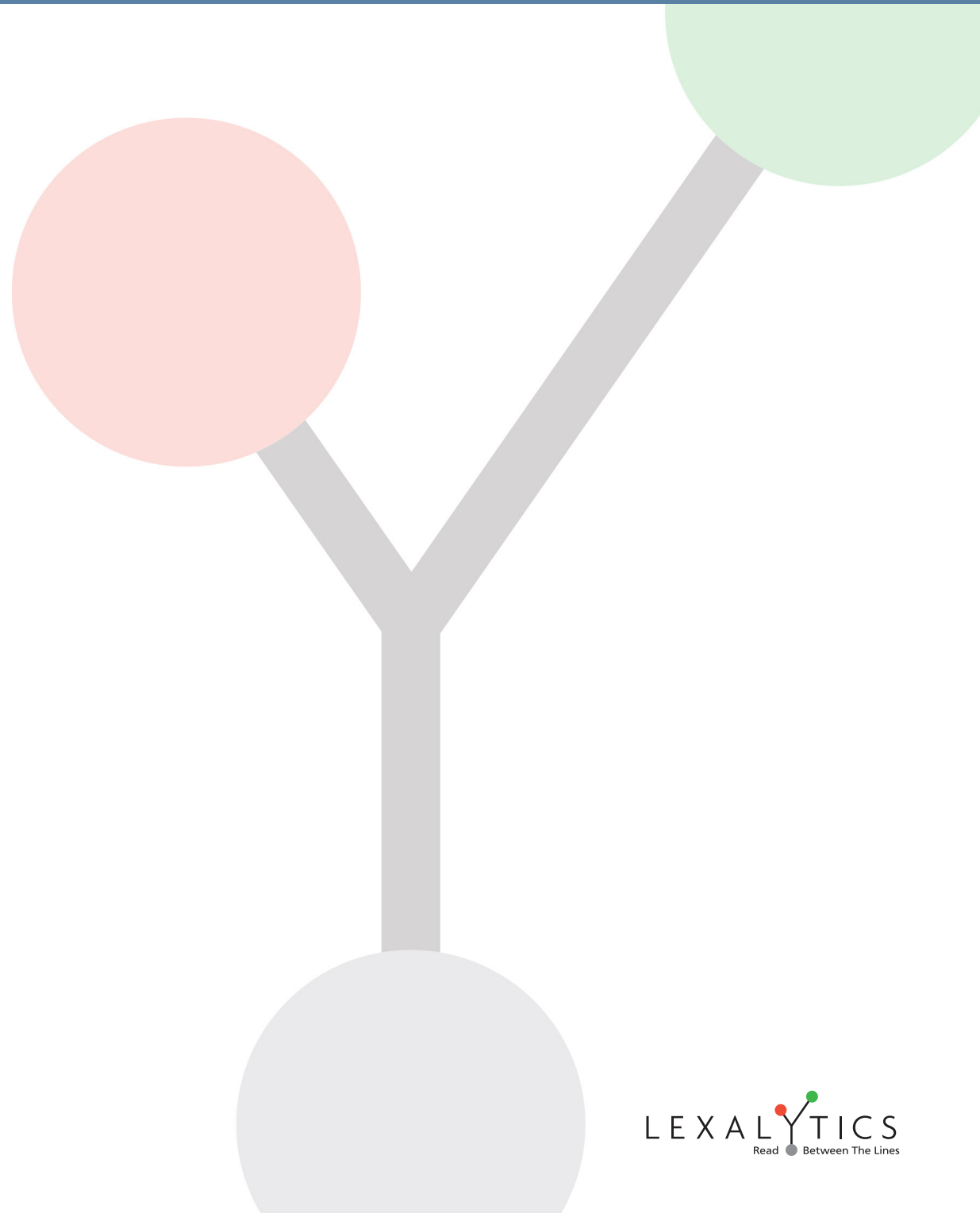


Solutions

Whitepaper





Lexalytics build text analytics products that scale all the way from industrial applications at hundreds of millions of documents a day down to working on a small survey directly inside of Excel. We provide text analytics services to companies on the Fortune 500 down to small market research companies; from companies that specialize in analysis to companies that just want to understand more about their market and customers.

Lexalytics has four products: Saliency, Saliency Mobile, Semantria, and the Semantria Excel Add-In.

