Cool Vendors in Artificial Intelligence for Customer Analytics

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Customer-analytics-focused startups are beginning to include AI as a part of their offering to leverage vast datasets and automate processes. We identify emerging vendors that demonstrate AI is essential to their offerings. They have invested in the data and skills to successfully support it.

Key Findings

- Key trending AI technologies in the AI for customer analytics in 2019 are: augmented analytics, especially predictive analytics; NLP; advanced sentiment analysis; and computer vision.

- The rapid pace of AI innovation and hundreds of AI companies promising improved customer understanding is contributing to CX professionals and marketers' sense of unpreparedness for AI implementation, and how to differentiate one provider from another.

- "Born AI" startups are appearing at a fast rate in the hotly contested area of AI for customer analytics, putting some pressure on heritage CX and marketing tech companies.

Recommendations

Application leaders supporting customer experience and customer analytics efforts wanting to use AI must:

- Work with the corporate CX lead and head of marketing to assess which trending AI technologies could potentially improve CX and marketing processes and outcomes by creating a gap analysis. Do not get swept up by trending AI technologies "just because."

- Identify and prioritize which part of the CX process you want to improve with AI before starting the vendor evaluation process. This can be done by working together with your head of CX and marketing. They are in a pole position to tell you where the main process bottlenecks are and which one or two of them that should be prioritized.

- Assess the requirements of integrating born AI providers' solutions with your existing systems by commissioning a report to understand the level of integrations with the solutions. Some of

them may integrate into many customer-facing and back-office systems, such as CRM and analytics.

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Strategic Planning Assumption

By 2023, 80% of organizations using artificial intelligence (AI) for digital commerce will achieve at least 25% improvement in customer satisfaction, revenue or cost reduction.

Analysis

This research does not constitute an exhaustive list of vendors in any given technology area, but rather is designed to highlight interesting, new and innovative vendors, products and services. Gartner disclaims all warranties, express or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

What You Need to Know

Our 2018 survey on Artificial Intelligence Enterprise Perceptions, Plans & Implementation says that among the organizations that have piloted and/or deployed AI for process augmentation, customer-facing processes were the most common processes to augment and improve with AI. Customer support was the most popular customer-facing process to support. In addition, 60% of the respondents said that they were using AI to improve sales and marketing.

Figure 1 shows that organizations are focusing most on customer-facing processes.

Figure 1. Organizations Are Focusing Most on Customer-Facing Processes

Organizations Focusing Most on Customer-Facing Processes
Percentage of Respondents, Multiple Responses Allowed

Product/Service

Product/service quality management	51%
Product/service delivery	48%
Product/service development	43%
Infrastructure management	43%
None	4%

Customer-Facing Processes

Customer support	74%
Sales and marketing	60%
None	7%

Manufacturing

Optimizing production workflows, inventory and work in process (WIP)	47%
Product and service quality	38%
Optimization of teams and operator productivity	36%
Optimizing supply chain	35%
Preventative and predictive maintenance	33%
None	12%

0%   40%   80%

n = 496
Base: Process augmentation is piloting/deployed, excludes not sure
Source: Gartner (May 2019)
Q. Select all the business processes your organization augments or improves using AI techniques.
ID: 383925

Customer experience (CX) professionals and marketers leverage AI to glean insights into customers, automate tasks, improve workflows, create content and to improve personalization efforts, just to name a few.

And there is a reason why they do this. It is because AI, CX and marketing are a great match, purely based on the grounds that AI thrives in a cause-and-effect, data-rich world. And CX professionals and marketing professionals deal daily with an abundance of multiple data points, and unstructured

and structured data, ranging from internal data, external data, social data and data generated over various channels.

In addition, CX professionals and marketers generally have little time to analyze data, let alone make predictions on next-best actions. Thus, making the use of AI technologies is an attractive option. However, the sheer number of providers in the space is growing and many of the solutions are difficult to differentiate between, making it difficult for buyers to understand which AI black box to choose.

This is the driving force behind the theme of our selection of companies in this Cool Vendors list. We highlight five vendors that stood out in their respective markets. They offer solutions that use a variety of AI technologies from augmented analytics, including predictive analytics, text analytics, computer vision, natural language processing (NLP) and deep learning, to help companies improve their CX and marketing efforts and campaigns.

Adoreboard: Specializes in emotional text analysis for social media to help determine real-time public perception of a company, personality or brand.

cClearly: Offers a marketing optimization solution that can automatically identify how real-world signals impact a marketer's performance and adjusts campaigns accordingly.

Cerebri AI: Is an advanced customer journey analytics company that uses AI technologies, such as predictive analytics and deep learning, to analyze customer touchpoints. It can quantify a customer's commitment to a brand or product, at any point in time, expressed in monetary values.

