



auMina™ – Enterprise Speech Analytics

U. Sachdev, R. Jayaraman, Z. Millwala

Uniphore Software Systems, Chennai, India

umesh@uniphore.com, rajagopal@uniphore.com, zainab@uniphore.com

Abstract

This paper gives an overview of a commercially viable product, auMina™ – an Enterprise Speech Analytics solution. It details out the features and capabilities of the product and the different business outcomes which can be derived from this Speech Analytics solution.

1. Introduction

auMina™ is an Enterprise Speech Analytics solution that enables contact centers drive critical business goals by analyzing existing speech data to identify trends, ascertain current status, predict outcomes and prescribe business process improvements. Speech Analytics is a smart analytics solution which listens to a set of calls and unearths golden nuggets about customer information (their needs, wants, market intelligence), sentiments of the customer (angry, satisfied, unhappy), agent information (knowledge, soft skills) and call drivers. This information can be leveraged to generate sales opportunities, reduce customer churn, build new customer relationships, improve agent quality and improve collections.

2. Speech Recognition Technology

Speech Recognition technology can be understood by correlating it with how our human body recognizes speech. Science has proven that humans detect speech using our ears. People identify the meaning of the words using the left side of their brain, which is more analytical, and decode the associated emotions and expressions using the right side of their brain, which is more holistic and creative. Speech Recognition uses a similar task break up to reproduce a similar set of functions to analyze sounds and speech. Prevalent speech recognition solutions make use of machine-based recognition, allowing them to recognize speech based on pre-registered words and sentences. A Speech Recognition solution recognizes the words and phrases spoken and converts them into a machine-readable format, paving the way for a human-to-machine communication.

3. Features and Capabilities

auMina™ has the following features and capabilities:

- Keyword spotting engine and proprietary recommendation algorithms to identify and prescribe improvements for each business goal. At 95.16 percent accuracy in lab conditions, the keyword spotting engine leads the industry, enabling consistent, predictable and actionable insights.
- Support for more than 80+ global languages including Indian regional languages with multiple dialects in each language.
- Patented algorithms for advanced noise reduction and silence detection capabilities to improve call quality.
- Augmented, scientific and automated speech tuning services to attain industry best speech recognition accuracy.
- Robust and Flexible Business Rule configurator with DIY model.
- Flexibility of on-premise or cloud-based implementation, augmented by a SAAS-based managed services business model.
- Flexibility to integrate with database management/CRM management systems, allowing relevant data to be integrated within the software to make it more meaningful for the user.
- Best in class Analytics and Visualizations to get instant actionable insights with out of the box reports, ability to build custom reports and get deeper insights with advanced analytics.

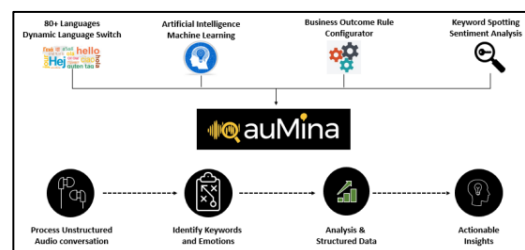


Figure 1: Feature List of auMina™

4. Three Pillars

The three key pillars on which auMina™ is supported are: Speech Engine, Rating Engine and Analytics & Visualization Engine.

The Speech Engine encompasses speech recognition capabilities, background noise removal, amplitude correction and dialect adaptation.

The Rating Engine covers the robust and flexible configuration framework for configuration of rating parameters – Business Goals, Business Rules and Scores where unstructured data is converted to structured data.

Through the Analytics and Visualization Engine, drill down views of data, slicing and dicing of data, correlation analysis and creation of custom and advanced reports can be achieved.

5. Business Outcomes

5.1 Improve Customer Experience

In today's hyper-connected world, creating a unique customer experience is one of the best ways to achieve sustainable growth. A customer experience strategy helps you retain more customers and build strong customer relationships. End-to-end focus on customer experience also improves up-sell and cross-sell opportunities, reduces operating expenses and decreases customer attrition.

auMina™ provides a complete customer intelligence solution. The system analyzes all conversations between customers and call center agents, identifying customer satisfaction metrics, and strategy to improve net promoter score, and customer effort score. The results of this analysis are presented through an intuitive workflow that includes customizable dashboards, reports and alerts. The system automatically highlights trends and keywords spotted in recorded conversations and displays alerts to the agent, with the overall goal of improving customer satisfaction.

5.2 Predicting Customer Churn

Businesses are faced with the challenges of an emerging “customer-centric” competitive marketplace. In a contact center environment, speech analytics is one of the fastest growing applications to identify customers who might be prone to churn in order to retain as many profitable customers as possible. Speech analytics with customer churn prediction identifies churn signals, calculates churn risk score for each interaction proactively reach out to customers at risk with retention offerings. This is a way the contact center reaches their customer and attempts to retain them as quickly as possible.

Speech analytics alerts supervisors based on the keywords and phrases detected based on the rules and severity of the call. For example, Customer Churn will be predicted when

the keywords like "cancel the service," "disconnect," "unsubscribe," "revoke," "suspend," "remove," and "move away" are spotted in the conversation between agent and customer.

5.3 Identifying Agent Skill Gaps

A challenge for any contact center is to understand the agent skill-gaps and guide the agent through training based on their skill set. Speech analytics has the potential to positively impact contact center agents across industries and provide a way for the contact center to analyze and measure the effectiveness of your on-boarding and contact center training programs and track the progression of agents through their careers.

Through the use of speech analytics, contact centers can automatically identify areas in which agents may need additional training or coaching, and can automatically monitor the customer service provided on calls. With speech analytics, 100% of agent calls are automatically scored, providing objective and consistent feedback on every call. This way, agents get fair and consistent evaluation into where they are doing well and where they need to improve.

5.4 Boosting Sales Opportunities

Speech Analytics helps enterprises unlock business opportunities with every customer communication. The three business essentials that Speech Analytics helps enterprises address include enhancing the potential of current offerings, driving the topline through up-sell and cross-sell, and optimizing costs to stay ahead of the curve.

Businesses use the Net Promoter Score (NPS) as a fundamental metric to assess customer loyalty towards their brand, products, or services. Speech Analytics becomes highly relevant here. For example, a customer may be satisfied with a product or service but still not likely to promote it within his or her network. Speech Analytics helps by classifying customers into distinct categories including active (promoter and detractors) and passive ones.

6. Conclusion

The human voice is a rich source of emotions, inclinations, biometric characteristics, and demographic details. The customer-service industry, exposed to valuable speech data through calls, needs technology to mine the bytes. Speech Analytics can dynamically process their content, emotions, profile data, etc., to add value to business decisions. A flexible, data-centric framework can integrate Speech Analytics with the latest business-intelligence tools. Using Speech Analytics, companies can shorten the sales/product-management cycles, decrease burdens on customer-facing personnel, and make services more user friendly. It is also possible to carry out granular analysis of the data to put agents closer to "the voice of the customer".