

THE VALUE OF expert.ai SEMANTIC TECHNOLOGY FOR INTELLIGENCE

INTRODUCTION

From counter terrorism, cybersecurity, anti-money laundering and fraud protection to network intrusions and malware attacks, private and government organisations must protect against a threat landscape that is both asymmetrical and increasingly sophisticated.

Today's diversity of information types and sources have introduced new complexities into the intelligence analysis environment that has made it more difficult for both businesses and the technologies they rely on to provide actionable and effective insight for decision making.

The value of a security and intelligence solution is its ability to use all of the information available and provide the tools that analysts need to gain visibility, context and insight from data and information. The semantic technology of expert.ai brings cognitive capabilities to provide the right information at the right time in the proper context. The result is meaningful, actionable intelligence that enhances insight, fuels more knowledgeable decisions, and strengthens what analytics can reveal.



Confronting today's challenges for information and analysis

Data

Organisations need different types and sources of information to better understand the world around them and give context to it. The information that companies rely on for business and security intelligence today is increasingly diverse and generated at a volume that frequently strains traditional processing and analysis tools.

Unstructured data in the form of text found in most intelligence sources (for example, reports, watch lists, transaction and call records, web pages, blogs and on forums or social media) proliferates in open sources freely available on the web, as well as in proprietary knowledge bases and institutional or intelligence community sources.

Also, the explosion of the Internet of Things (IoT) supplies an increasing amount of data generated by users and devices, adding a new dimension to what we now think of as "big data." According to IDC, by 2020, 28.1 billion devices will offer connectivity and data. This includes data from smartphones, but especially that from sensors in everything from machines and equipment, to GPS and RFID data, feeds from satellites, traffic cameras, video surveillance, and personal devices such as those in vehicles and home appliances, many of which we'll be able to communicate with directly in natural language.

The volume of information available places limits on everything that interacts with it, from infrastructure and hardware, to the technologies and manpower used to process and analyse it for relevance and meaning.

Real-world intelligence analysis requirements

At the front line of intelligence analysis is the analyst, who is tasked with the real-time production and sharing of knowledge that can provide the foundation for decision making and detection of existing and emerging risks and threats. This means not only capturing what already happened, but also reporting what is currently happening and what might happen next. This includes rapidly evolving and multifaceted events (geographical, political, environmental), as well as nuanced details and patterns whose significance for current or future threat may not be easily understood at the time.

Today's analysts need tools that understand the various levels of complexity they encounter, and that support their real-world analysis requirements for all of the phases of the analysis process, from collection and discovery, to qualification, investigation and on to decision making and threat mitigation.

The explosion of the Internet of Things (IoT) is supplying an increasing amount of data generated by users and devices, adding a new dimension to what we now think of as "big data."

The screenshot displays a data intelligence platform interface. At the top, there are navigation tabs for Topics, Facts, Relationships, Emotions, Geo, People, Organizations, Domain Entities, Cyber, and Tagging. On the right, there are indicators for Alerts, Knowledge (129), Notes (13), and Saved Searches. The left sidebar contains filters for Intelligence, Cybercrime, and Crime, with various sub-categories and counts. The main search area shows results for 'tim cook', including a news article snippet and a network diagram of Apple's management structure.

Intelligence Scenarios

To ensure that this volume of available information doesn't drown out weak signals or blind them to important information that is not obvious, analysts need tools that can help them to clearly see the information that matters.

These are just a few of the common scenarios that analysts encounter:

- An OSINT analyst creates the organisation's daily report, an essential tool used to support its intelligence and business strategies, by exploring a variety of information sources—news and stock feeds, blogs, forums and chat rooms, social media—to identify news and events, follow up on developing situations and listen for emerging trends and signals. How can the analyst manage so much data and still effectively identify threats and opportunities before it's too late?
- A counter terrorism analyst monitors the most recent communications between the members of a terrorist group. The volume of information acquired -- email, SMS, chats (and other data coming from COMINT activities) is too much for one person to handle. How can the analyst focus on the areas of greatest interest?
- A Law Enforcement Intelligence analyst who coordinates the organised crime unit manages thousands of reports. She typically handles court cases, where documents are filled with valuable information (i.e. "John Smith was arrested while driving his Jeep Patriot license plate ABC-1234 in Los Angeles, along with his passenger, Joe Thomas, boss of a suburban San Francisco gang."). How can the analyst automate and optimise the process of analysing and structuring this information?

