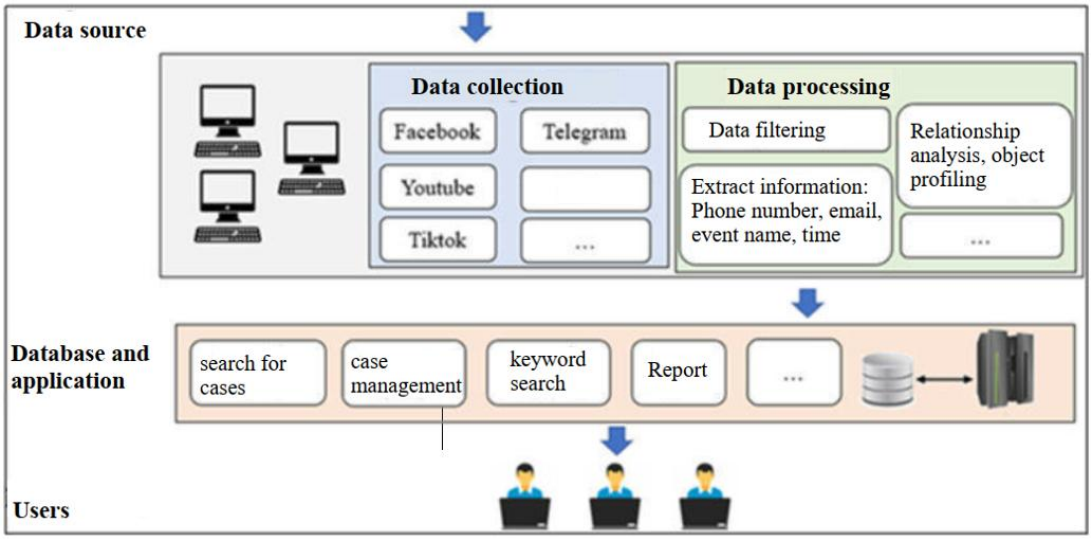
TRACKING AND MONITORING SYSTEM FOR OBJECTS ON SOCIAL MEDIA PLATFORMS - FLYT

SOFTWARE FEATURES

The system of tracking and monitoring social for Objects on social media platforms consists of four main functional components: Data collection, data processing, databases, and user applications



Data collection

Collect data from social media platforms such as Facebook, YouTube, TikTok, Telegram, according to task requirements, using automatic scraping techniques or API connections (if any) from platforms

Filter irrelevant patterns, clean data, analyze, and extract useful information from collected raw data

Data processing, information extraction

Data preprocessing removes duplicate, junk, or irrelevant data

Standardize data formatting (*convert text to lowercase, remove special characters, etc.*)

Applying artificial intelligence (AI) technology to natural language analysis (NLP): Extracting information from text (identifying people, places, organizations); Content

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classification (determining the topic, sentiment analysis, or danger level of the information); Automatic translation if needed (e.g. translation from Vietnamese to English or vice versa)

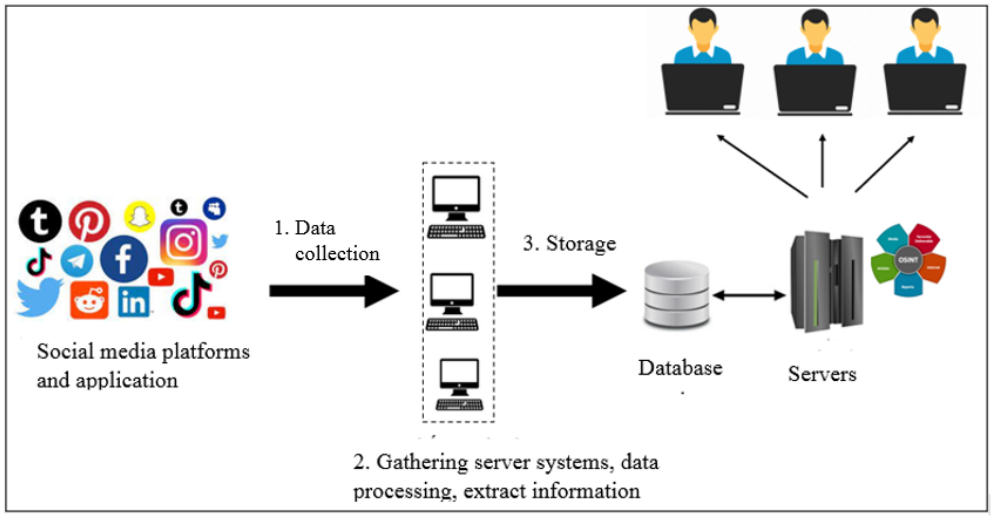
The database saves the extracted information

