

AI-Powered Web Intelligence

Drug Trafficking Web Investigation

Whitepaper

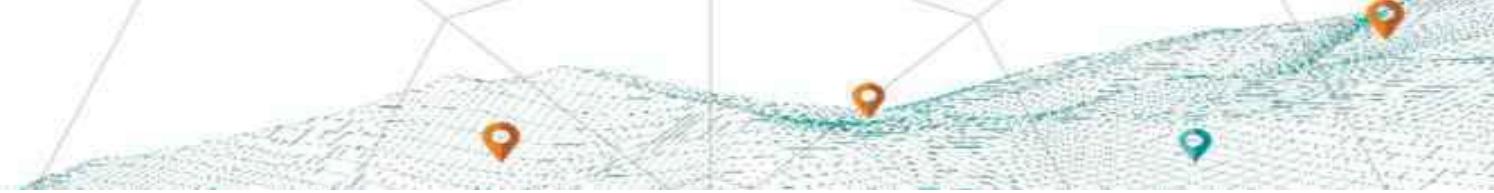
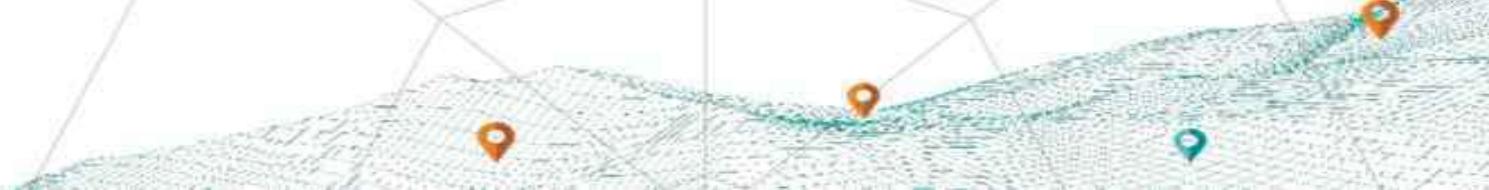


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AI-Powered Web Intelligence

The Next Level of Insights & Asset Protection

The increasing use of social media platforms, mobile apps and dark web sources have led to significant growth of illegal activities online. Platforms are used by criminals, terrorists, hackers and others exploiting easy access to the internet, conducting operations with minimal visibility.

Cobwebs' solutions were designed by our intelligence and security experts as vital tools for the collection and analysis of data from open source, deep and dark web, social media, and blogs. Our solution monitors vast sources of data to reveal hidden leads and generate insights. Covertly uncover and interact with the internet's never-ending trail of clues to build suspect profiles, reconstruct social circles, identify cyber threats, engage targets, and generate evidence.

Our exclusive technology extracts targeted intelligence from big data using the latest machine learning algorithms, automatically generating intelligent insights. Our company focuses research and development on Artificial Intelligence technologies, harnessed to extract relevant intelligence from big data using an array of automated processes.

About Cobwebs Technologies:

Our Values & Expertise

Cobwebs Technologies is a world leader in web intelligence. Our innovative solutions are tailored to operational needs of national security agencies and the private sector, identifying threats with just one click.

Our products are suitable for various customer types and are deployed globally by law enforcement agencies, national security agencies, critical infrastructures, telecom financial services and more. We maintain strong partnerships with some of the top enterprises, global security and intelligence providers. Cobwebs Technologies ensures superior customer service, while providing a combination of technology and professional training, imparting methodology and real operational experience.





Web Investigation Solution

Automated platform for deep analysis and monitoring

Cobwebs' web intelligence platform extracts targeted intelligence from big data using the latest machine learning algorithms, automatically generating intelligent insights. Our research and development are primarily focused on Artificial Intelligence (AI) technologies, harnessed to extract the relevant intelligence from big data with automation.

Cobwebs' platform assists analysts in identifying new targets, while uncovering potential profiles and groups across the web using automated advanced search capabilities. Users gain deep insights and substantial intelligence, including locations, context, internal relations, group structures, hierarchies, and more. Reveal targets and collect real-time intelligence with our non-intrusive methods for expedited results and efficacy.



Key Features

- Coverage and analysis of multiple data sources: social media, deep and dark web
- Transform a single lead into a developed, end-to-end investigation
- Identify target profiles and groups
- Extract geolocated data
- Live web data analysis and automated real-time alerts
- Streamlined artificial intelligence to provide automated insights



Searching Keywords

Searching surrounding the topic of drugs on the dark web

Covering a wide range of sources, including open, deep and dark web, blogs and social media, search any word or phrase and gain intelligent insights. Dark web monitoring connects users to thousands of sources to stay ahead of criminals, supporting end-to-end, full web spectrum investigations.

Automated data extraction from dynamic dark web URLs is vital, as the dark web is home to criminals worldwide.

Keyword Analysis

This investigation includes a search for keyword phrase ‘USA cocaine’ using the platform’s dark web tools. With the click of a button, the system initiates retrieval of data from various sources. Following their analysis, the solution extracts vital intelligent insights, with relevant takeaways visualized in charts, graphs and more.

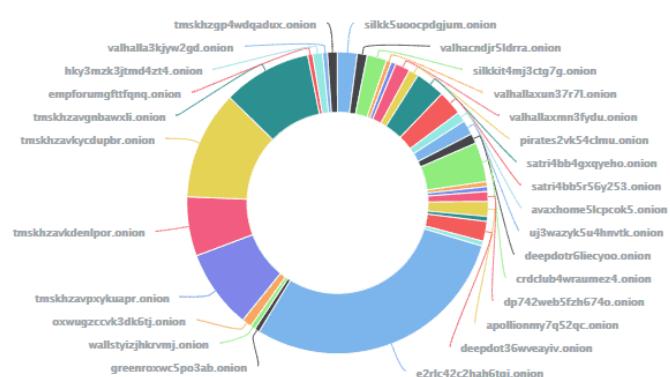


Our dashboard offers visualized insights, derived and examined via our automated web monitoring and analysis tool.

Our system summary visualizes the results: the dark web websites matching query criteria. Cobwebs' vigilantly generated keyword analysis results offer diverse analytic insights.

Example analytics displayed:

- Geospatial analysis
- Demographic breakdown
- Natural language processing
- Visual link analysis
- Key targets extraction
- Artificial intelligence analysis



Dark web sources distribution



Extracting Posts

A Deep investigation of content circulating with keywords

Posts results indicate which of them contain a keyword or phrase. Our system extracts posts and data like relevant comments, author(s) of the posts, along with other vital details. The solution empowers users to truly dig into the critical specific posts and review their content. The screenshot below demonstrates our solution's extraction of relevant posts, partnered by locations derived from written content.