Analysts need tools that can help them to see the information that matters clearly.

- A CERT operator analyses new reports and signals concerning everything from the spread of malware on the network to the possible theft of bank account information and eCommerce site vulnerabilities. In addition, they need to be able to identify relevant information for an energy company whose facilities are at risk due to recent cyber attacks. How can the analyst accurately identify all the relevant reports and vulnerability indicators necessary to ensure protection against cyber attacks and threats?

The limits of traditional applications

Strategic information analysis informs all of your intelligence processes. Achieving a high level of performance requires more than just a few automated processes or a simple monitoring or keyword recognition tool; you need software that reads and understands like an analyst.

When it comes to managing the complexity and diversity of today's and tomorrow's data, traditional approaches fall dramatically short, especially when it comes to two key areas:

Manual to automatic analysis

Extracting knowledge from unstructured data is a time consuming activity. The daily productivity of an analyst usually does not exceed 20 pages. The analyst must read it, highlighting areas of interest, and then entering it in a system — (the average text requires about 30 minutes for processing). Therefore, analysts must be able to rely on systems that can automate as much of this work as possible but with a combination of human-level intelligence and contextual knowledge, and the reach to access every possible piece of information. Ideally, it should read like a person would, meaning that it should be able to identify the sections inside a piece of content that are relevant for your analysis, extracting specific sentences and claims, and present them to you for validation.

When it comes to managing the complexity and diversity of today's and tomorrow's data, traditional approaches fall dramatically short.

Why did Nintendo fire Alison Rapp? - Mar. 31, 2016

Economics RSS - 3 months ago



Nintendo fired a woman named Alison Rapp on Wednesday, a decision that's putting the spotlight back on harassment in the gaming industry.

Rapp worked in marketing at Nintendo and has been a vocal advocate for women in gaming.

She was also a frequent target of online vitriol from supporters of a movement known as GamerGate. The movement purports to promote ethics in gaming — but has been condemned for harassing women and their supporters in the gaming industry.

It was this harassment that Rapp posits cost her her job.

Rapp had found herself in the hotseat over Nintendo's decision to tone down its sexualization of girls in games, according to Kotaku.com. Though for its part, Nintendo (NTDOF) said it let go of Rapp — who had been at the firm since 2013 — because it discovered she was "moonlighting" with a second job, which it said it doesn't allow.

"Alison Rapp was terminated due to violation of an Internal company policy involving holding a second job in conflict with Nintendo's corporate culture," according to a statement sent to CNNMoney. "Though Ms. Rapp's termination follows her being the subject of criticism from certain groups via social media several weeks ago, the two are absolutely not related."

Rapp didn't respond to requests for comment, but in a series of tweets addressing her termination, she said the company didn't prohibit side jobs. She said the very fact that Nintendo found out about her moonlighting — which she was doing under a pseudonym — was due to online trolls trying to take her down. It's not apparent what type of work she was doing, and Nintendo declined to elaborate.

"GG has been digging up all kinds of things about my personal life and contacting Nintendo about them," she tweeted.

This type of harassment falls into something known as "doxing," where trolls use public platforms to dig up personal information and threaten someone's safety — or, in this case, job.

In her tweets about Nintendo, Rapp painted a picture of a company that shied away from discussing the hard stuff. She said that after working at the company for one month, she was "asked not to tweet about rape culture because it could become a big story." More recently, she said she was stripped of her spokesperson status at the company, which she said was due to negative attention online.

"Do you think that if the industry wasn't afraid of women, sex-positivity, etc. that the anon moonlighting I did would have been a problem?" she tweeted.

Nintendo said it is "committed to fostering inclusion and diversity in both our company and the broader video game industry, and we firmly reject the harassment of

Emotions

- Emotions
- Stress (6)
- Suffering (4)
- Hatred (2)
- Action (2)

Entities

- Places
- United States of America (1)
- Chicago (1)
- New York (1)
- Military Actions
- conflict (1)
- Cyber illegal
- troll (2)
- Organizations
- Nintendo (17)
- Standard and Poors (6)
- Indices LLC (2)
- Opco (2)
- Morningstar (2)
- Twitter (1)
- National Football League (1)
- Cable News Network (1)
- Financial Services LLC (1)
- Trademark Holdings LLC (1)
- Factset Research Systems (1)
- Chicago Mercantile Exchange Inc. (1)
- People
- Alison Rapp (37)
- Chris Kluew (3)

