2 Limitation**

### **2.1 First Limitation**

Only one algorithm was used to theoretically remove error. We can experiment with others which has somewhat same theory but different application method and find if it is better or not.

### **2.2 Second Limitation**

There were no feature analysis for the spammer after improving the algorithm to see if different combination would work better after changing the process.

## **Synthesis**

Everyone in the current timeline is dependent on social media. We are using them every day to communicate with people and make decisions. Thus, we want to make sure if the content or information that we are fed are genuine or just a scam so that we are not led astray or make any bad decisions which might hamper our day to day life.