208 / 208 Top Posts

Address: Type Address

Map Satellite

Details

30/09/2018 12:37

ProfDrug
@ProfDrug

Straight from the brick, Imported Peru Cocaine This is Pure Cocaine from Peru, excellent to: -Smoke -Sniff -Inject ProfDrug TEMPORARILY 2CB AND KETAMINE OUT OF STOCK ++++ [* Welcome to our shop, ProfDrug *]-We are the best street vendors already 17+ years *.Street sellers to all European country's *.Quality is our priority number one *.All our products are shipped with excellent care *.Sealed and packed with chemical products for the smells *.The packing will be done with proper decoy *.And packed with great care stealth [* Read terms and conditions before ordering *]-Please send you address like this: *-Name Lastname: Monica Smith *-Address: Bismarckallee 5 *-Zip-Code City: 79098,Freiburg im Breisgau *-Country: Germany [* OR!!! *]-Name Lastname: Mihang Ho *-Address: 72 Dunstable Rd *-Zip-Code City: LU1 1EH,Luton *-Country: U.K (United Kingdom) [* Drugs We Sell *]-Homemade dutch speed pasted 67%+ *-Homemade MDMA XTC Pills 200+ MG *-Homemade Dutch LSD *-Medical Imported Ketamine from India *.Cocaine Peru 89%+ *-Afghan Heroine *.XTC Pills 200mg+ P200 *.2CB Pills 22 MG [* We are active on this markets *]-Dream Market *-Olympus Market [* Refund And Reship *]-Order has not arrived, what should I do? *-Non tracked packages will NOT be reshipped! *-Re-Shipping will be 100% of the product or 50% Refund by your (NEXT) shipment!! *-Check if the maximum delivery time has passed, in this case you can contact me about it *-Please contact us before

Extracted posts & locations reviewed in a specific thread

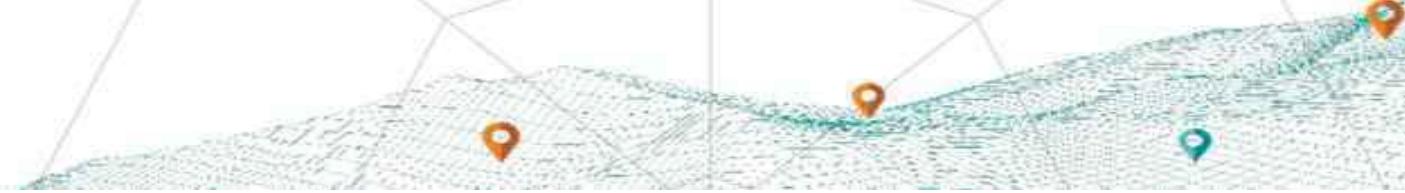
Analyzing Key Topics

Using natural language processing algorithms to extract entities

With any keyword or phrase searched, our solution's natural language processing algorithms process, analyze and understand it in its relevant context(s). The system generates a list of the most commonly used words in the posts, sorted by entity type.

Text	Type	Count	Actions
cocaine	drug	3	
methadone	drug	3	
amphetamine	drug	3	
cannabis	drug	3	
stimulant	drug	3	
mdma	drug	2	
ketamine	drug	2	
oxycodone	drug	2	
heroin	drug	2	
fentanyl	drug	2	

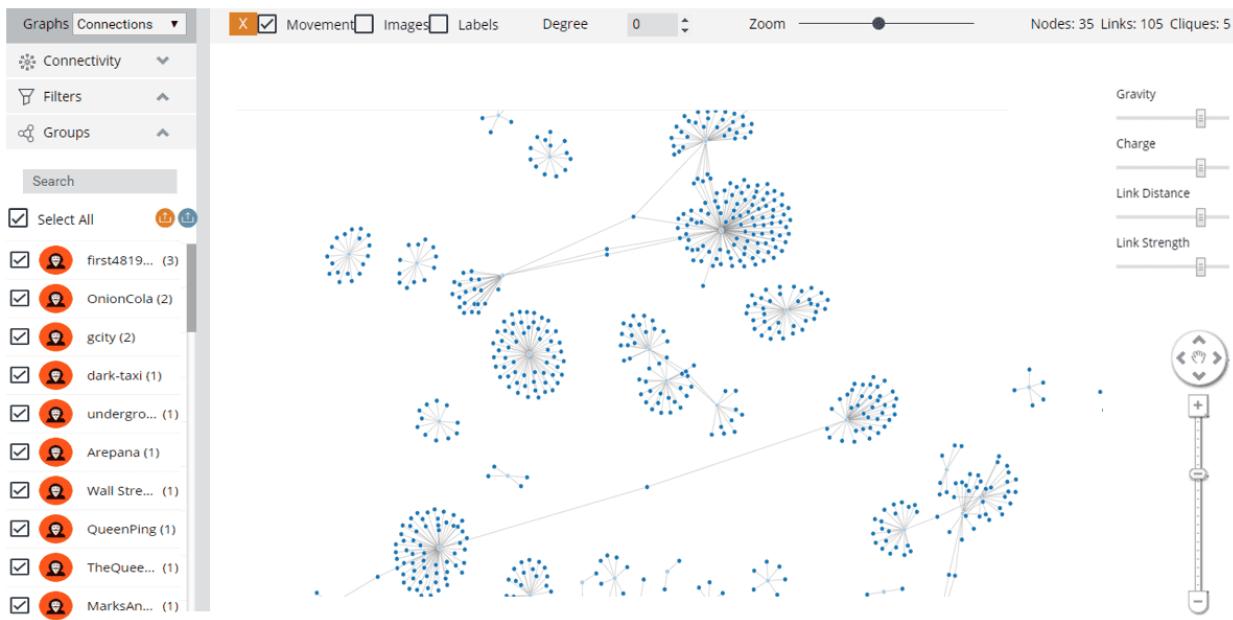
AI text analysis for topics extraction



Visualizing Communication

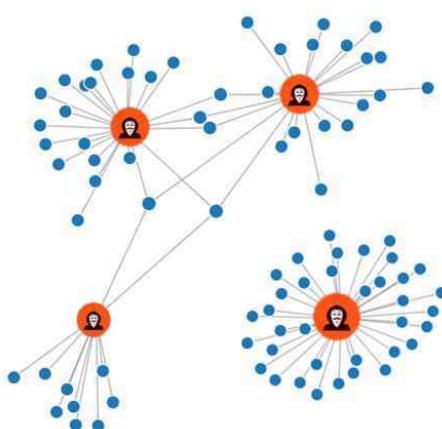
Understanding Target Connections via Nodes & Links

Most data is collected, analyzed and visualized. Based on the targets' connections and their mutual engagement, a visual link analysis graph is generated. Each node represents a target's connection, with lines linking nodes and specifying their connection/relationship.