Since 2003, we've refined and improved our core engine: "Saliency". Saliency is a multi-lingual text analysis engine that is currently integrated into systems for business intelligence, (social) media monitoring, reputation management, automated trading, survey analysis, voice of customer, customer experience management, and more. Saliency provides the basic machine learning and natural language processing for all of our products. Saliency integrates painlessly with your BI/dashboard/ analytics or data warehouse system, and works "right out of the box", quickly adding value to your business – letting you focus on building your service and not on the technical details of text analytics.

Saliency Mobile takes the power of the Saliency engine and puts it right in your pocket. It's a slimmed down API, but still has all the core functions and

features you need for easy on-the-go analytics. Saliency mobile is great for application developers that want the power of a major text analytics system with the privacy and convenience of having the processing done directly on the handset.

Semantria is our software as a service option, with an easy-to-use API. We have wrappers for most major programming languages, and handle all of the details of processing for our customers. We have customers that pump more than a hundred million documents per day through our SaaS system, and have over 99.995% uptime – suitable for mission critical systems.

The Semantria Excel Plug-in serves both as a tuning workbench and a processing client, with all the easy-to-use features of Excel. It's easily customizable, so you can use built-in visualizations, and analyze your data by category, entities, sentiment, or any of our other features in all languages we support. It's also trivial to export results into other analysis and visualization platforms like Tableau™, Qlik™, R, SAS, SPSS, and many others.

We don't believe in black boxes, so every parameter is available for you to tune and optimize to fit your needs and desires.

Put simply, our products have the strength to analyze the entire blogosphere, the subtlety to look for slight trends in confidential records, and the flexibility for completely novel problems. We turn text into actionable information.



Named Entity Recognition: When you need to know “who” is being discussed: We have 5 different algorithms with multiple machine learning model types that work in concert for maximum transparency, configurability, and accuracy. We also provide immense detail about the context surrounding each entity (important topics, sentiment for that specific entity, entity-level summarization and more.)

Named Entity Relationships: Entities act on each other. Companies buy one another. People move between organizations. Genes affect other genes. Competitors launch new products. Products have new functionality. Our relationship patterns allow the extraction of those important interactions between entities.

Topic Extraction: With extraction methods ranging from simple n-gram through full syntactical parsing, we provide a wealth of information on the important topics of discussion. You can use fully automatic topic extraction, or you can help shape the semantic direction of how our software extracts the topics – allowing you to both discover topics you didn’t know were there, as well as rigorously tracking topics you were expecting.

Sentiment Analysis: We’re world-renowned for our sentiment analysis. We shipped the very first commercial sentiment analysis engine back in 2004, and have torn it apart and rebuilt it many times since then, staying on the leading edge of technology. We believe in personalization of sentiment, so we provide easy tuning capabilities combined with transparent results (you know exactly why we made that decision). We provide the finest-grained sentiment available, not just providing document-level sentiment, but providing topic-level, entity-level, sentence-level, summary-level, and more. Sentiment can shift radically in a single comparative Tweet, we can easily handle it. Speaking of social sentiment, we have lots of specialized parsing and processing abilities for social – like full Emoji support, acronyms, emoticons, and the ability to extract sentiment from hastags. #welovehashtags

Summarization: Not only can we provide a configurable summary of a document, we can give you the summary for a specific entity inside of that document – highly useful if you’re trying to understand what’s happening with a particular company across many different documents. Classification: You can use keyword-based classifiers, or use our unique Wikipedia™ based concept topics, or you can use machine learning to learn how you’ve been tagging content and do it just like you’ve been doing it. Keywords are good for very specific tasks, Wikipedia classifiers are great for broad cases where you really don’t want to list all the keywords (like, say “food”), and machine learning is excellent for when you’ve been tagging content for a while – we can just learn how you do it, and do exactly the same thing. These tools, in combination, are excellent for tasks like automating survey coding, or tracking mindshare in the press.

Language Support: Arabic, Danish, Dutch, English, French, German, Hebrew, Indonesian (Bahasa Indonesia), Italian, Japanese, Korean, Malay (Bahasa Melayu), Mandarin (traditional), Mandarin (simplified), Norwegian, Polish, Portuguese, Russian, Spanish, “Singlish” (Singapore colloquial English), Swedish, and Turkish.

Industry Packs: We have special packages for specific industries that provide instant tuning to deliver more relevant results with zero work. We have special packs for the hotel industry, the restaurant business, one for airlines, and one for the pharmaceutical industry. There are thousands of specific phrases and entities included in these packs, delivering to you a wide swath of data specific to your industry.