From keyword to meaning-based

Traditional search using keyword- or statistics-based approaches or that apply matching algorithms may fail to link seemingly disparate but related subjects, actors, activities, organisations, or topics. A simple phrase, "Mark, with his brother Jack, drove a Cadillac in New York on July 19", contains several entities and relations to identify: people: Mark and Jack; family relation: brothers; car model: Cadillac; place: New York; date: July 19. Software must be able to read and comprehend human information in content, categorise at sentence level, distinguish between entities in text and their attributes (not just those on a target list, but all entities), identify relationships between them and solve anaphora, and more, across vast volumes of documents. Fortunately, the right tools can ensure that you're able to take advantage of all of your information to meet the requirements of analysts who need to process it and the security and intelligence operations that rely on it.

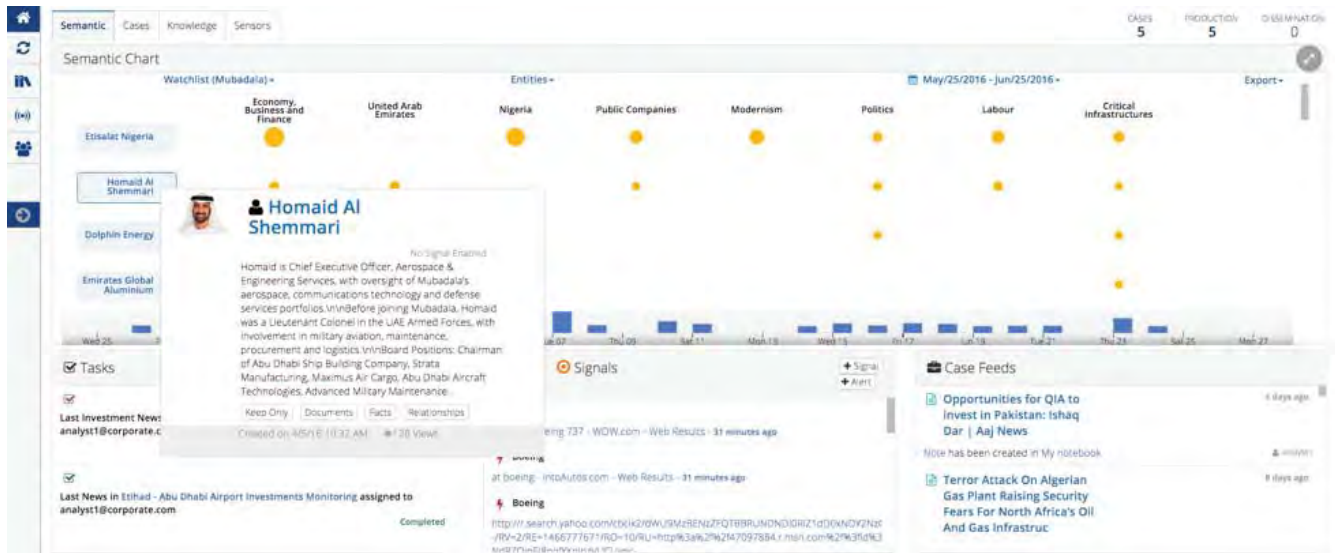
Software must be able to read and comprehend human information in content.

The screenshot displays a semantic search interface. On the left, there are navigation tabs for 'Semantic', 'Cases', 'Knowledge', and 'Sensors'. Below these is a search bar with the text 'Etihad Airways (Organizations)'. The main content area shows search results for 'Etihad Airways agreement Pepsi Indian Premier League' and 'Etihad Airways agreement IPL'. Each result includes a snippet of text and a 'View Article' button. On the right side, there is a detailed view of the search results, featuring the Etihad Airways logo and a network diagram of related entities. The network diagram shows a central node for 'Etihad Airways' connected to various other entities, including 'Abu Dhabi Breakthrough Egypt', 'NBAU Private Bank (Dubai) SA', and 'Abu Dhabi International Terminal Company'. The interface also includes a 'References' section and a 'Copy to clipboard' button.

Introducing expert.ai for Security and Intelligence: Innovative Cognitive Technology

Cognitive technologies like expert.ai strengthen security and intelligence applications by employing the understanding, reasoning and learning that help reveal and interpret nuanced information, patterns and even weak signals in real-time.