Centralities Measurements

Advanced algorithms calculate a range of measures to analyze the graph. The degree visualization feature indicates the number of 'one hop' (one degree) connections between a network's nodes. Connected individuals who may provide more critical information or may have expedited access to connect with a wider network can be easily identified.. Some nodes expand significantly based on centrality measurement, calculated with analysis of mutual friends, engagement or other contributing factors.



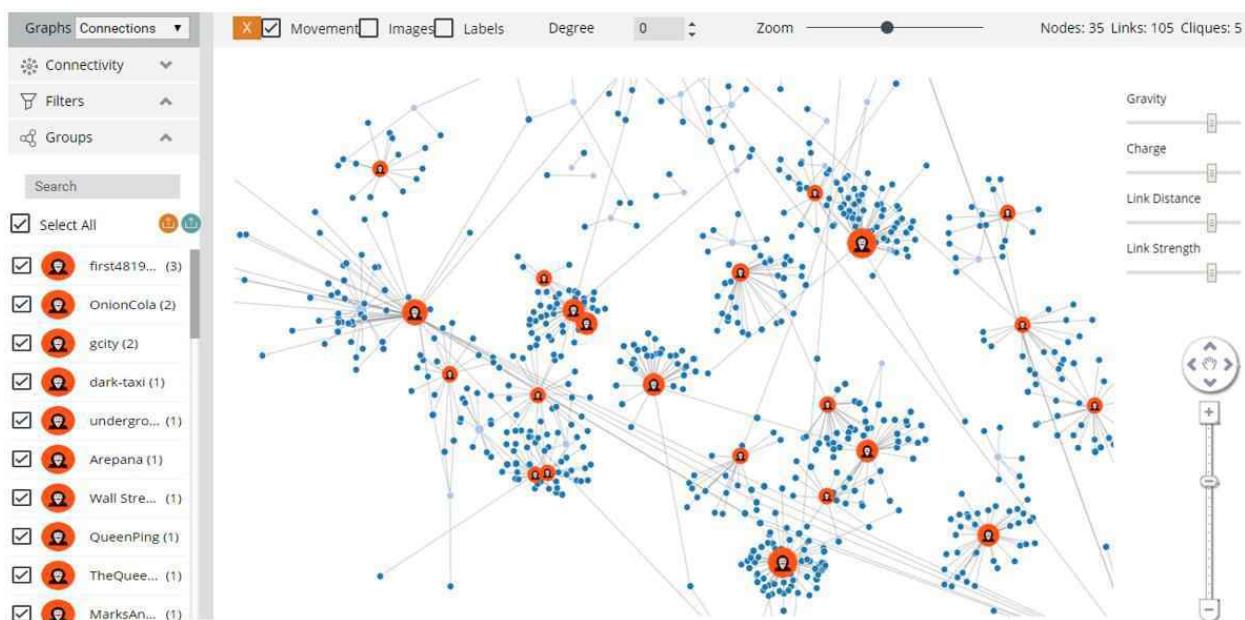
Highlighting key nodes



Identifying Key Targets

Using graph analytics tools to emphasize targeted intelligence

Various social circles can be pinpointed to identify potentially critical targets with our visualized analysis graph. Measurement is founded on mutual connections between 3 or more graphed nodes. Each group represents a clique, a social circle. Nodes connected to two or more cliques are often highlighted, particularly if quality of intelligence value is high. Allowing us to identify new leads, key targets and their relationship, the graph optimizes investigation workflows, productivity, progress and results.



Visualizing key targets by centralities measurements

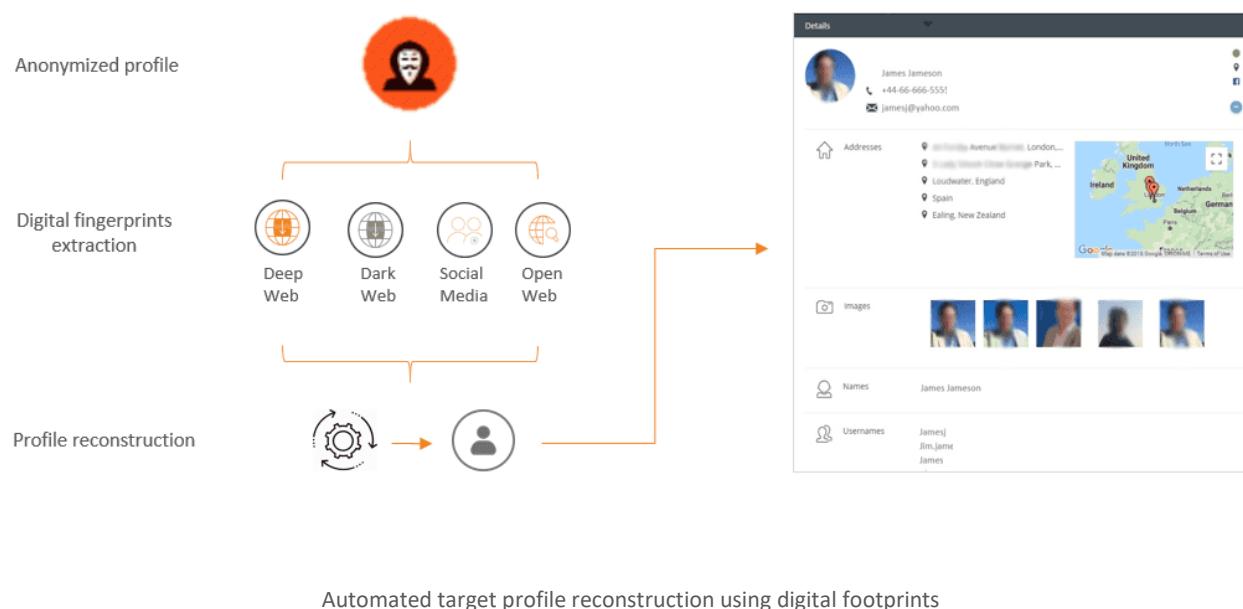
The screenshot above presents key targets identified, each one represented by main nodes connecting to cliques, or signifying their central role/leadership status. Critical nodes are color coded, accompanied by images and labels for leveraged user interactivity, powering user-friendly analysis and visualizations of data.