Datakalab: Is a neuro-marketing company that uses a combination of AI, computer vision, and behavioral and transactional data for website analysis.

Streamoid: Has created an AI tool to visually search, classify and predict online shoppers' preferences to automate and personalize retail fashion search and recommendations.

Each of these vendors is explained in further detail below.

Adoreboard

Belfast, Northern Ireland (https://adoreboard.com)

Analysis by Brian Manusama

Why Cool: Adoreboard is digging deeper into the "why?" people are saying, thinking and feeling the way they do about a brand. This is going beyond "what" are people saying, to why they are saying it. It goes further than sentiment analysis. By defining and identifying feelings expressed, as well as the topics driving those feelings, its analysis drills down to the cause, providing its Decision Ready Insights. Adoreboard can tell you precisely which key emotions are contributing to the success or the underperforming aspects of a brand, product or service.

Adoreboard brings an emotics platform that turns data into business answers. It uses a combination of psychology and technology to specialize in emotional text analysis for any unstructured text.

From customer and employee surveys, Net Promoter Score (NPS) verbatim, social media, employee reviews and consumer-generated content, Adoreboard helps to determine the human perception of an experience, company, personality or brand. Adoreboard's emotics platform currently integrates with Zendesk and SurveyMonkey.

The science behind Adoreboard is based on blending common sense reasoning with affective computing to create an index for each primary emotion in Plutchik's Wheel of Emotions. There are eight emotion indexes based on a model of emotional intensity.

Each index is scored from 0-100 and consists of three emotions; the Joy Index moves from low-intensity emotion called Serenity, to a medium-intensity emotion termed Joy, to a high-intensity emotion named Ecstasy. Use the technology results in products such as strength, weakness, opportunity and threat (SWOT) analyses to take a strategic view of the customer or employee experience, competitor CX benchmarks, customer journey mapping and the measurement of empathy. Adoreboard's technology is already used by Slack, Telstra, Unilever and Allstate Northern Ireland (NI).

Challenges: The market for sentiment analysis is quite nascent in terms of buyers. Adoreboard runs the risk that customers are not seeing and appreciating the superior technology it provides in comparison with others. The emotics platforms of Adoreboard need to be able integrate in existing customer-centric infrastructures and be scalable across the different functions. Empathy and sentiment are popular topics in the customer experience. This attracts a lot of vendors. Adoreboard needs to work on its brand awareness to scale out its business.

Who Should Care: Organizations with large customer bases that go beyond simple sentiment analysis to boost their customer experience should investigate this technology. Organizations that want to understand the customer experience when they do product introductions and research product innovations should investigate this technology. Marketing departments that want to improve their brand awareness and optimize click-through rates on the web should use this technology. Customer success and insight professionals who want to quickly derive actionable insights from verbatim reviews, help desk or survey responses should benefit from this technology.

cClearly

New York, N.Y.; U.S.; London, England; and Herzliya, Israel (www.cclearly.com)

Analysis by Saniye Burcu Alaybeyi

Why Cool: cClearly differentiates itself from other vendors for customer analytics and marketing optimization to find insights by providing the ability to both merge and correlate "first-party data" with "real-world data." It also does this by helping marketers automatically act on the insights. The cClearly platform identifies how real-world signals impact a marketer's performance and affect campaigns accordingly. Current advertising and marketing methodologies are ineffective. Marketers don't know who their best audience is and how to reach it. They don't have enough control over how ads are delivered. In addition, traditional research methods provide limited insights.

cClearly's platform combines and correlates facts and data points about consumers (audience data such as demographic, financial, interest, behavior, purchase, psychographic and real-time data such as weather and store location). These correlations are used for answering questions such as:

- How does rain affect my conversion rates?

- Are people who live close to my competitors' store less likely to buy from me?

- Which demographics have the highest lifetime value for my business?

Furthermore, the correlations are then used automatically by the cClearly system to optimize ad campaigns; for example, changing a bid based on a consumer's distance from a store or based on the weather.

cClearly provides business value to its customers in three main ways:

- Audience insights, to discover new insights about audiences to better plan media campaigns and messaging.

- Audience targeting, to target and segment campaigns to get the right messages in front of the most qualified customers using real-world data.

- Audience optimization, to improve advertising effectiveness through refined optimization based on correlations to real-world data.

Challenges: cClearly originally developed its platform for search marketing and it worked well. Now it is testing the platform on other channels, such as display and social. Being able to scale with display and social could be a challenge.

cClearly operates in a business environment that is mostly controlled by Google (and Facebook). cClearly continuously needs to be able to adapt to the changes that these entities make to their reporting and management systems that cClearly integrates with. For example, on 26 February 2019, Google announced that it is are deprecating the "average position" metric and introducing other metrics instead.[1]

cClearly will have to adapt its systems and algorithms to use these new metrics. And finally, skeptical buyers are overwhelmed by the sheer number of available AI technologies and vendors. They struggle to decide which ones to select and when. Getting these buyers' attention and in their agenda is another challenge for cClearly.

