



JJAIBOT & HUMAN TRAFFICKING A CASE STUDY

A Policy Organization used JJAIBOT to Combat Human Trafficking

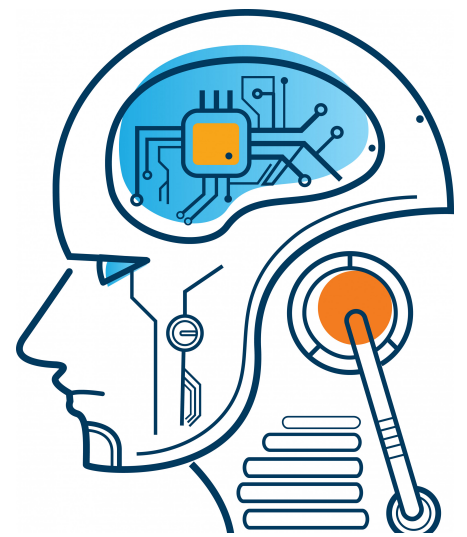




Table of Contents

02

ABOUT HUMAN TRAFFICKING

03

ABOUT NON-PROFIT ORGANIZATION

04

THE NEED FOR AI IN HUMAN TRAFFICKING

05

JJAIBOT COMBATTING HUMAN TRAFFICKING

07

THE FINAL WORD

HUMAN TRAFFICKING

Human trafficking is the trade involving humans who are exploited for labor, sexual slavery, or commercial sex for the benefit of the trafficker. It consists of harboring or transporting people into a situation of exploitation by force, deceit, and violence against their will.

According to International Labour Organization estimates there are 40.3 million victims of human trafficking worldwide.