Unveiling Target Details

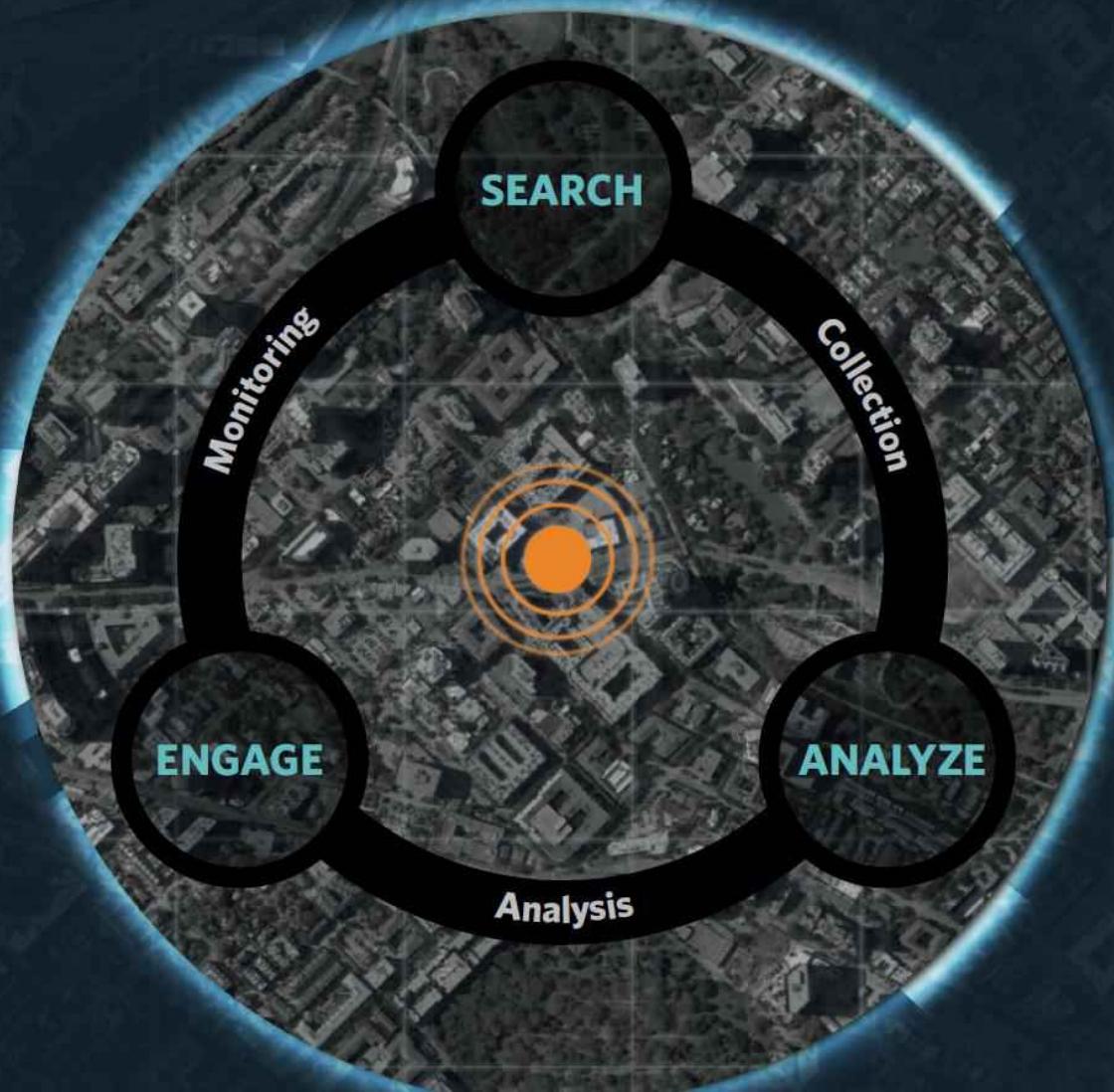
Digital footprints and their real-life intelligence value

Each of us creates a unique digital footprint with our use of social media, open web, databases, mobile apps and much more. From surface web, to deep and dark web sources, our solution's broad coverage yields optimal investigational progress and results. Found in fundamental traces like name, username, phone number or a range of lead data, our digital footprints drive our solution's target profiling report.



Only one lead is required for the reconstruction process and for our platform to search the vast sources it covers. Mapped and visualized, results provide locations, images, personal details and online presence data, with further analysis yielding insights on specific and selected target(s). Cross-analysis of profiles unveil key connections, while identifying related key targets and delivering valuable intelligence. With data filtered and selected, our solution produces an automated report listed target details required.

Ready to learn more about our game-changing & innovative solutions?
Start here on our website: <https://cobwebs.com>



USE CASE

Shooting in Alexandria

Cobwebs investigated the event with the power of artificial intelligence, analyzing and preventing future attacks

Cobwebs investigated the event, utilizing the system's AI-powered technology to analyze and prevent future attacks.

Artificial Web Intelligence

Content generated on the web continues to expand on a daily basis. Social networks, forums, blogs, and news sites are the key sources of information for everything occurring in the virtual world.

Vast amounts of data generated via online activity complicates tracking it, challenging intelligence analysts and deterring their progress. Gathering, processing, prioritizing and taking action on the right data are all challenges, and getting lost in a sea of available information is easy.

Intelligence agencies can stay one step ahead with the power of artificial intelligence predicting and pinpointing smoking guns, for optimal response times and resolution of investigations. Artificial intelligence overcomes human limitations, transforming fragments of information into actionable insights that transpire into preventative measures.



Background

Following the Alexandria shooting of five republican congress members, including House Majority Whip Steve Scalise, media outlets incessantly speculated how the shooting could have been predicted and prevented by authorities.

James T. Hodgkinson, the shooter, was eventually exposed as an abusive alcoholic with a criminal record. His social media activity was overflowing with aggressive anti-republican propaganda. With that, indicators of concern based on Hodgkinson's social media activity were assessed as minor and with insufficient cause for significant alarm.

Cobwebs Technologies was contacted to support the authorities with the use of Tangles, employing the solution to help answer the most critical and fundamental question revolving around the case: could this shooting have been prevented using web intelligence? And, how can future monitoring of social media and online activity be implemented to effectively anticipate similar hate-crime threats.



Investigation

Based on responses to previous shootings, the assailter's online presence became a hornet's nest for extremist hate messages from both fronts. To prevent detrimental escalation of the public discussion, profiles of users were terminated promptly. Real-time analysis of Hodgkinson's social activity in parallel with initial reports of the shooting provided profound vision and insight on the assailter's activity preceding the shooting.

Tangles also revealed Hodgkinson's remaining Twitter account that likely was still open due to being undetected by authorities, while all other Facebook profiles and pages were already disabled.

