What is Sentiment Analysis and How Does It Work?

Sentiment analysis is a machine learning technique that employs text analysis algorithms, natural language processing (NLP), and statistics to analyze customer sentiment — classifying opinions into positive, negative, or neutral categories. Understanding a client's reactions on an emotional level is vital for unearthing the deepest insights required to perfect the customer experience. For this reason, companies are in a race to understand their customers — what they're saying, how they're saying it, and what they mean.

An estimated [80% of the world's data is unstructured](#), the majority of which is unstructured text such as customer reviews, feedback forms, surveys, social media data, and the like. This data is hard to analyze, understand, and sort through, making the process time-consuming and expensive. Sentiment analysis, also known as opinion mining or emotion AI, uses NLP to understand the context of data, and instill structure into it via tagging and categorizing.

By analyzing unstructured customer feedback at scale, such as customer reviews and social media conversations, businesses are better able to listen to their customers and make informed decisions relating to their products and services.

While there are various types of sentiment analysis approaches, those with the highest level of adoption include fine-grained sentiment analysis, emotion detection, aspect-based sentiment analysis, and intent analysis.

Types of Sentiment Analysis

Fine-grained Sentiment Analysis

Fine-grained sentiment analysis, also referred to as polarity detection, involves determining the polarity of a person's opinion. This might be a simple binary positive/negative sentiment differentiation or a higher specification — very positive, positive, neutral, negative, very negative — depending on the use case.

Emotion Detection

Emotion detection aims at detecting emotions, like happiness, frustration, anger, sadness, and so on. Most commonly, this can be done using an approach based on NLP or machine learning

classification algorithms. An NLP-based approach uses textual features like emoticons, degree words and negations, parts of speech, and other grammatical analysis to detect emotions. With intensive training, machine learning classification algorithms can be used to understand the semantics and structure of the sentences to detect emotions.

Twitter has become a valuable platform, providing an ever-growing collection of information on a wide range of topics from worldwide breaking news to opinions on products and services. Researchers benefit from this wealth of information, particularly because tweets often convey relevant information about the users' emotional states. As a result, the language, hashtags, and emoticons used provide considerable insight into users' sentiments on a variety of topics in the form of short text messages.

Aspect-based Sentiment Analysis

Aspect-based sentiment analysis digs deeper than fine-grained sentiment analysis. Its purpose is to identify an opinion regarding a specific element of a product. For instance, the battery life of a laptop computer. Businesses want to know which particular aspects or features people are mentioning in a positive, neutral, or negative way, allowing them to identify what are perceived to be the strong and weak points from the customer point of view.

Intent Analysis

The purpose of intent analysis is to detect not only what is expressed in the message, but also its intent. A common use case for it is in customer experience and support methodologies. Customer intent is often understood as buyer intent — the part of a customer's journey toward a purchase that reveals the purpose or reason behind a statement or action. Detecting customer intent can also reveal more subtle insights beyond what a customer is saying or talking about, whether it's a strong negative sentiment, a question about a feature, or a sincere 'thank you'.

The use cases vary for the practical application of sentiment analysis depending on what an organization is hoping to measure or determine. Common use cases for sentiment analysis include customer experience, feature development, brand monitoring, customer service training, market research, and performance management. Below we discuss some of these in greater detail and provide real-world examples of sentiment analysis in practice.

Use Cases for Sentiment Analysis

Sentiment analysis for customer experience

Leaders are now turning to sentiment analysis as a tool to ensure that they are close to the themes associated with the best and worst-case examples of their customer experience to be able to provide support to their customers when they need it. Sentiment analysis can identify clients who need support and improve the overall customer experience. Companies with the ability to identify these themes and the sentiment attached to them, quickly, from very large unstructured data sets is a substantial competitive advantage. Sentiment analysis unlocks new ways of thinking about future data collection for marketers, while increasing customer loyalty, profitability, and market performance using data that's sitting dormant in archives today. Indeed, research shows that positive experiences can bring a 4-8% revenue growth compared to the competition by increasing the customer lifecycle 6-14x and improving retention up to 55%.

As such, sentiment analysis is a valuable tool for customer service and can be used to:

- Analyze customers' interactions
- Identify customer pain points and prioritize issues accordingly
- Organize support and put filters in place to redirect tickets to your team
- Target individuals or groups to improve their experience and services
- Establish and improve audience segmentation

Sentiment analysis for brand monitoring

One of the most popular uses of sentiment analysis is to get a 360 view of how a company's brand, product, or business entity is viewed by its customers and stakeholders. Tools such as product reviews and social media can reveal key insights about what an organization is doing right or wrong. Companies can also use sentiment analysis to gain insights and measure the impact of a new product launch, a particular ad campaign, or a consumer's response to recent company news on social media.

For example, a surge in social media mentions following a product launch could be perceived as a good thing, but sentiment analysis stops to ask: are those positive or negative mentions? Digging deeper into the data reveals greater insights about sentiment beyond just tracking numbers.

Sentiment analysis for market research and analysis

Finally, sentiment analysis is used in business intelligence to understand consumer behavior and opinions — things like purchasing behavior, opinions on the user experience, and customer service. Insights on these more subjective, sometimes difficult to measure aspects related to the consumer give businesses direction on how to add value to the product or service offered.

Sentiment analysis has various use cases and can therefore be applied to countless aspects of business, from brand monitoring and product analytics to customer service and market research. By making sentiment analysis a key component of their existing systems and analytics, companies can work more efficiently, with more accuracy and greater overall success.

With the sheer volume of unstructured text data that is crucial to understanding the health of a business, sentiment analysis is an indispensable part of the overall data infrastructure. Sentiment Analysis advances analytical capabilities from highly structured but limiting data, to unstructured, dirty data. Harness the power this data holds in gaining new insights to better understand your customers and to perfect their experience with your brand.

Let our data experts at REEA Global show you how to get started with sentiment analysis, today! [Give us a shout](#) — we're ready to help you hit the ground running.

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