

Speech Analytics Best Practices: Deriving Meaning

Word Spotting vs. Topic Identification

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Abstract

Word spotting has been touted as a powerful tool to analyze recorded customer calls. But, while it's useful for some applications, word spotting cannot identify the topic of a call because more than one word is required to understand the call's real meaning. Enabled by powerful new technologies, topic identification yields more meaningful information than word spotting. It can accurately identify call subjects and classify and score every customer conversation.

Ultimately, topic identification can contribute to significant business benefits such as improving financial performance through reduced labor costs, increasing brand loyalty and profitability through effective customer retention programs, and reducing business risk associated with liability claims and fraud.



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Executive Summary

Every day, businesses record millions of hours of customer calls. Dedicating resources to “live sampling” is expensive and as a result companies are often unable to manually sample the volume of calls necessary to harvest the vast amount of business intelligence these calls contain. New technologies like word spotting and sophisticated topic identification algorithms are available that analyze all of a call center’s recorded calls without human intervention. Recently word spotting has been touted as a powerful tool to analyze recorded customer calls, and while useful for some applications, the technology can’t identify the topic of a call because more than one word is required to understand a call’s real meaning. Topic identification yields more meaningful information than word spotting and should be considered the gold standard within speech analytics.

More powerful technologies can be deployed that identify the topics within calls. These new technologies not only automate scoring components and call classification; they can identify topics within each call and across a body of calls. Automated call scoring systems run in the background alongside recording equipment and automatically generate reports for quality monitoring, agent evaluations, or customer satisfaction surveys. Call classification can save management an enormous amount of labor, since over 50 percent of the manually processed calls are not germane to the topic of interest. These applications now offer call centers a valuable tool to reduce costs, capture customer intelligence, optimize business processes, and manage risk.

The Problem

The contact center is a very labor-intensive environment. Agent costs typically represent 60% or more of operational budgets. Optimally, contact centers would hire more specialists to analyze calls, but the increased labor costs are prohibitive. Tools are needed that would allow call centers to analyze all or most calls without adding to labor costs. Since businesses have been unable to access the larger data sample that call mining would provide, businesses must make decisions with less information.

Tools that would provide more complete information would enable management to reduce labor costs, maintain profits from loyal customers through better retention efforts, and reduce business risk associated with liability claims. For example, contact center labor costs could be cut by reducing the manual processes associated with classifying calls by topic or locating sample calls that support business objectives. Call mining can identify why customers are calling and reduce the number of times they have to call to resolve issues. Consequently, customers enjoy a better experience and businesses enjoy better retention rates. Call mining can also be employed to automatically monitor what agents are saying to customers to reduce liability claims. The same call could be mined to identify if the customer was asked for account verification information to reduce fraud.

Business Value of Word Spotting vs. Topic Identification

Word spotting – the practice of flagging calls by a specific word – can be useful in classifying calls into general groups by a single word, but it does not identify what the listener really wants to know: what’s really going on in the call! For example, if a call center wanted to identify when customers were interested in purchasing an item and conducted a search on the word “buy” the application couldn’t differentiate between the statements:

“I wouldn’t buy that product; it’s too expensive”

vs.

“I would buy that product if it were on sale”

Word spotting would tag both calls, but would still require a supervisor to listen to both calls to identify the customers that wanted to make a purchase. While this is a valid approach and an improvement over blindly listening to random calls to find those that deal with buying, it still leaves an enormous amount of unproductive time listening to calls that weren’t germane to the task.

The Power of Topic Identification

Using the same example as above, technologies that would allow a supervisor to automatically identify a call in which the customer is interested in purchasing would clearly be more useful than simply identifying a specific word. The value of identifying the right call would yield labor savings by focusing the supervisor on calls that are of interest. Typically, 40-60% of calls reviewed by a supervisor are not germane to the search: valuable time is thus wasted listening to calls that are irrelevant. Reducing the amount of time needed to find and retrieve relevant call intelligence can quickly offset the cost of deploying topic identification. For example, topic identification can be employed to classify calls into specific categories of interest to the supervisor, and eliminate calls that are unimportant. This time savings can enable the supervisor to focus on more productive tasks.

Topic identification can also be employed by call centers to improve customer retention. Many studies have been devoted to the subject of costs associated with high-value customer acquisition and retention. Clearly, deploying cost-effective technology to identify customer dissatisfaction can increase the lifetime value of a customer and even prevent a customer exit to the competition.

Imagine a scenario as a customer: your recent purchase of a PDA is marred by a defective memory card. Your new “productivity tool” is making you waste time trying to fix it. You call into a contact center to lodge your complaint. Within twenty-four hours, a CSR contacts you and not only completely and accurately understands the problem she can recommend the solution and will ship out a new card that day. This doesn’t just create retention; it builds that priceless commodity – brand loyalty.

Only a tool that leverages the power of topic identification can provide the call center with context that yields effective, actionable information.

Topic identification can be used to identify key words that are indicative of customer dissatisfaction, such as naming a competitor or asking to speak to a supervisor. Moreover, since topic identification technologies can be applied to recording in near real-time, trends of customer dissatisfaction can be identified before they become widespread problems and programs can be brought to bear to keep customers before they decide to take their business elsewhere.

Another significant application for topic identification is the mitigation of business risk associated with liability claims, fraud, or product performance. Since agents represent companies, any statement that implies a guarantee of performance for a product or service may be challenged by a customer and put a company at risk for damages. Companies can use call classification and call scoring to identify key topics and word combinations that may identify potential risk to the enterprise, and instruct the agent to modify their language for future customer contacts before the behavior results in legal action.

Businesses can use topic identification technologies to profile calls over time and search for specific combinations of words in customer/agent calls that could result in fraud. A simple example of this might be that agents are not properly identifying key personal and account information to confirm if the caller is the owner of an account.

From the perspective of risk mitigation, calls can be identified that may signal fraudulent use of a customer account, or produce complaint patterns that may signal a serious product defect. Mining customer calls can highlight whether the agent asked for account verification information to reduce fraud. Mining customer calls can help identify patterns of customer complaints that could be addressed before a potential product liability issue is brought to the attention of the courts.

Conclusions

Speech technologies, particularly those that enable call centers to identify specific subjects and call patterns over time can result in a significant savings for businesses. At the same time topic identification can reduce liability and aid businesses in customer retention. Speech analytics have matured to a point where they are cost-effective and yield significant returns on investment enabling call centers to analyze all or most calls without having to add to labor costs. The applications can improve businesses' financial performance by reducing costs associated with labor, maintaining profits from loyal customers through better retention efforts, and reducing business risk associated with liability claims and fraud.

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