Results

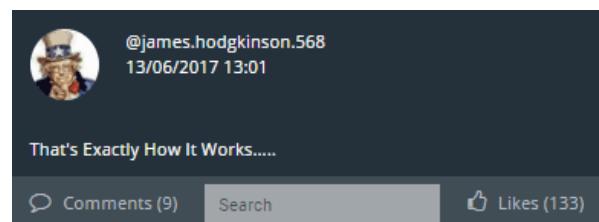
- Hodgkinson's web activity analysis surfaced disturbing indications of problematic behavior. Involvement in political activity via social media in itself is not a threat, but Hodgkinson's imbalance between supporting a cause and acting belligerently towards his adversaries is the first red flag waving signs of trouble.



- Overall, Hodgkinson maintained two Facebook pages and an additional Facebook profile under his name for ongoing distribution of political propaganda.



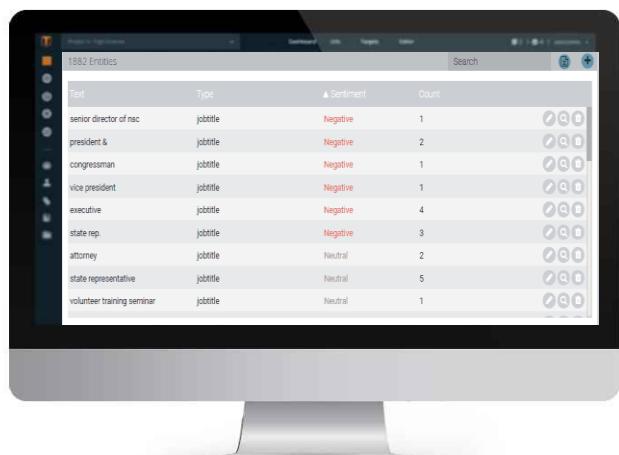
- Less than 24 hours before the shooting, Hodgkinson was actively posting on his second Facebook profile. To human analysts, posts of this type are rarely perceived as threats or concrete indication of harmful intentions. It can take more than the human mind to comprehend complex situations, especially when it comes to taking available information into consideration within context.



Real Time Monitoring and Prevention

Evolving intelligence methodologies using cutting-edge technology are crucial in identifying concrete threats within masses of big data. Artificial intelligence is harnessed to empower human analysts on their mission to face the modern-day challenges.

Natural Language Processing (NLP) capabilities allow Tangles to monitor the internet and extract much more than just words. The AI-led approach allows users to delve into the mind of the author, mapping out his words and even their sentiment towards a topic.



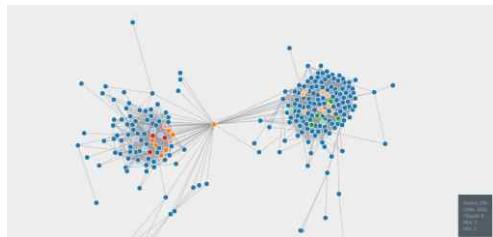
Shooting in Alexandria

Object identification in pictures can assist in revealing specific contents of endless media, pictures and videos alike. Tagging specific objects of interest and pointing analysts towards interesting content supports thorough analysis of data that could be otherwise overlooked due to inefficiencies or other parameters.



Weaponry business liked by Hodgkinson

Automatic link analysis extends collection of data to other social media accounts used by the individual, (through direct connection or multiple-degree connection), and paints a complete intelligence picture with various views of his life and social circles.



Advanced link analysis can infer group topologies and social changes in a person's life, indicating surrounding influences – online and offline. Follow-up analysis of group connections can expand the circle of suspects, while creating new high-profile targets for investigation.



A well-calculated alert mechanism points out routine breaks in standard activity of online entities, whether activity fluxes or drops from the user's regular level of activity or routine.



@james.hodgkinson.568 showed a substantial increase in activity in the months prior to the shooting

Cobwebs' AI-integrated solution, Tangles, provided valuable intelligence that helped identify main targets requiring surveillance. Tangles also supports organizations' effective delegation of limited internal resources to guarantee public safety and prevent future hate crimes.



About Cobwebs Technologies

Cobwebs Technologies brings years of extensive experience to today's evolving global intelligence market.

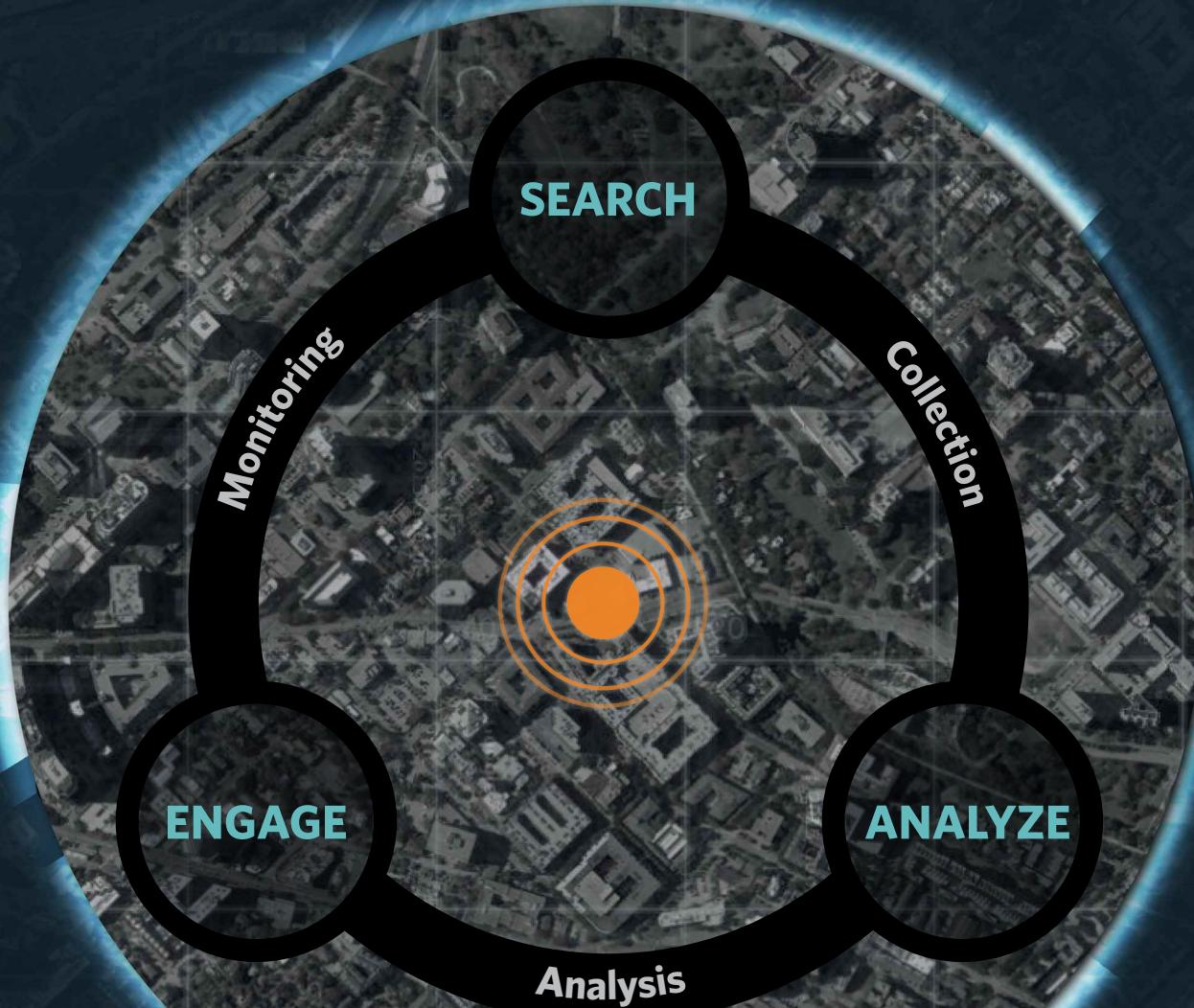
Our team is comprised of military and intelligence experts, blended with some of the sharpest minds in today's high-tech arena, particularly in the web intelligence niche. Our extensive hands-on and project-based experience in WEB intelligence allowed us to identify inadequacies of other intelligence solutions, challenged to cope with technological developments and advancements.