Store data as structured (SQL) or unstructured (NoSQL) on demand
Manage extracted information, ensure easy query and analysis, secure access

User Applications

The web application provides an interface and tools for the end-user (analyst or manager) to interact with the system
Provides an intuitive dashboard that displays aggregated information
Allows users to manage collection targets
The software may be able to support conversion into the end-user's language interface.

SOFTWARE SYSTEM MODEL



The software system is deployed according to the client-server model, layered (Layered Architecture) according to functional layers that operate independently, connect to each other through APIs or data transfer protocols and perform the following tasks:

- Interact directly with social media platforms that collect raw data
- Clean, analyze, and extract information from raw data
- Storage and management of processed information
- Provide interfaces and tools for end users

SPECIFICATIONS

Features	Parameter
Data collection, processing, storage	
Targets and Objects Management	– Allows users to manage defined targets, objects – The number of object's profile is up to 500 and can be scalable, depending on the number of collection agents – The number of targets is up to 200 targets and can update information such as: object type, object definition, object description – Enable or disable data collection from workstation's collection
Gathering information from open source	– Automatically, periodically collect information from open sources, from defined targets on social networking platforms: Facebook, YouTube, TikTok, Telegram – Multiple actors collect data simultaneously (up to 10 machines), speed up data updates, and promptly detect new problems arising on platforms – Assign target collection tasks to each agent – Synchronize, centrally store data collected by agents. – Filter irrelevant data, avoid redundant storage
Cyber surveillance operations	
Search by multiple fields, multiple types of information	– Search for data by multiple fields: name, phone number, email address, keyword. – Supports precise search, or approximate search – Combining methods of searching and filtering information to quickly identify the necessary information. – Applying AI technology, it supports searching according to many different types of data: text, images, audio.
Building a Target Profile	– Synthesizing collected information to build a target profile, track activities (event participation, opinions, relationships with other subjects) over time – Unlimited number of monitored objects (should set up monitoring up to 200 objects to improve management efficiency)
Build and visualize relationships between objects	– Build relationships between subjects and groups of subjects according to many different criteria such as participating in groups and participating in events. – Visualize the relationship between objects, serve the analysis and early zoning of objects
Early detection and warning of threats	– Applying AI technology, analyzing collected data, promptly detecting and warning threats, serving investigation and quick response

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Case management	– Allow users to create and manage cases to search by many different methods such as keywords, records, geographic regions, languages
Summary of case monitoring information	– Allows the aggregation of news related to each specific incident. Track the flow of incident information over time
Search for case and event	– Search, collect data based on keywords, to find posts with content related to keywords on the collected data source stored on the server – Search and return time: 2 seconds
Number of virtual accounts (avatar) set up and managed	– Unlimited (It is recommended to use less than 50 virtual accounts to improve search performance)
Report	– Generate reports according to the user's selection: Summary report, statistics of object activities over time, network chart of object relationships, object statistics by viewpoint, ideological group, incident report, incident relationship chart
System Administration	
Create and decentralize users	– Create and delegate permissions for users to exploit the system, each person has a different role and level of access according to the manager's decentralization. Number of accounts up to 10 accounts
System Parameter Configuration	– Allows configuration of the system's initial default parameters.

🖧SYSTEM COMPONENTS

The integrated system consists of the following hardware components and software subsystems:

- Data collection subsystem (Profiler)
- Avatar creation and management subsystem
- Case Keyword search subsystem
- Targets management subsystem
- Case management subsystem
- Object management subsystem
- Report building subsystem
- Servers for applications and storage databases
- Workstations and Monitors for data collection, Laptops for working
- UPS system ensures 24/7 operation