Who Should Care: Application leaders in midsize and large advertisers that don't want to be locked into the Google tools ecosystem, and those who require custom marketing optimization approaches. Also, application leaders interested in developing audience-driven insights and those interested in a target marketing optimization platform for paid search should take note of cClearly.

Cerebri AI

Austin, Texas, U.S. (www.CerebriAI.com)

Analysis by Jessica Ekholm and Jason Daigler

Why Cool: To drive engagement, Cerebri AI could become the most useful tool in the bag of tricks of a CX professional and marketer bag of tricks. The Cerebri Values system calculates monetary values for each event in every customer's journey, then predicts the most opportune moments and the corresponding "best action" for maximizing brand engagement and business results.

The Cerebri Values system uses a range of AI techniques, including machine learning and reinforcement learning, to analyze each touchpoint across a shopper's journey. The system then quantifies the customer's commitment at any point in the timeline to the brand overall (as well as specific products), expressed in monetary values.

By unifying disparate datasets that may or may not have interacted before, CX professionals and marketers can identify hidden profitable patterns in their customers' journeys and concurrently implement the best action to unlock that value. Mapping customer journeys, understanding customer expectations, and identifying gaps and opportunities are essential parts of the customer experience management process. The tools that help companies with this process include journey mapping and journey analytics.

The cool factor in this solution involves standardizing the measurement of each event's impact in every customer's journey. This is done using local currency, creating a common quantitative framework spanning all the silos for real-time monitoring of brand engagement and product consideration. Marketers typically use multichannel marketing hubs, marketing automation platforms and personalization engines to define and execute journeys across an array of disparate touchpoints.

Challenges: *Competition*: There are plenty of customer journey analytics providers in this space, including some, such as Thunderhead, which use advanced analytics such as predictive analytics and ML to predict critical paths. It enables real-time decision making to provide contextual and personalized customer experiences. Several providers, such as Salesforce, are also touting their capabilities for offering advice on the next-best action.

Market Presence and Brand Recognition: Cerebri has only been on the market for more than two years and is a small player in a market of giant customer journey analytics (CJA) vendors. These vendors include Salesforce (Journey Builder), Adobe (Experience Cloud), ClickFox, [24]7.ai and Genesys, just to name a few.

Buyer confusion: As mentioned, there are several providers in this space all touting to help customers understand their customers' journeys using a range of AI technologies. These technologies include predictive analytics and deep learning, leaving a lot of customers confused on how to differentiate one provider from the other. Thus, Cerebri's main challenge will be to perfect its value proposition and the differentiation it offers.

Who Should Care: Application leaders supporting customer experience and marketing technologies, chief marketing officers (CMOs) and marketing leaders who want to analyze the implications of individual customer journeys at scale in a more systematic, comprehensive and automated way should care. Also, those application leaders and marketing professionals who want

to understand the CX context driving opportune marketing moments and implementing the best actions to maximize customer value should look at Cerebri's AI solution.

Datakalab

Paris, France (www.datakalab.com)

Analysis by Jessica Ekholm

Why Cool: Datakalab is one of the very few neuromarketing companies in the world that uses a combination of AI, computer vision, and behavioral and transactional data for website analysis. It allows companies, and in particular e-commerce companies, to get a deep understanding of customers' emotions and behaviors when visiting its website. This allows marketers and advertising professionals to test and understand what is or isn't working with their website. It helps answer questions such as why customers dwell on a particular site and why do they abandon carts.

The analysis is done in a lab environment using only panelists who have given their consent to be part of a project, thus aiding alignment with General Data Protection Regulation (GDPR) guidelines.

Challenges: *Market presence:* For startups, market presence and brand recognition are among the toughest hurdles for them. And this is particularly so in a market that is emerging, such as neuromarketing. At the moment, Datakalab is a very small player that is currently focusing on the French market, with ambitions to move to European and then worldwide sales.

Initial low demand: According to our customer experience innovation survey in 2018, we found that emotion detection was the lowest in terms of customer analytics priorities in that year. However, that is likely to change rapidly over the years as demand is likely to increase as empathy and sentiment are becoming increasingly popular topics in the customer experience as more companies similar to Datakalab join the market.

Competition: Incumbent vendors such as Google and Microsoft already have powerful facial recognition capabilities. In addition, there a handful of smaller providers, such as Affectiva, using computer vision for facial coding and emotion analytics. And it is only a question of time until dedicated survey and "Voice of the Customer" companies will be adding emotion analysis to their sentiment analysis to help marketers understand customer experience, sentiment and emotions.

