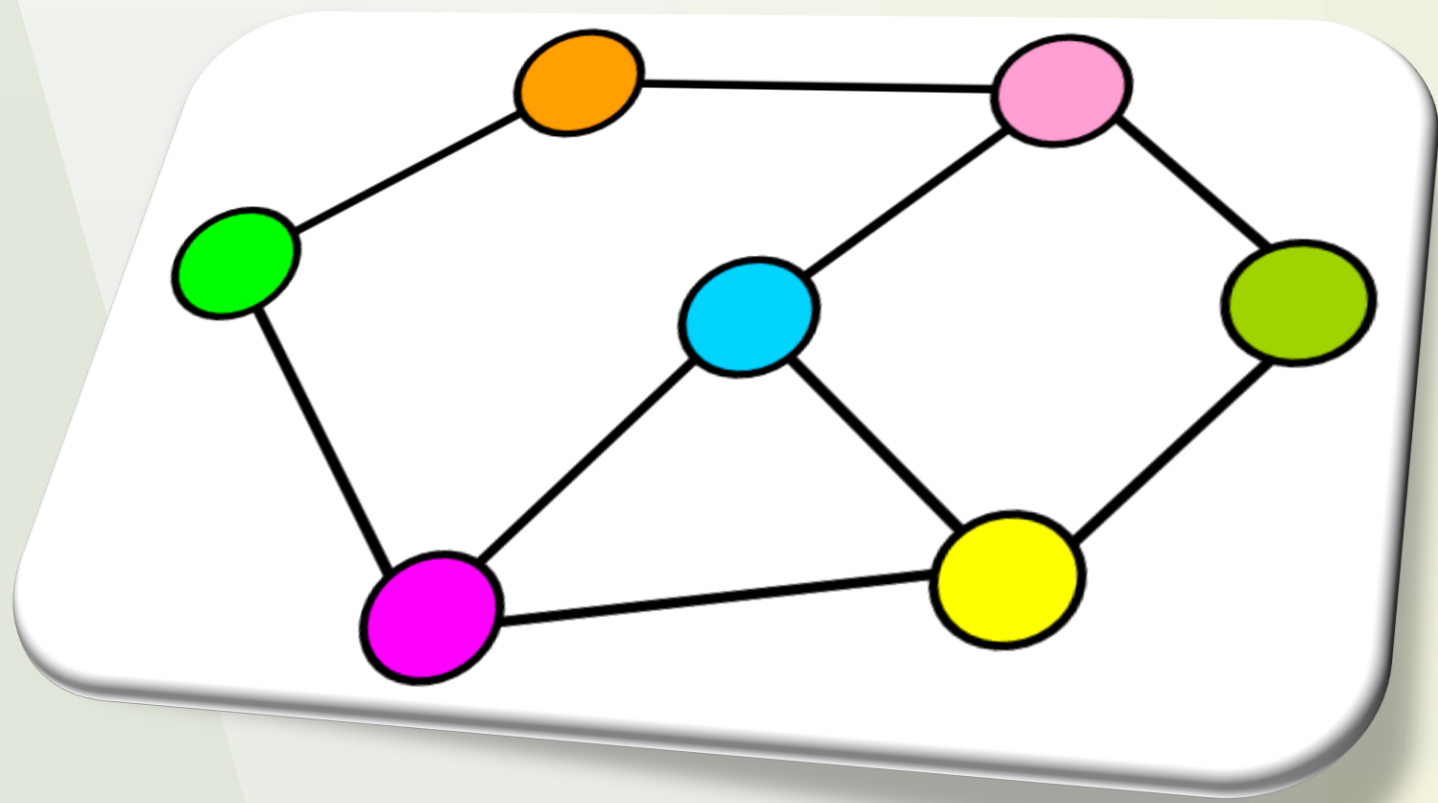


Graph Theory in Crime Science

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INTRODUCTION

Crime Science is the study of crime in order to find ways to prevent it. Graph is basically nodes with connecting edges among the nodes as below.



Here a technique of graphs is used to identify the suspects of a crime by using their statements. Then according to that statements color each and every node with distinct colors and mark the edges to each other suspects according to their statements.



OBJECTIVES

The methodology of this graph coloring for identifying suspects is mainly focused to reduce the time of investigation. That means optimize the investigation by saving time. It is a hard task to analyze the statements of each and every suspects. So, main objective is to get a better performance in investigating when identifying the suspects.

- ❖ Optimize the investigation process.
- ❖ Reduce the time of investigating.
- ❖ Identifying the suspects by analyzing their statements.



CONCLUSION

Here, as the introduction each and every edge between nodes are based on the statements of the each suspects. So we cannot predefine patterns to capture the suspect at once, because it depends on the statements of each other. So then using propositions and proofs for the each and every case in graph analysing we can capture the suspect. This method is really helpful in investigating crimes to identify the suspects.



REFERENCES

- [1] R. J. Wilson, "Colouring Graphs," in Introduction to Graph Theory.
- [2] E. Chuck, "Utilizing Graph Theory to Model Forensic Examinations," 2017.
- [3] S. P. Y. Channel, "How To Solve A Crime With Graph Theory," 2017.