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Sentimental Analysis Of Incoming Calls On Helpdesk

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Abstract:

As more people use automated client support systems and call centers, there is an increasing need for improved methods of measuring client satisfaction and improving the quality of support. We confess multitudinous calls in our daily lives — several of which are promotional or related to loans and finance. This layout focuses on sentiment analysis to approximate arriving helpdesk calls with the intent to determine client emotion and serve their businesses better. With the application of natural language processing(NLP) methods, we analyze both the tone and content of verbal interactions and their abstracts. The suggested method identifies spam calls based on the conversation and shares the news with other druggies to assist them in evading similar unwanted calls.

I. INTRODUCTION

Offering quality client support is vital to any company seeking to establish long-term connections with its visitors. Properly handling incoming questions is imperative to icing a seamless client experience. While phony calls might seem insignificant, they can intervene with operations and affect individuals on a broader level. Conventional call centers often rely on do-it-yourself sweats to manage client businesses, which are sluggish and ineffectual. These strategies may address specialized concerns, but they often fall short of the emotional undertone of client interactions. In cutting-edge helpdesk networks, analyzing the emotional content of the call — whether it is an expression of satisfaction, frustration, or neutrality — can give rise to wiser judgments. additionally, knowing client emotions enables associations to acquire valuable feedback and consistently improve the quality of their service. Each incoming call also brings with it more than a question or a complaint; it represents an experience, prospects, and emotions of a client. Nevertheless, these human feelings often get lost along the way, somewhere in between words and tones.this approach centers on using sentiment analysis for incoming helpdesk calls to find emotional perceptivity that are often difficult to measure. In doing this, we hope to anchor the disparity between data and empathy — enabling support brigades to not only react with outcomes, but with comprehension At its most basic, sentiment 1 .analysis is the act of ascertaining the emotional connotation behind a string of words. It's a matter of deciphering not merely what an individual is communicating, but how they're communicating it. When used on incoming helpdesk calls, sentiment analysis holds the unspoken to rethink how support platoons reply, habituate, and improve. Instead of counting in big part on call duration, problem-resolution percentages, or agent scripts, businesses can avail themselves of a valuable richer measurement — how the customer felt then and there from, and after, the commerce. Others might be hesitant to share their real interests for fear of losing time. As a result, companies are left in the dark about the real emotional impact of their service.

II. RELATED WORKS

Throughout the years, researchers have tried to find solutions to better learn the emotions and sentiments of the callers in call centers' helpdesks. One method done by J. Lee and his unit in the year 2020 utilized speech- to-textbook technology — such as Google's Speech API or Mozilla DeepSpeech — which transcribes the calls into textual textbook. Anatomizing words using sentiment analyzing tools such as VADER and TextBlob, they also utilized. Surprisingly, they established that examining the way commodity was uttered — just like the tone and pitch of the speaker — in addition to the actual words resulted in far better outcomes. Their collaborative system, which employed a combination of deep literacy models, was appropriate to detect sentiment with approximately 84 delicacy. Ahmed et al.(2019) focused on real-time emotion discovery employing auditory features such as MFCCs and CNN models. Although strong at tone landing, their system didn't fully grasp the content spoken. Ghosh et al.(2018) utilized CMU Sphinx and Naive Bayes for sentiment analysis from speech to about 78 delicacy. Sentiment analysis initially gained popularity through textual information, especially in social media and product reviews. Root workshop akin to those by Turney(2002) and Pang and Lee(2002) focused on categorizing opinions in textbook with machine literacy algorithms such as SVMs and Naive Bayes. Although these researches provided the foundation for textbook- based sentiment bracket, they did not consider speech- based data or real- time analysis required in helpdesk scripts.

III. CONCLUSION

In conclusion, the manner in which we comprehend client emotions in call centre assistance has progressed a significant distance. That began with simply translating speech to textbook and analyzing keywords has turned into far more sophisticated systems able to capture in which commodity is expressed — i.e., tone, emotion, and tension — as well as the actual words. More recent technologies, particularly those involving deep literacy, enable support brigades to better, more precisely understand in real time how a client is feeling. This enables companies to respond quickly, more tête-à-tête, and better. As these technologies improve, they'll have an even larger role in making client support more human and responsive.

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