Buyer confusion: At the moment, there are many companies promising improved customer understanding and marketing efforts with the aid of AI technologies, ranging from NLP, natural language generation (NLG), audio analysis and computer vision. And buyers find it difficult to navigate and differentiate one solution from another.

Fear of the unknown — ethical and data issues: Clearly using computer vision technologies for marketing purposes will raise ethical concerns of how data is used. In Europe, this could pose a risk for not aligning with GDPR and, in general, could be seen as a risky move.

Who Should Care: Application leaders supporting customer experience and marketing technologies, CMOs and marketing leaders who want to excel their website analysis using

innovative new technologies such as computer vision to deepen their understanding of their customers' website behaviors.

Also, application leaders supporting customer experience, and marketing technologies and marketing leaders who want to improve key performance indicators (KPIs) — such as conversion and click-through rates, order values, dwell time and reducing cart abandonment rates — should care. It will also help application leaders who want to understand the website experience that their customers and prospective customers have.

Streamoid

New York, N.Y., U.S. (www.streamoid.com)

Analysis by Tuong Nguyen

Why Cool: Streamoid has created a unique AI tool to visually search, classify and predict online shoppers' preferences to automate and personalize retail fashion search and recommendations at scale.

The offerings are rooted in a deep neural network (DNN)-trained computer vision algorithm further curated by fashion industry experts. The platform consists of four offerings that complement each other, but can be used independently.

Product recommendations with more advanced features are available in Streamoid's Outfitter product. Outfitter assembles real-time outfit recommendations using a stylist-supervised AI-based platform. This is available through various delivery mechanisms, such as on the product page, emailers or even to assist employees on the sales floor (empowering individuals to be fashion stylists).

- Text-based search — For example, green sweaters less than $100.

- Autotagging — A detailed understanding of fashion based on Streamoid's custom-developed ontology. The company claims it is able to tag images at the most granular level in the industry (more than 50 attributes).

- Style-based chatbot — This offering extends its search capabilities using NLP.

- Visual search — Search based on images from various sources, such as phone and social media, to discover where you can buy a similar product.

Challenges: As a smaller company with a specific e-commerce value-add, Streamoid faces competitive pricing pressures while potentially competing with larger e-commerce vendors with the resources to develop, deliver and potentially license this feature. Training of deep neural networks is expensive and time-consuming. It is similarly expensive for smaller companies to host their own DNN infrastructure. This cost barrier may erode Streamoid's advantage over time as well.

Although creating a computer vision (CV) solution for fashion recommendations would require CV parameters built specifically for the task, popular CV frameworks such as Caffe2, CNTK and

TensorFlow provide a significant stepping stone for any vendors to enter this space. (As in they don't have to start from scratch.) This adds an additional, potential threat.

A similar challenge comes from the NLP side. Publicly available resources such as Google's SyntaxNet (natural language parsing) and products from vendors such as Narrative Science, Yseop and Brainspace, provide different NLP-based tools to help vendors add NLP to their value-added offerings. The increasing accessibility language and speech frameworks open up the opportunity for more organizations to extend these existing platforms and build special purpose applications (such as fashion recommendations).

Who Should Care: Application leaders supporting fashion e-commerce should consider vision and NLP-based search and recommendation tools to improve on KPIs such as conversion and click-through rates, order values, and return and cart abandonment rates.

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

"5 Steps to Understand Customers More Efficiently Through AI"

"Use AI to Improve the Sales and Customer Experience"

"How to Use AI to Create the Customer Experience of the Future"

Evidence

[1] "Prepare for Average Position to Sunset"

2018 Gartner Artificial Intelligence Enterprise Perceptions, Plans & Implementation, conducted online in January and February 2018 among 848 respondents in the U.S. and Canada (n = 208), U.K. (n = 217), China (n = 213) and India (n = 210).

All respondents were screened for active employment in organizations that are piloting or deployed/are using at least one of the following AI technologies:

- Natural language processing
- Computer vision
- Artificially intelligent physical robots
- Process augmentation
- Decision augmentation

Respondents were also required to be at least at a manager level and to have knowledge of the artificial intelligence budget for 2018. They were also required to have knowledge about adoption plans for AI solutions.

Depending on the AI technology mentioned above, they need to have knowledge of its:

- Strategy
- Business objectives
- Business requirements
- Technology requirements
- Selection and/or use of providers
- Effectiveness/ROI measurement
- Operations management
- Solutions design and implementation

At the country level, soft quotas were established to guarantee a good distribution in terms of AI technologies adoption, company size and industry.

The results of this study are representative of the respondent base and not necessarily the market as a whole.

The survey was developed collaboratively by a team of Gartner analysts and was reviewed, tested and administered by Gartner's Research Data and Analytics team.

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