Cobwebs' cutting-edge systems are designed for national security agencies and the private sector, pinpointing web relations, criminal activities and terrorist threats with the click of a button. With clients worldwide, our solutions and team assist organizations with complex investigations, providing actionable analysis of targeted data. With our end to end solution's deep and insightful analyst reports and our range of professional services, Cobwebs strives to maintain its position as an industry leader, surpassing the competition - one intelligent insight at a time.



Want to learn more about our web intelligence platform and capabilities?
Please visit: www.cobwebstech.com
or contact the local sales representative for a demo.





USE CASE

Ultras at the Final of a Sports Event

Cobwebs helps a European police agency secure the final match of a main sports event and prevent clashes between fans.

Cobwebs helps a European police agency secure the final match of a main sports event and prevent clashes between fans.

Background

In May 2018, the finals of a major sports event took place in a European country. The final was between two extreme rival teams.

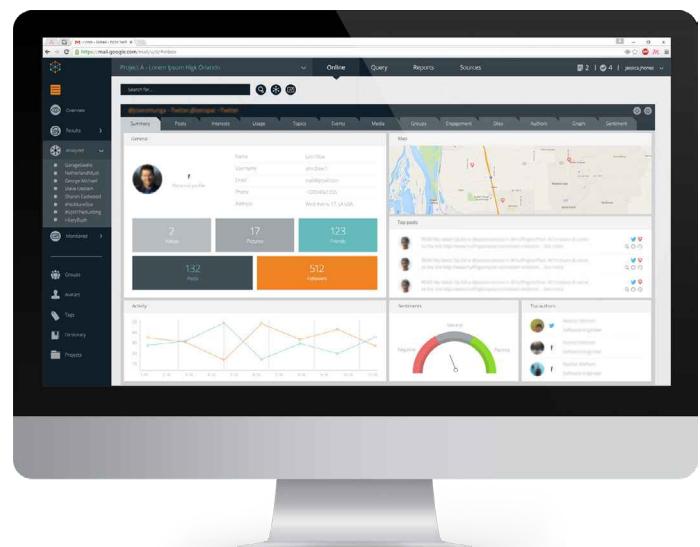
Local police was concerned that due to their rivalry, along with the event's importance and some well-known violent organizations that are supporters of both of these teams could cause clashes in the European city. The results could yield damaged property, injured people, and a poor reputation and public image gained by local security forces unable to control the instigators.

We received the request to investigate violent organizations supporting both teams to prevent cause of turbulence at the Stadium or any possibility of troubles or disorder in the city, with the objective to anticipate and gain control of any possible scenario.

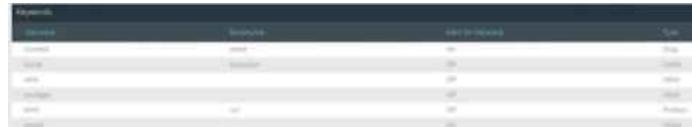
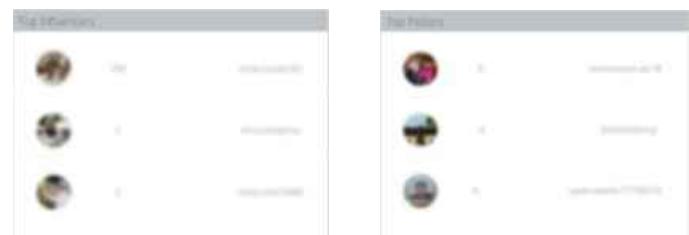
Investigation

After conducting the primary phase of research on the history of violence of both clubs, we decided to monitor the web for several days prior to the final using the Tangles system. The goal was to gain a sense of the atmosphere surrounding the final sports event, and to better understand the animosity between both clubs and fans.

- We loaded the system with a dictionary of hashtags and keywords, defining different levels of alerts for each of them to identify the main actors and influencers.
- After identifying main actors, the main discussion groups (public and private) we decided to focus investigating efforts on were two key hooligan associations. They were marked as possible trouble makers, and once we target investigated them, we realized the most severe alerts were generated by their activity.



- The system was also able to identify unique main individual influencers and main actors from both sides, that were then marked as targets in the system in order to follow their activity in real time and detect potential threats.



Based on various statistics derived from posts, comments, or the amount of traffic generated online, we were also able to understand the number of people who would be attending the event, and how could be potential troublemakers.