80% are women & girls
in forced labour



50% of the victims are
children



#2 fastest criminal
industry



Only 0.4% of survivors
identified



42% of recruiters are
women

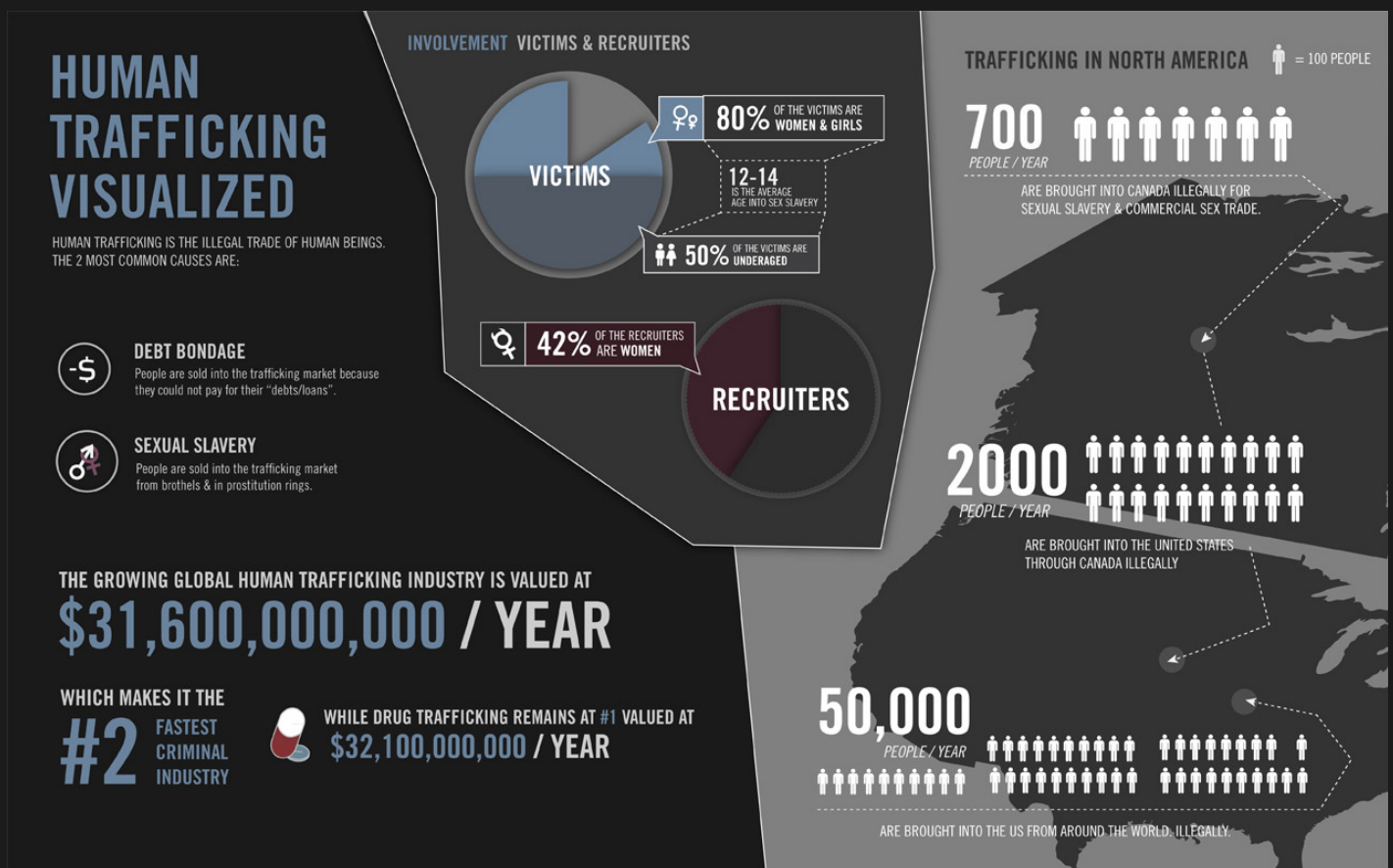


31.6 billion dollar
industry

This also highlights the difficulty that law enforcement encounters while trying to solve cases to do with human trafficking. Most cases of human trafficking are a result of vulnerability on the victims' side, which the perpetrators use to exploit the victims. These vulnerabilities are usually socio-economic in nature.



The organization of our interest is a non-profit organization that works on the issues of commercial sexual exploitation. It mostly focusses on the issues of sex tourism and has helped pass legislation that ensures those who travel outside the USA for sex tourism are prosecuted within the USA.



The organization has a network of organizations in several countries working together toward one joint mission: to eliminate the sexual exploitation of children.



ARTIFICIAL INTELLIGENCE

Identifying and combating human trafficking is essential in tackling the vice. Without means of identifying the victims and possible channels traffickers use, you are unlikely to rescue the victims or stop the cases when they are about to occur.

In the case of the non-profit, which mostly deals with commercial sexual exploitation for minors in the name of sex tourism, it is crucial to identify the drivers and motivations of the perpetrators of such cases. In most of the cases, the victims are driven to such by economic situations in their countries; they are mostly minors who are introduced to such practices by people they trust such as their parents, guardians or friends who are motivated by financial gains they obtain from the tourists who buy from them such services. In their countries there is weak legislation against such practices thus the actions of perpetrators may go unpunished hence the need for identifying potential perpetrators and victims and helping to avert such practices where possible.



Social Media Concerns

In this digital age, perpetrators use social media to connect with victims who may be trained by their masters on how to make posts on social media to advertise their services. They may use images and coded language, which may be only understood by those looking to travel to buy sex from minors.

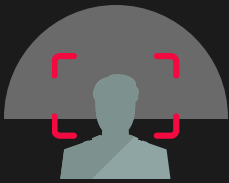


Public & Private Sector Involvement

Traditionally the organization relied upon collaborative efforts between the host country community of informants in identifying hotspots where sex tourism is rampant. This may be effective, but sometimes its too late to deter/prevent it from occurring; also the host country may sometimes be reluctant to collaborate with international nonprofits that deal with deterring sex tourism as they believe will threaten the tourism market. The organization also works with the private sector mostly in hotels and tourism to help educate the workers on those sectors on how to identify and channels to use to report on the occurrence of sex tourism cases.

However, these methods may not be fully effective, thus the need to adopt technology tools to help in averting sexual exploitation in children. The organization adopted JJAIBOT to assist in combatting human trafficking.

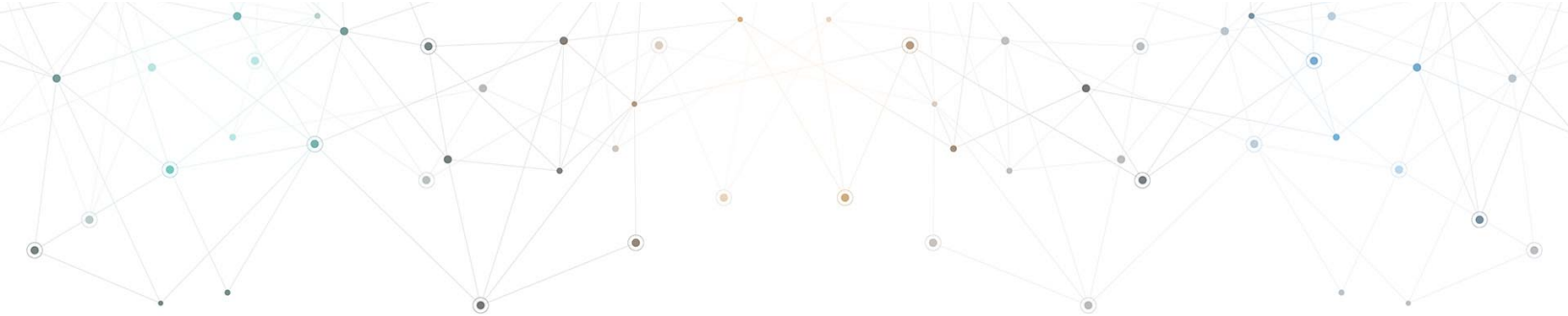
Julian Jewel's Artificial Intelligence Bot (JJAIBOT) is an artificial intelligence bot that was created by Julian Jewel Jeyaraj in January 2019 as an initiative to help people understand the effects of climate change, mental illness and wildlife conservation through an interactive, emotion-based artificial intelligence bot. The non-profit organization adopted JJAIBOT and uses its components to help in its cause of combating child sex tourism. Its components were tailored in a way that they could be implemented in organizations' missions of preventing sex tourism.



