

Proposal: AI in Combating Human Trafficking While Preserving Victim Privacy

Introduction

Human trafficking is one of the gravest human rights violations globally, affecting millions of individuals. With the advent of digital technologies, traffickers have found new means to exploit vulnerable people via online platforms, making the detection and prevention of trafficking increasingly complex (Cockbain, 2018). Traditional methods of combating human trafficking are often slow and ineffective in identifying patterns across vast data sets. In contrast, artificial intelligence (AI) offers a novel approach to detecting trafficking activities in real-time by analyzing digital footprints, such as social media interactions, advertisements, and transaction data (Latonero, 2012). However, while AI is powerful in identifying trafficking networks, the use of large-scale data analytics introduces significant privacy concerns, particularly regarding the protection of victims' sensitive information (Szekely et al., 2015).

This proposal will examine the potential of AI in combating human trafficking while comparing different privacy-preserving approaches used to protect victims' identities. By addressing both the technical and ethical challenges associated with AI, this paper will explore how to balance the effectiveness of AI in tracking traffickers with the need to preserve the privacy of those it seeks to protect.

Significance of the Issue

The global scope of human trafficking necessitates innovative solutions to combat it, and AI is increasingly recognized as a critical tool. According to the International Labour Organization (2017), approximately 24.9 million people are trapped in human trafficking, many of whom are

exploited through digital means. AI can play a significant role in analyzing vast datasets to identify trafficking networks more quickly and effectively than human investigators alone. It can detect patterns in suspicious online activities and generate alerts for law enforcement agencies to act upon. AI systems, such as those used by Thorn, have already demonstrated the ability to identify victims of sexual exploitation by analyzing online ads (Thorn, 2020).

However, the use of AI in this field raises critical ethical concerns, particularly regarding victim privacy. Many current approaches involve collecting and processing large amounts of personal data, often without the explicit consent of victims. This creates potential risks, such as the inadvertent exposure of victims' identities or their re-victimization through data breaches. The challenge lies in finding ways to leverage AI's capabilities without compromising privacy.

This proposal is important because it addresses two critical areas: the need for innovative AI tools to fight human trafficking and the ethical imperative to protect the privacy of victims. Current research has explored both AI in human trafficking (Latonero, 2012; Szekely et al., 2015) and privacy-preserving techniques in AI (Dwork, 2008; Abadi et al., 2016), but few studies have focused on the intersection of these fields. By comparing different approaches to privacy preservation, such as differential privacy and federated learning, this paper will contribute to ongoing debates about ethical AI deployment in socially sensitive areas.

Comparative Approach

To effectively examine this issue, this paper will adopt a comparative approach, analyzing the benefits and limitations of different AI models and privacy-preserving techniques. Two key techniques that will be explored are differential privacy and federated learning. Differential privacy ensures that AI models can learn from data while maintaining individual privacy by adding noise to the data (Dwork, 2008). This method has been widely adopted in industries where sensitive information is used, such as healthcare and finance. Federated learning, on the

other hand, allows AI models to be trained across decentralized devices without sharing the raw data itself (Kairouz et al., 2019). This method is particularly useful in scenarios where data privacy is paramount, such as in the fight against human trafficking.

By comparing these two privacy-preserving techniques, this paper will explore which approach offers the most effective balance between accuracy and privacy protection in combating human trafficking. Differential privacy might allow for more granular data analysis but risks degrading model accuracy, while federated learning minimizes data sharing but presents challenges in coordination and efficiency. A comparison of these approaches will highlight the trade-offs involved in using AI for social good, particularly in ethically sensitive contexts like human trafficking.

Conclusion

The intersection of AI and human trafficking offers tremendous potential for social good, but it also raises profound ethical questions about privacy. This proposal aims to explore how AI can be used effectively to combat human trafficking while preserving the privacy of the victims. By comparing differential privacy and federated learning as two key privacy-preserving techniques, this paper will contribute to the ongoing conversation about the responsible and ethical use of AI in socially critical areas. The findings from this research will not only inform AI developers and policymakers but also provide insights into the broader ethical challenges of deploying AI for social good.

References

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