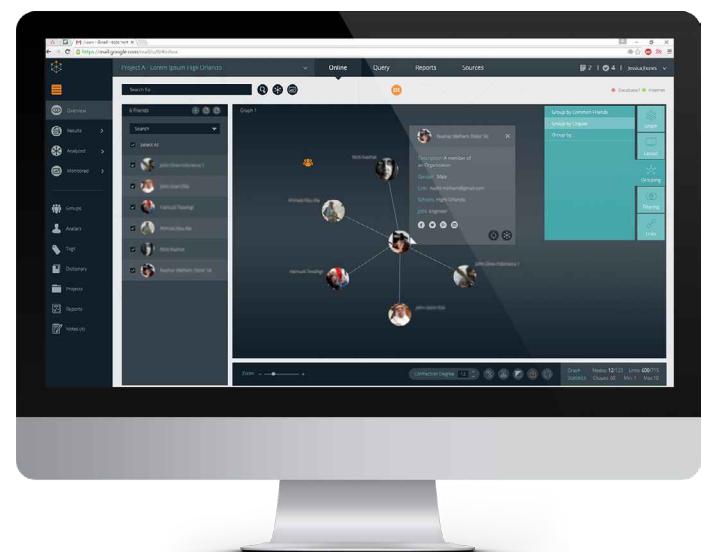


With this conglomerate of data, we understood the number of law enforcement officers required to guarantee safety of spectators and the surrounding facilities of the stadium.



- Main targets identified as most likely to cause trouble were immediately monitored, allowing us to follow everything they were posting on social media in real-time. From pictures, to videos being uploaded, to being tagged in posts, comments and groups, the main targets were active, and their locations were tracked.

We went beyond just following their online activity and presence, including information generated by other users, such as people who were posting pictures, comments, and geo-tags with them.



Results

From the moment the targeted fans arrived in the country where the event took place, they were monitored to understand what their activity, what they were discussing, while also attempting to gain a sense of the sentiment of their activities, (positive or negative).

The police also knew exactly how to prioritize, optimize and make efficient use of their limited human resources to guard local population, fans and facilities. They were able to do so in knowing the number of people expected, trouble makers expected, and with a strong estimation of the number of fans who would be present in each of the relevant locations.

With the pictures of potential troublemakers acquired from the online analysis, police were able to identify them at the stadium. They were also able to maintain appropriate situational

awareness regarding the potential troublemakers' behavior before, during and after the final took place, in all locations they were present: hotels, bars, modes of transportation, etc.

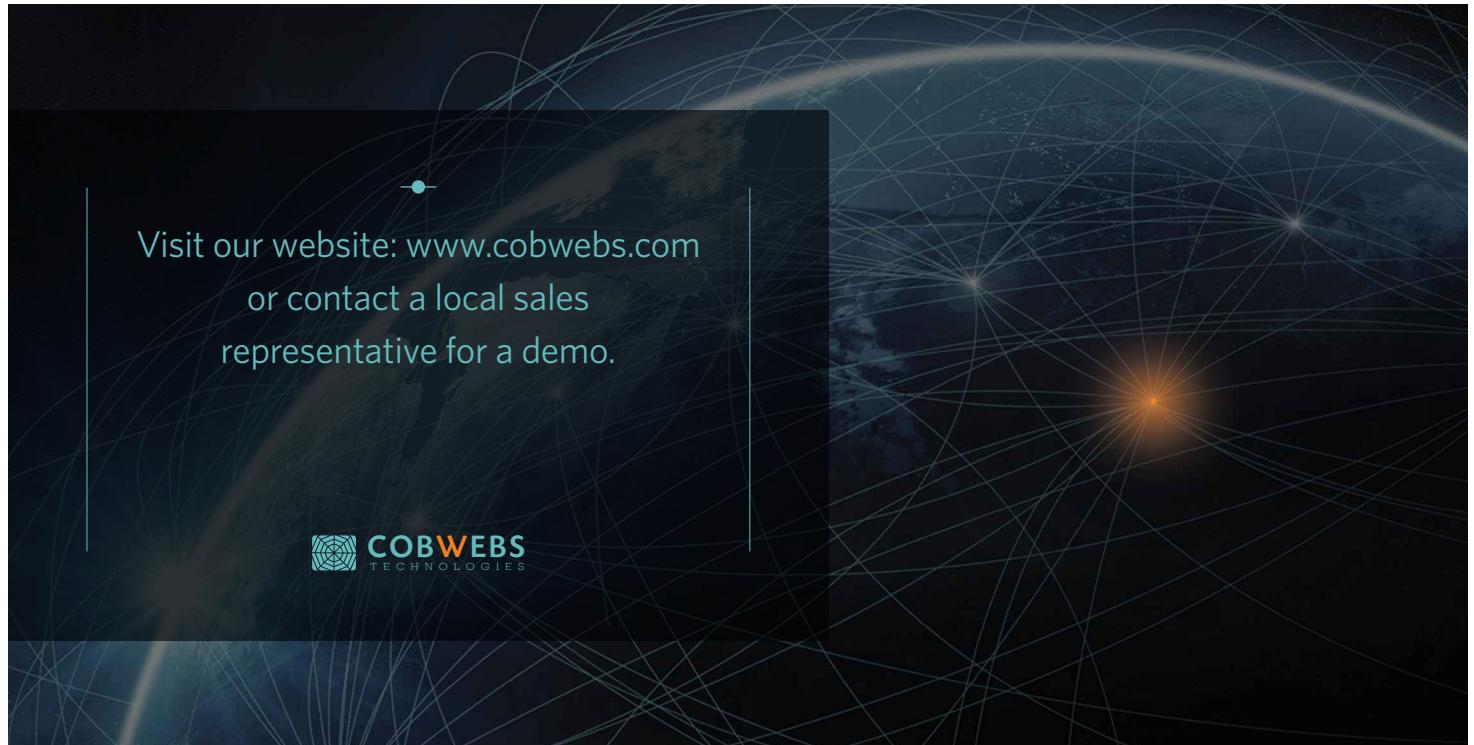
With the use of advanced algorithms, we unveiled hidden information that could not have been identified with traditional monitoring methods.

With the help of Tangles, we were able to provide valuable intelligence that helped local police not only identify main targets to monitor with a watchful eye, but also helping police understand how to use their limited resources wisely to guarantee the safety of the venue.

About Cobwebs Technologies

Cobwebs Technologies is a worldwide leader in the field of web intelligence. We bring vast experience in the global intelligence market, introducing the next generation of Artificial Intelligence (AI) powered tactical web intelligence solutions.

Cobwebs' innovative and cutting-edge systems are tailored to operational needs of both national security and law enforcement agencies. Our solutions pinpoint web relations, criminal activities and various threats with a click of a button.



Visit our website: www.cobwebs.com
or contact a local sales
representative for a demo.





AI-POWERED WEB INTELLIGENCE

AUTOMATE YOUR
INVESTIGATIONS

IDENTIFY THREATS IN REAL-TIME



Cobwebs Technologies powerful web intelligence platform monitors online activity, collects and analyzes data from endless digital channels – from open, deep and dark web, to mobile and social.