Based on artificial intelligence and cognitive algorithms that simulate the human ability to read and understand language, expert.ai understands the meaning of words in context, understanding virtually everything in all the content required.



In Security and Intelligence operations, this helps you to:

Make sense of intelligence data

expert.ai combines an understanding of language similar to how an intelligence analyst thinks and processes information with the processing scale for large volumes of data. As a result, expert.ai's processing makes immediate "sense" of the data, adding context to the content and at a fraction of the traditional analysis time. This understanding of the meaning of language in context is especially beneficial in scenarios where adversaries communicate ambiguously and intermittently using slang, analogies and code words or phrases.

Mitigate cognitive biases

expert.ai's unique value lies in its ability to replicate the absolutely critical contribution of analytic diversity and helps mitigate cognitive biases. A powerful set of ontologies accommodate a wide range of assumptions and/or hypotheses, and tailored taxonomies for highly specialised problem sets can be produced and integrated, further augmenting the power of the semantic engine.



Test hypotheses

By augmenting cognitive activities and facilitating the analysts' processes of creating hypotheses, analysts can test multiple hypotheses simultaneously and produce interpretive analysis. It serves as an enabler to engage in broad horizontal (creative) thinking and deep vertical (critical) thinking excursions within large amounts of data in a way that is expedient and revelatory. This extensive and in-depth view of data can accelerate cognitive activities, helping the analyst discover truths, solve complex problems, make good decisions early, cue sensors and disruptors, and prevent surprises.

Among the most important features of expert.ai is the ability to integrate it at various points within an open architecture framework and make other analytic tools more effective.

Provide forecasting and foreknowledge

This is especially effective for Indicator & Warning analysts who must go well beyond typical evaluation and reporting. Instead, these analysts must transform information into knowledge and foreknowledge, applying intellectual rigour and exceptional tradecraft to compensate for absent evidence and make information actionable. Their trade must be plied in a data environment that makes the "needle in the haystack" challenge seem easy.

Speed up the analysis process

expert.ai's "Smart Ingest" feature produces high performance data that developers can easily integrate into existing analysis platforms and applications for faster evaluation and analysis of documents, web pages, social media data or any big data sets or real-time information streams.

Optimise existing technology and platforms

Among the most valuable benefits of the expert.ai is integrating it at various points within an open architecture framework to make other analytic tools more effective. This adds further value for customers because they are able to optimise their existing investment.

EU referendum: Barclays, Royal Bank of Scotland want to stay, as Priti Patel says Brexit will cut car insurance for women - Telegraph
Economics RSS - 4 months ago

Visit website Copy to clipboard

EU referendum: Barclays, Royal Bank of Scotland want to stay, as Priti Patel says Brexit will cut car insurance for women
Priti Patel, a Work and Pensions minister, will say that leaving the European Union will cut 'the cost of car insurance, especially for women' and the price of food
Priti Patel, the Conservative employment minister, argues that leaving the EU is in the best interests of women Photo: REX FEATURES
12:01AM GMT 23 Feb 2016
But other big companies including Sainsbury's, Tesco and British American Tobacco have decided to stay neutral. Barclays and Royal Bank of Scotland's intervention came after 36 FTSE 100 companies signed a letter to a national newspaper urging Britons to stay in the EU.
The number of signatories was fewer than expected. However a Number 10 source said the "out" campaign "can only dream" of getting as many.
In a statement, Barclays said: "On balance we think it is in the interests of our customers and clients for the UK to remain in the EU."
Royal Bank of Scotland chief executive Ross McEwan, speaking in a personal capacity, added: "I can't see an economic scenario where coming out of the EU is a good thing for the bank or the banking industry as a whole in the short to medium term."
The European Union ordered RBS to sell assets as a consequence of the state aid. Photo: AFP
However there was criticism because some members of the Prime Minister's business advisory group, which includes senior business executives who Campaign group Vote Leave found that 15 of the 34 FTSE 100 signatories had received over €120.9million (£95million) from the European Commission in grants between 2007 and 2014.
Vote Leave also said that 22 of the 36 companies had spent between €13.1 million and €16.6 million on lobbying and employing consultant lobbyists.
Robert Oxley, a spokesman for Vote Leave said: "Many of those peddling project fear today wanted us to join the Euro and opposed giving the public a referendum in the first place."
Separately, Martin Temple, the manufacturers' organisation annual dinner Martin Temple will argue in a speech on Wednesday, that Britain should stay in the EU, saying "the great risk of leaving is that our country would be economically poorer".

