WHITEPAPER National Security Systems **Voyager** Labs

AI-Powered Tracking of Criminal Immigration Violators

Utilizing OSINT, Facial Matching, and AI for Automated Leads:
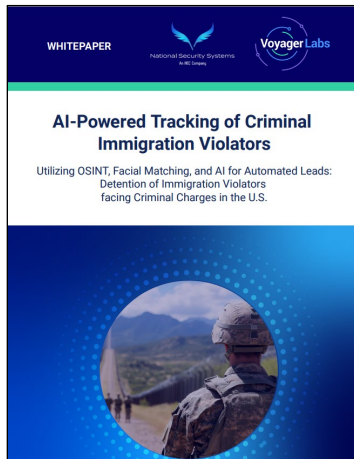Detention of Immigration Violators
facing Criminal Charges in the U.S.

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Utilizing OSINT, Facial Matching and AI for Automated Leads: Detention of Immigration Violators facing Criminal Charges in the U.S.

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National Security Systems
An NEC Company

Voyager Labs

AI-Powered Tracking of Criminal Immigration Violators

Utilizing OSINT, Facial Matching, and AI for Automated Leads:
Detention of Immigration Violators
facing Criminal Charges in the U.S.

EXECUTIVE SUMMARY:

The joint Voyager Labs – NEC NSS solution provides a comprehensive and unmatched suite of Open-Source Facial Recognition (FR) capabilities. Ethically obtained and governed, this solution provides customers the ability to accurately identify and match images of persons of interest with tremendous accuracy and efficacy. Importantly, the matched images can be newly obtained or cached images held within customer's own databases and might include intake or booking data as well surveillance images or social media posts.

Voyager Vision's Facial Recognition Technology component can be deployed using NEC's FRT: NEC's face recognition technology has been ranked the world's most accurate in a benchmark test conducted by the globally recognized U.S. National Institute of Standards and Technology (NIST). In this benchmark test, NEC received the highest performance evaluation in "1:N Identification," which consists of still images of 12 million different people, by achieving an authentication accuracy rate of 99.88%. NEC also ranked first in three other tests – including an aging effects test, in which photos taken more than 10 years prior were used for identification – and placed in the top three in all categories of the "Face Recognition Technology Evaluation (FRTE) 1:N Identification leaderboard," which are posted on the NIST website. NEC's FRT has ranked first in the world multiple times in the "1:N Identification" test, which calls for the highest accuracy of all of the face recognition benchmarks conducted by NIST. While working to improve the performance of its core algorithm, NEC has simultaneously rolled out real-world implementations of face recognition, and its face recognition business now operates in more than 50 countries and regions around the world.

Voyager Analytics software provides a comprehensive and robust Artificial Intelligence solution leveraging unique, proprietary Open Source analytics, including coverage of U.S. and foreign social media platforms, to support law enforcement efforts to identify locations and leads to at-large immigration violators with criminal convictions and charges.

Our solutions provide law enforcement agencies with the means for continuous and tailored identification, data gathering, and analysis of the activities and connections of immigration violators with serious criminal records who are being sought for arrest and detention. Our software capabilities can be currently demonstrated to deliver the following primary benefits for our Clients:

1. Identification of the social media accounts - and historical and current activities on those accounts - of at-large criminals.

2. OSINT and AI-informed identification of Persons of Interest's closest connections, friends, family, locations, and other operational leads.

3. Images from public sources of Persons of Interest and identification of their associations for lead generation.

4. Identification of suspected people and organizations which are supporting Persons of Interest's efforts to avoid arrest by law enforcement.

5. Building, expanding, and maintaining a massive, secure U.S. government-controlled database of Open Source Intelligence relevant for this threat, for automated discovery of locations, networks, criminal support elements, and deep investigations. The Client's addition and maintenance of sensitive proprietary data, including pictures and watchlists of known criminals and Persons of Interest, to this data lake will further enhance its value.

6. Integration and addition of other commercial and sensitive data sources, such as AdTech and Breach Date, for data fusion and immediate, actionable operational insights.

7. Anonymized, non-attributable gathering and analysis of data in English and 133 foreign languages on more than a dozen social media platforms, including TikTok, YouTube, VKontakte, Weibo, Telegram, X/Twitter, LinkedIn, and Reddit.

Background and Demonstration of Use Cases

The federal government estimates that there are about 663,000 immigration violators in the U.S. with criminal convictions or criminal charges who are not in the custody of the Immigration and Customs Enforcement agency. Discounting those among this number who are serving sentences in local, state, or federal jails and prisons, there are hundreds of thousands of immigration violators with criminal charges who are at-large in the U.S. and are priority cases for arrest and detention.

The joint Voyager Labs-NEC NSS Open-Source Intelligence platforms provide a highly automated, uniquely powerful capability to leverage publicly-available data to help locate these at-large threats. The use cases we have ready to demonstrate for their U.S.-based connections include Mexico's Sinaloa Cartel and Jalisco New Generation Cartel (CJNG), MS-13, and the Venezuelan-based "Tren de Aragua" transnational criminal organization.

Our use cases of violent criminals in this category will demonstrate the following aspects of these two Open Source platforms.

1. AI-driven analytics applications on a wealth of OSINT data leveraging our commercial off-the shelf software about Persons of Interest.

2. Ability to identify Persons of Interest's previous locations, associates, family members and friends, and associates with possible knowledge of their current locations.

3. Publicly available images of Persons of Interest, for further indications and leads about current locations and associates.

4. Alerts and continuous monitoring of Persons of Interest, proactively sent to Client-authorized users.

5. Identification and OSINT investigation of organizations involved in helping criminals evade arrest.

6. Automation and leveraging of the AI disciplines of Image Recognition (including tattoos), Object Recognition, Computer Vision (including for geolocation), Facial Recognition, Text/OCR Recognition, and Natural Language Processing and Understanding.

7. Fusion of other commercial off-the-shelf software relevant for this mission, including Breach Data and geo-locational data from AdTech.

8. Search Warrant data: Inclusion of Court-ordered social media account information, for harvesting of locational data (from Internet Protocol addresses), images, and connections.

NEC face recognition technology has been implemented at approximately 80 airports worldwide and is used in applications including immigration, customs, boarding procedures and customer service. These applications have become one of the primary use cases of face recognition technology. In addition, more than 1,000 organizations have adopted NeoFace Monitor, a system that allows users to log in to their devices using face recognition, improving both security and convenience. NEC also continues to be an industry leader in the provision of face recognition cloud services, including more than 1 million registered users in Japan.

Our law enforcement clients, including four federal agencies, increasingly demand immediate high-impact solutions to uncover hidden connections. Incorporating social media analysis enhances lead generation and reduces time spent on manual data collection and analysis. The Department of Homeland Security's Office of Inspector General has issued multiple reports highlighting the urgent need for improved measures to identify and apprehend immigration violators with criminal records. These reports underscore the critical importance of implementing advanced solutions to address this pressing issue.

- Final Report OIG-25-06
- Final Report OIG-24-65
- Final Management Alert OIG-24-26
- Final Management Alert OIG-24-33
- Final Report OIG-24-27

Speak with an industry expert to learn more about our Partnering with Purpose with Voyager and the comprehensive suite of Open-Source Facial Recognition capabilities.