Multi-tenancy: If you’re building a system that’s going to be used by lots of different people, each one of them probably have their own take on how the system needs to behave. If you are just using one single machine learning model, that’s really difficult to accomplish – but we’ve already thought about that, and make it easy for you to support thousands of different configurations, each one staying nicely separate from the others.



You (or your customers, if you're a service provider) can analyze the conversation about your industries, discovering trends and patterns that will help you succeed – start using more open-ended questions to surveys, import social data, “read” thousands of news articles. Below you can see just some of the markets where our services are vital for brand growth.

Hospitality applications:

- Quintessential example of how Lexalytics can be applied to help businesses solve problems and meet their customers' needs (before even the customer knows they have them!).
- Find unvarnished reviews of your business, staff, and services offered to your customers.
- Help ask specific questions such as: how do customers feel about the pool or dining options you provide?
- Find out what services and features customers would most appreciate in a loyalty program or find out what can bring in new customers.

The Restaurant/Food Service Business:

- Listen to the unvarnished truth about your customers' good and bad experiences.
- Mine social content to discover what dishes people are talking about.
- Was the food great but the service bad (or vice versa)?
- With specific entities, themes, and categories focused on the restaurant business, you can manage your own profile and find out how to target customers who may love your food but simply haven't heard of you yet!

Retail Sales:

- Listen to customers all over the internet talking about what products they love and want
- Find out how people feel about your competitors' products or prices.
- Target specific products to the exact sorts of customers most likely to buy them.

Consumer Packaged Goods:

- Discover trends on social or in the blogosphere about your brand or products.
- If you get some viral buzz, score the sentiment of people involved to develop strategies to keep it going.
- Use the data to figure out the best practices for directly engaging with customers
- Show your potential and regular customers you know what they need and care about.

Product Development:

- Listen to industry leaders and experts by mining data from social content and online industry publications.
- Review, score, and categorize online reviews from customers and blogs.
- Discover what people are saying about your products and what areas can be improved.
- Find holes in the marketplace that your company can fill.

Entertainment Industry:

- Use specific or general entities or themes to measure how the audience is reacting to any sort of media.
- Find out if people are getting tired or begging for more content like superhero films, hospital dramas, or action-adventure stories.
- Get a heads-up on what genres are gaining buzz on social media with fans or industry professionals.
- Find out who your specific audience is and what kind of content they like and dislike.

Financial Services:

- Use text analytics to make better sense of data at the micro and macro levels.
- Analyze financial reporting on any number of specific themes, categories, or trends.
- Mine social content for commentary about financial products people are looking for.
- Listen to your clients to better understand how they feel about your services and products.

Customer Experience Management:

- Analyze the effectiveness of your own customer experience management services.
- Learn what specifically makes your customers happy or dissatisfied.
- Use text analytics to evaluate and score your Voice of the Customer surveys very quickly.
- Mine social content to discover problems or areas in need of improvement you may not already know about.



Targeted Advertising: Not only can Lexalytics help you find just the right ad campaign for your customers, but we can help you deliver that advertising right to them! Our entity extraction will pull out key, specific details in your consumer data. Saliency can see the themes threaded throughout the data, finding common preferences or things clients dislike. With all this, Lexalytics can even provide insight into the intention of your customers by identifying “buy signals.”

Brand Management: A lot of people will try to tell you what your brand should be, but Lexalytics can tell you what it is. While social content might seem like a lot of voices in a room all talking at once, Saliency is able to listen intently. It identifies individual speakers and what common themes come up when discussing your brand. It can hear how people online talk about your brand in relation to competitors, and analyze the sentiment of that discussion.

Competitor Analysis: Lexalytics can also help a new company or an established one hoping to stay fresh take stock of their place in the market. We can analyze the social content, published media, or any number of resources to help you see the larger picture. Saliency can help identify your company’s strengths and weakness, and it can do that for the competition too.

Generating New Product Ideas: Thinking about expanding your business or the services offered? Using categories to find out the industries and services people are talking about, Lexalytics can help you identify a need customers have that isn’t being filled. You can use entity extraction to research specific products and features, and Saliency will let you know how customers feel about them before you even begin. Saliency can help you understand the context of the themes that emerge from clients or in the marketplace.