World Leaders
Anne Villiers (3)
People
Priti Patel (9)
Anne Villiers (3)
Brexit (3)
Robert Oxley (2)
Theresa Villiers (2)
Rex Features (1)
Ross McEwan (1)
Eddie Mulholland (1)

Facts
Intelligence
Politics (17)
Public Companies (5)
Economy, Business and Finance (4)

Emotions
Desire (2)
Geography
United Kingdom (5)

Topics
Intelligence
Politics (14)
International Organisation (13)
Professional Services companies (5)
Insurance (5)
Emotions
Desire (2)
Geography
United Kingdom (5)

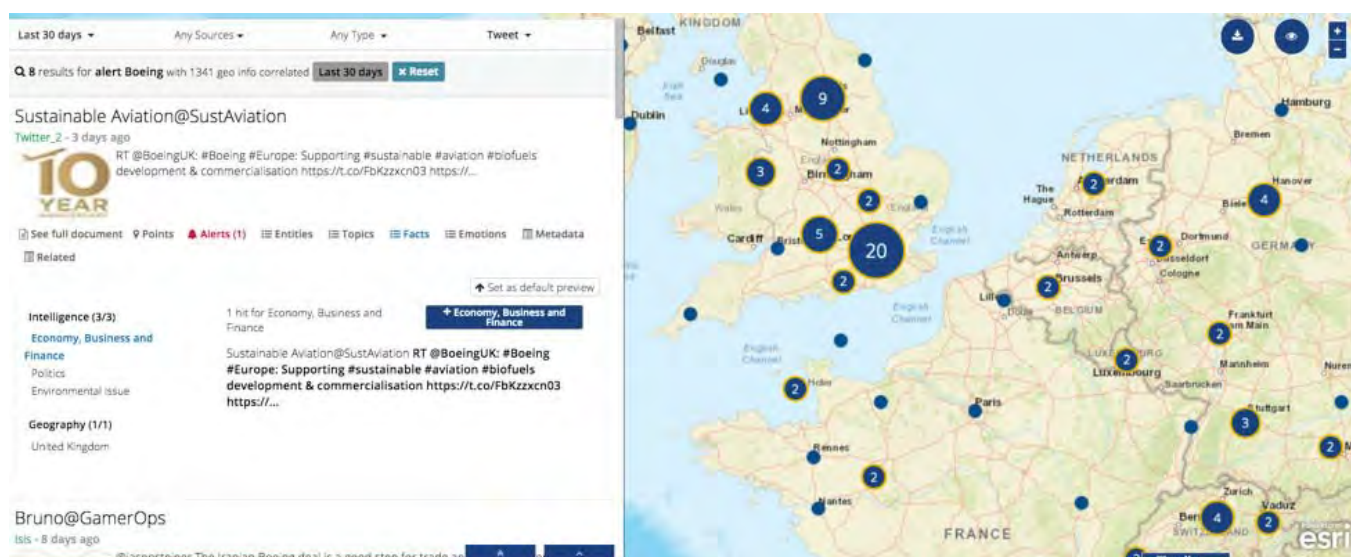
expert.ai's case management software supports analysts in the creation, management and distribution of strategic knowledge.

Unique Benefits

- Deep understanding of all relevant information
- Correlation of events from a variety of sources to reveal patterns and trends
- Detect threats in real-time and as events evolve
- Reduce uncertainty to drive better, more informed decision making
- Transform your security model from reactive to proactive
- Effective information management that does not overwhelm analyst teams

Powerful Intelligence Features

- Sense-making: Process text in natural language while adding context to content for rapid and deeper understanding of the meaning of data.
- Smart Ingest: Deliver rich and sophisticated metadata while categorising content according to taxonomy and discerning key entities and relationships.
- Enrichment Analytics: Create, share and apply knowledge at any scale and across any I&W problem set.
- Inference Analytics: Enable and enhance discovery of information “hidden in plain sight” from vast amounts of data: Add expert.ai capabilities to existing platforms.



expert.ai Solutions for Defence, Intelligence & Security

Customised Intelligence Solutions

In addition to integrating expert.ai in existing technologies, companies can also adopt new, ad hoc solutions based on expert.ai. expert.ai has developed innovative, sector-specific solutions for Defence, Intelligence and Security that include a sophisticated and efficient workflow process, and collaboration features for rapid and effective information sharing. These solutions allow rapid access, visualisation, sharing and distribution of open-source and internal content, with unparalleled support for every phase of the intelligence cycle. They are tailored to fit the analyst’s perspective and the user’s domain, supporting collaboration across the organisation’s analytics teams, and offering a fast way to find content on open sources and internal databases.

