Detecting and Preventing Filicide by Machine Learning Algorithms

Abstract

Filicide is referred to the phenomenon where one or more child is murdered by a parent, stepparent or equivalent guardian (Thea Brown, 2017). This sub-classification of domestic homicides is the most outrageous of crimes as it occurs at the hand of the person who is most expected to protect a child. In spite of taking place all around the world, this deeply horrifying crime is committed rarely. Furthermore, this is the leading reason which makes each filicide case a unique one and brings the question up whether it is feasible to prevent it or not. Analyzing both parents and children is the solution to this issue since previous works only consider on of these two groups.

Keywords: Filicide, Machine Learning, Image Mining, Text Mining.

Introduction

To identify an approach for detecting this crime, studying a parent's motivation plays a significant role where a classification system can effectively provide us with better understanding. Based on the type of crime and the gender of the perpetrator, different classification systems have been devised for filicide however, the classification created by Phillip Resnick is one of the most influential. This classification scheme includes five categories (West, 2007): altruistic filicide, acutely psychotic filicide, unwanted child filicide, accidental filicide, and spouse revenge filicide.

Although every motivation represented by this classification system may help us as a factor to analyze parent's behaviors by machine learning algorithms and detect the crime, it is not sufficient. According to studies parents are capable of this crime regardless of their mental status or criminal history (Thomas Munk Laursen, 2010), in other terms, there might be some cases having no common features with categories above.

In these specific cases, machine learning algorithms should not only consider analyzing parent's behaviors to detect the crime but also children. Filicide puts children under 18 in danger whereas children at the age of five are at risk to a great extent. Children establish dissimilar communication skills depending on their age and they may give the message of threatening with murder in different forms such as body gesture, taste in music, hidden clues in writings, playing, calligraphy, etc. Text and image mining are two of the many powerful means which come to our aid to detect these messages.

Conclusion

Parent's behavior in real life or on social media and children's behavior based on their age give us a large amount of data and the opportunity to learn a model, save many lives, and do not allow these precious treasures to be laid in the hands of abuse and murder.

References

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