Visual & Acoustic Recognition Component (V-ARC):

JJAIBOT uses AI and deep learning software to detect images (brain scans, facial expressions, etc.) in still or video images. The organization has an extensive database of offenders and victims of sex tourism. We trained JJAIBOT from the database to identify the victims, perpetrators, locations, images and any visual data that may be associated with the perpetrators and the victims. With such a vast database the AI would help organizations monitor social media of the victims and perpetrators and also use its predictive analytics to pinpoint the next possible victims and would-be perpetrators. Using our vast array of database and AI power of JJAIBOT possible locations where the vice is rampant could be pin-pointed and use such data to warn the would-be victims and alert the authorities about the potential threat of the child molester. The organization would also be able to inform the hotel facility of the possibility of them hosting an offender.

By monitoring the images shared on social media, AI was able to positively identify would-be perpetrators and also some repeating perpetrators who were successfully identified by law enforcers. Victims identified would be counselled and taught on ways on how to report sexual offences suffered. In case a sexual violation occurred, and the organization was able to collect video evidence and unable to identify the offenders, victims or location of the offence using the JJAIBOT deep learning capabilities it would dig up from its extensive database the images and possible locations and try to match them with the video obtained. It will give matches to a high degree of accuracy thus enabling identify locations of crime, perpetrators, and victims.



Chatbot (C-BOT)

JJAIBOT chatbot is a secure, transactional, conversation-based chatbot that uses Natural Language Understanding (NLU), Natural Language Processing (NLP) and Natural Language Generation (NLG) techniques. We helped the organization deploy the C-BOT component in their network and also on social media pages. With help from volunteers who were victims of sexual exploitation, we created few social media pages whose profile mimicked those of the victims; we trained the C-BOT to mimic chats from the victim's accounts and learn of the communication patterns used by the perpetrators of sex tourism. The data provided by volunteer victims helped the C-BOT build a profile and also provide datapoint of the coded language used in the vice. Perpetuator could initiate a conversation with the C-BOT without the idea that he was actually communicating with our AI. From the conversation, the organization was able to pinpoint perpetrators' location, his mental state and whether he is a first offender or continuing offender. The organization is then able to collaborate with the relevant authorities and help them nab the offender before he causes harm. With the help of C-BOT, the organization is able to come up with complex data and analyze it to come up with common text patterns that are used in the commission of the crime with C-BOTs NLP and NLU capabilities. With the deployment of C-BOT in digital platforms the organization is able to gain insights into would-be perpetrators and also identify victims of human trafficking offences. This has helped the organization stay abreast of the perpetrators as they are now able to catch them before they commit the crime and also identify profiles of would-be victims.



Emotional Processing Unit (EMU)

JJAIBOT's Emotional Processing Unit (EMU) has several components of emotion: happiness, contempt, anger, fear, sadness, disgust, indifference, love, confidence, and regret. While EMU is combined with C-BOT features such as NLP, NLU, and NLG capabilities, we are able to come up with the emotional state of the victims based on their online activity data. JJAIBOT capability of text mining helps the organization deduce the emotion state of would-be perpetrators and victims based on their online activity. Understanding the mental status of the perpetrators is vital as it helps build current emotion state which can be of importance in identifying potential perpetrators online.



Predictive Analytics Engine (PAE)

JJAIBOT identifies patterns through predictive analytics to determine if each pattern is of immediate value. With both new and historical data, PAE applies statistical techniques, analytical queries, and automated machine learning algorithms to data sets to create predictive models that place a score on the likelihood of an event happening. With the organization's massive trove of data, PAE can be used to give a predictive model and create a pattern of possible occurrences. To a certain degree of certainty, the organization will be able to pinpoint possible violations and time when the acts will occur thereby notifying law enforcement for preventive actions.



HUMAN TRAFFICKING

By adopting JJAIBOT AI, the organization was/is able to tackle most cases of sex exploitation through sex tourism. We found that the AI was able to reduce the time period taken to investigate some facts of sex tourism. The organization was also able to better collaborate with private sector players such as hotels and travel agents by helping the players in the sector better understand the nuances involved in such cases of sex tourism.

With JJAIBOT AI capabilities, the organization was able to dig up previous cases that would otherwise be ignored as sex tourism crimes. This was done through image processing from images shared in social media and performing hash-matching of the images with images from series of known crime images from the database; also, social media posts from known preparators gave the organizations useful clues of how the crime operates.

Our JJAIBOTs AI also isolated known locations by use of machine learning algorithms; thus, the organization was able to know which hotels or travel agents were knowingly or unknowingly abetting the vice. By use of our vast database of images collected, the algorithm was able to determine where the photos used by the victims on the social media were taken, thus enabling the local authorities to locate and rescue the victims of the vice.