Case Management Software

Supports analysts in the creation, management and distribution of strategic knowledge.

expert.ai's primary capabilities include:

Categorisation: During the categorisation process, a document is automatically assigned to one or more pre-defined categories in a taxonomy. expert.ai categorises documents according to different customised taxonomies (geo taxonomy, crime taxonomy, emotions taxonomy), etc.

INTELLIGENCE TAXONOMY

- [International Organisation](#)
- [Government Executive](#)
- [Armed Forces](#)
- [International Relations](#)
- [Loans](#)

Other topics :

[Energy](#) , [System of Justice](#) , [Summit](#) , [Oil and Gas - Prices](#) , [Natural Gas](#) , [Critical Infrastructures](#) , [Merger, Acquisition and Takeover](#) , [National Government](#) , [Oil and Gas - Downstream Activities](#)

GEOGRAPHY TAXONOMY

- [Ukraine](#)
- [Russia](#)
- [Belgium](#)
- [Bulgaria](#)

Displayed below on the left column, are the categories/topics which were automatically identified within the text. The taxonomy includes over 1,000 specific elements of the Security and Intelligence domain. Select one of the items on the left to highlight the related sentences in the original text.

Ukraine crisis: NATO suspends cooperation with Moscow
Brussels, Belgium (CNN) -- NATO will suspend "all practical civilian and military cooperation" with Russia because of its annexation of Crimea, saying it has seen no sign that Moscow was withdrawing troops from the Ukrainian border.
Foreign ministers from the 28 members of the Western military alliance met in Brussels on Tuesday for the first time since Russia grabbed the Black Sea peninsula from Ukraine last month, triggering the worst East-West crisis since the Cold War.
They were discussing ways to boost NATO's military presence in formerly communist central and Eastern Europe to reassure allies worried by Russia's moves.
After the session, U.S. Secretary of State John Kerry said Russia has challenged truths that only a few weeks ago seemed self-evident: that European borders in the 21st century would not be redrawn by force.

Text Mining: Text mining and named entity recognition (NER) are information extraction tasks that seek to locate and classify a text's atomic elements into pre-defined classes (entity types). expert.ai extracts several types of entities: standard entities (people, places, dates, etc.), semantic tagging and domain-specific entities. expert.ai reveals entities which, although not explicitly cited in a text, have a strong, consistent connection with entities already detected in the content. Thanks to a specialised module that detects and extracts entity co-occurrences, expert.ai also extracts the possible relationships that exist between entities.

People

- [Alexei Miller](#) (2)
- [Anders Fogh Rasmussen](#) (9)
- [Andriy Deshchytzia](#) (1)
- [Angela Merkel](#) (3)
- [Barack Obama](#) (1)
- [Jen Psaki](#) (1)
- [John Kerry](#) (3)
- [Sergey Lavrov](#) (1)
- [Viktor Yanukovich](#) (5)
- [Vladimir Putin](#) (4)
- [William Hague](#) (2)

Organizations

- [Cable News Network](#) (2)
- [Department of State](#) (1)
- [Foreign Office](#) (2)
- [Gazprom](#) (2)
- [International Monetary Fund](#) (1)
- [NATO-Russia Council](#) (1)
- [North Atlantic Treaty Organization](#) (17)
- [RIA Novosti](#) (2)
- [US House of Representatives](#) (1)
- [White House](#) (1)

Places

- [Belgium](#) (1)
- [Black Sea](#) (2)
- [Brussels](#) (4)
- [Crimea](#) (5)
- [Eastern Europe](#) (1)
- [Kiev](#) (3)

Text mining offers a list of classic standard entities (People, Organizations and Places), as well as the extraction of entities correlated to the Security & Intelligence domain. Select an item on the left to see it highlighted in the text. When a person is selected from the People box, the name and its anaphor (if present) will be highlighted. Anaphors are the indirect references to an entity, such as pronouns or roles.