Optimizing Lead Generation, Marketing Spending, and Product Launches: Marketing spending is necessary, but how do you know how much is enough? Lexalytics can use text analytics to help you measure, almost in real-time, the effectiveness of your marketing spending. You can analyze demand and anticipation to best-time the launch of a new product or service. You can find customers who are dissatisfied with current solutions, targeting them with advertising campaigns that provide the solution to a problem they may not even realize they have.

Social Customer Service and Support Analysis: Lexalytics can also help determine the effectiveness of your customer service. Saliency can help you analyze what sort of social customer service works, how customers feel about it, and what makes them happy or dissatisfied. You can also apply these themes, topics, and entities to queries about your own customer service, identifying areas in need of improvement and areas of success.



Perhaps the most straightforward application of these tools is in managing the experience of your customers. It would be impossible for even a team of social media professionals to accurately read and analyze all the social data out there. With Lexalytics' tools, that's all done for you. Instead you and your team can focus on specific areas of interest, using the easily visualized data to identify areas in need of improvement or opportunities for even larger profits.

The "Voice of the Customer" is one of the most important when it comes to growing your business. With Semantria and Saliency, you can easily process customer survey data and immediately see how people feel about your business generally or measure the sentiment surrounding specific themes or entities. Not only can Lexalytics tools help you process these surveys, but through mining social and online data, it can even help you create these surveys, asking questions you otherwise might not have known to ask in the first place.

Yet, your customers are talking about you all the time, you just can't always hear/read it. Our text mining tools can listen in to what your customers are saying about your industry, products, or brand on social media, even when

they think you're not listening. By monitoring social media, you can get in mere minutes a "big picture" look at your industry or company in the eyes of the public.

Still, successful business isn't just about pleasing customers, but also about being aware of your competitors. Saliency and Semantria are also vital tools for conducting market research. They can be used to speed up the results from focus groups or they can analyze the competition (and how people feel about them). Through our sophisticated methods of named entity extraction, context determination, and sentiment analysis, you'll uncover subjects and trends you'd never have thought to look for by hand.

For consultants, content managers and creators, professionals in business intelligence, and countless others would all benefit from Lexalytics tools. Not only does it provide you with more data-based analysis than you would have access to otherwise, it also saves you time. Why spend countless hours analyzing market research, customer satisfaction surveys, or dozens (if not hundreds) of reviews when Semantria or Saliency could do it all for you in the time it takes to make a cup of coffee?



One of Lexalytics' key differentiators is the ability to tune anything and everything in the system to meet your needs. We have an excellent base tuning set that works well across a wide variety of content, but we allow each of our customers to truly individualize their solution. For sentiment, we offer the easiest, clearest, and most powerful tuning capabilities of anyone in the industry.

You can quickly see why a document scores the way it does, and then change all of the underlying parameters that go into that scoring decision. No need to retrain a model, just change a few configuration files and off you go. Instead of building your own NLP software, why not spend that time in tuning an already stable, easy to integrate system? If you're a data scientist or an NLP expert – even better. We liken this to using power tools. If you're trying to build a house, you're not going to try and build a drill from scratch, are you? You're going to go get the best power tools you can get, and you're going to use those to build the house. Your skill in understanding how to work with language and data will allow you to really dig into the capabilities of Lexalytics software, without having to worry about maintaining the code or expanding the basic capabilities into new spoken languages.

Seven out of the top ten Social Media Monitoring companies use Lexalytics software.

Lexalytics animates several of the top survey analysis companies including evolve24, Service Management Group (SMG), KPMG/Nunwood, and eDigitalResearch.

We are the “oomph” behind the Thomson-Reuters automated trading service. We enhance Dow Jones' Factiva information service, power Microsoft's social listening platform, and help Hewlett-Packard enhance their information discovery products.

Lexalytics wins in many different data-analysis vertical industries. Our customers, in turn, use our engine to analyze data for almost every vertical industry on Earth. Every day, you come into contact with thousands of products and services belonging to companies improved by our software.

And most of those companies are blissfully unaware of the text analytics engine that's doing the work for them, they just know that their reputation management partner, or their content management partner, or their customer satisfaction partner... gives them great information. If you want to make your analytics application/service truly different and great, then you need to come to our website (<http://www.lexalytics.com>) or call us at: 1-800-377-8036 x1



320 Congress St
Boston, MA 02210

General Inquiries
1-800-377-8036

Sales
sales@lexalytics.com
1-800-377-8036 x1

International
1-617-249-1049