Our research and development are primarily focused on Artificial Intelligence (AI) technologies, harnessed to extract relevant intelligence from big data using automation.

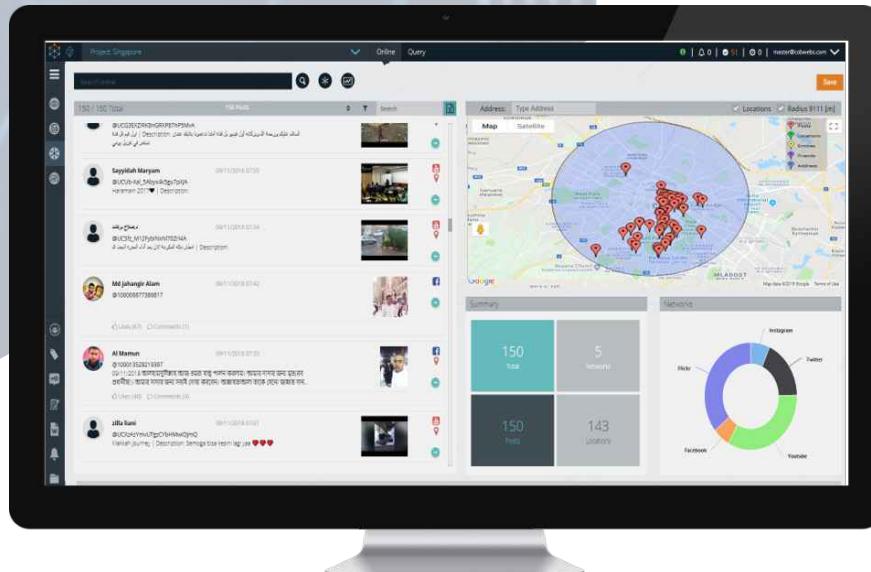
Our AI-powered engine automatically monitors data in any specified geographic location, eliminating risks and shedding light on the darkest online & real-life threats while meeting organizational and industry needs.

Cobwebs' platform assists analysts in identifying new targets, while uncovering potential profiles and groups across the web using automated, advanced search capabilities.

Users gain deep insights and substantial intelligence, including locations, context, internal relations, group structures, hierarchies, and more.

Reveal targets and collect real-time intelligence with our non-intrusive methods for expedited results and efficacy.

OUR PLATFORM



Cobwebs' solutions were designed by our intelligence and security experts as vital tools for the collection and analysis of data from open source, deep and dark web, social media, and blogs. Our exclusive technology extracts targeted intelligence from big data using the latest machine learning algorithms, automatically generating intelligent insights.

Designed to meticulously race through and scan the web's endless digital channels, our solution analyzes huge sums of data to help you protect your public.

STREAMLINED ARTIFICIAL INTELLIGENCE

Our exclusive technology extracts targeted intelligence from the web's big data using the latest machine learning algorithms, automatically generating critical insights.



Live Data
Extraction



Automated
Insights



Predictive
Analysis



Natural
Language
Processing



Pattern
Recognition



Deep Image
Analysis



BENEFITS

DISCOVER TARGETS INFORMATION

Our robust engine lets analysts search for people and keywords to evaluate and monitor forums and markets. Triggering real-time alerts, our platform powers the discovery of malicious activities, individual actors, and their social relations.

CREATE WEB PROFILES

Automatically generate an accurate web profile based on web presence from the open, deep and dark web. Reveal targets and collect real-time intelligence with our non-intrusive methods for expedited results and efficacy.

EXTRACT LOCATIONS

Track web activities based on locations, from any device and a wide range of web applications. Reveal all the relevant locations the target is associated with according to posts, check-ins, places mentioned, friends addresses and more.

REVEAL CONNECTIONS AND INTERESTS

Extract and analyze targets' and groups' social connections from profiles and pages with our automated technology. Use our platform's centrality measures and evaluate the strength of connections, along with influencing nodes to identify social communities and gain critical operational insights.

GAIN SITUATIONAL AWARENESS

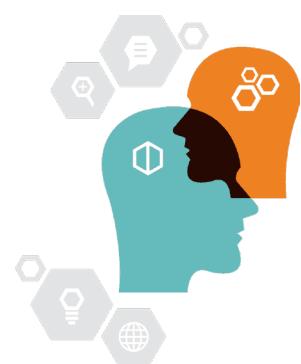
Gain unmatched situational awareness in real-time, with Cobwebs vigilantly monitoring open, deep and dark web information sources.

PREDICT EVENTS

Our leading artificial intelligence algorithms conduct statistical calculations with acquired data models, offering predictive insights, like deviations in profile activities, changes in sentiment and other anomalies.

GET ALERTS

The solution evaluates and calculates various inputs, triggering relevant alerts that pop up when critical information is detected.



THE NEXT LEVEL OF INVESTIGATIONS

SEARCH

Search any word or phrase and gain intelligent insights. Our worldwide web monitoring technology connects users to thousands of sources to stay ahead of criminals, supporting end-to-end, full web spectrum investigations.

ANALYSE

With the click of a button, the system retrieves data from various sources. Following their analysis, the solution extracts vital, intelligent insights, with takeaways visualized in charts, graphs and more:

- » Geospatial Analysis
- » Demographic Breakdown
- » Natural Language Processing
- » Visual Link Analysis
- » Key Targets Extraction
- » Artificial Intelligence Analysis

MONITOR

Our AI-powered engine automatically monitors data in any specified geographic location, eliminating risks and shedding light on even the darkest online & real-life threats, meeting organizational and industry needs.

Set up criteria tailored to your precise needs for real-time data collection that's actionable.



KEY FEATURES

- » Monitoring and analysis of multiple data sources: social media, deep and dark web
- » Transform a single lead into a developed, end-to-end investigation
- » Identify target profiles and groups
- » Extract geolocated data
- » Live web data analysis and automated real-time alerts
- » Streamlined artificial intelligence to provide automated insights

WORLDWIDE PRESENCE

With our solution deployed worldwide, Cobwebs is making the online and offline world a smarter and safer place. Our AI-driven solution is implemented and adopted by leading law enforcement and national security agencies, critical infrastructure brands, financial services and other sectors.

ABOUT

Cobwebs Technologies' advanced artificial intelligence and machine learning algorithms deliver powerful web intelligence. We decipher the intricacies of web layers by analyzing the complex details of structured and unstructured data.

Our web intelligence platform monitors these vast sources of data to reveal hidden leads and generate insights. Covertly uncover and interact with the internet's never-ending trail of clues and gain intelligence-enhanced security for a safer world.