Force, and a possible review and update of NATO defense and military plans, the official said.
Russian troops on border
Earlier, Rasmussen said he saw no sign that Russia is pulling its forces back from the border with Ukraine.
"Unfortunately, I cannot confirm that Russia is withdrawing its troops", Rasmussen said at the opening of the two-day meeting.
"This is not what we're seeing. And this massive military buildup can in no way contribute to a de-escalation of the situation".
Concerns are high that Russia, which U.S. officials last week said had about 40,000 troops near the frontier, might seek to enter eastern Ukraine, after it annexed Ukraine's Crimea region last month.
Russian President Vladimir Putin told German Chancellor Angela Merkel on Monday that he'd ordered a withdrawal of some Russian troops from his country's border area with Ukraine.

Fact Mining: Identifies facts, as well as the entities (people, organisations, places) and tags (URLs, phone numbers, emails, etc.) that may be related to them, combining categories and entities within the same sentence.

Energy and Resource ?

People » [Alexei Miller](#)

Organizations » [RIA Novosti](#), [Gazprom](#)

Places » [Ukraine](#), [Russia](#), [Kiev](#)

Measures » [1,000 cubic meter](#)

Money » [1,700,000,000 dollar](#), [385.50 dollar](#), [268.50 dollar](#)

Principal Limited Companies » [Gazprom](#)

[Company Information](#)

[Defence](#)

[Diplomacy](#)

[Government](#)

? Fact mining identifies and groups the facts with the relative entities involved. The left-hand column lists the facts extracted from the analyzed text. The different colors depend on the taxonomy of reference (see Categorization tab). For each single fact selected in the left column, the right-hand column displays the related topics and entities above each sentence (atomic knowledge unit).

Oil and Gas - Downstream Activities, Natural Gas, Energy, Alexei Miller, Russia, Ukraine, RIA Novosti, 1,700,000,000 dollar, Main elements (RIA Novosti, supplied, gas, energy)

Ukraine, which is heavily reliant on Russia for energy, is also \$1.7 billion in arrears in its payments for gas already supplied, Miller said, according to RIA Novosti.

Natural Gas, Oil and Gas - Prices, Energy, Ukraine, Kiev, Gazprom, Main elements (natural gas, price, giant, energy)

In a move that will heighten pressure on the interim government in Kiev, Russian energy giant Gazprom announced a sharp increase in the price it charges Ukraine for natural gas.

Natural Gas, Alexei Miller, Ukraine, Gazprom, RIA Novosti, 268.50 dollar, 1,000 cubic meter, 385.50 dollar, Main elements (gas)

Starting Tuesday, Ukraine will be charged \$385.50 per 1,000 cubic meters of gas, up from the previous rate of \$268.50, Russian state news agency RIA Novosti quoted Gazprom Chief Executive Alexei Miller as saying.

Conclusion

For security and intelligence professionals tasked with protecting digital and physical assets, protecting against threats and providing timely intelligence, generating knowledge from data is essential. While the causative factors that underpin attempts to predict future physical phenomena (such as weather forecasts) are bound mostly by the laws of physics, no such laws constrain or define human behaviour. As the intelligence analyst attempts to determine what a person, a group, or even a government might do six months from now, the process is dominated by unknowns.

Analysis within the intelligence business is manifested by extracting meaning from ambiguous information, compiling comprehensive understanding from fragmentary indicators, discerning threat amidst seemingly benign activity and data, and projecting future actions and outcomes based on episodic observations of past behaviour. It is difficult and sometimes daring work wherein success results from applying collective brainpower as a finely tuned and conditioned instrument. With expert.ai technology business and government analysts can make that difficult but critical leap with more confidence and precision.

About us

Expert System rebranded its Natural Language semantic technology to expert.ai in October 2020. The product suite was formerly known as Cogito.

Expert.ai is the premier artificial intelligence platform for language understanding that augments business operations, scales data science capabilities, simplifies AI adoption and provides the insight required to improve decision making throughout organizations. The expert.ai brand is owned by Expert System (EXSY:MIL), that has cemented itself at the forefront of AI-based natural language solutions across Insurance, Banking, Publishing, Defense & Intelligence, Life Science & Pharma, Oil, Gas & Energy, and more.



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