

ARTIFICIAL INTELLIGENCE (AI) IN SERVICE MARKETING: AN AVALANCHE OF CHANGE IS IN THE HORIZON

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Introduction:

Artificial Intelligence (AI) is going to change the landscape of service marketing. Customer service is especially set for a radical change in the coming days. Recent advancements in Generative AI, which is large language models (LLMs) to produce more natural bot-based conversations in customer service, are ready to enhance the capabilities of service providers across industries (Martineau, 2017). Service-oriented sectors such as telecom, healthcare, aviation, hospitality, banking, finance, ridesharing and ed-tech to name a few are resorting to AI-based solutions to deal with repetitive service tasks with maximum efficiency and minimum error. Though there is concern over employment of the customer service personnel, new job opportunities are also on the horizon. Experts reckon that the juxtaposition of both humans and machines is quite possible to give customers the best possible experience and optimize the resources and capabilities of companies (Johri *et.al.*, 2021). Certainly, companies that need to deal with a massive customer pool, want to stay ahead of the competitive game or have budget constraints and workforce shortages, can take advantage of the early development of AI to ensure the best possible customer experiences (Blake, 2023). This article mainly narrates how global buzzword AI is impacting service marketing in general and customer services in particular. Along with demand-side development in improving customer experience bolstered by AI to supply-side development in the emerging AIaaS (Artificial Intelligence as a Service) industry, this article elucidates scholarly contributions to AI-related academic and industry-focused research endeavors in recent times. The changeover due to AI in the global economy and labor force (one of the major stakeholders in the service-based economy) is also illustrated in this quasi-bibliometric article.

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AI in Practice for Optimum Customer Experiences:

Globally renowned USA-based restaurant chain KFC uses AI to give customers a personalized shopping experience. In collaboration with Chinese search engine giant Baidu, KFC has facial recognition technology in place to predict customer orders (PTI, 2016). Department store giant Macy's has cognitive AI technology in the megastores to help shoppers navigate for their desired items and find associates on the floor if needed (Samuely, 2017). Indian financial service provider Axis Bank has radically improved call center traffic jams by streamlining mundane tasks such as requesting account balance and credit card bills, reviewing transaction history, blocking cards if lost to avoid fraudulent transactions, ordering checkbooks etc. (Chaudhry, 2023). Here, voice AI is the savior for Axis Bank to automate these repetitive tasks for digitally literate clientele without any assistance from human agents. Dutch multinational banking and financial services corporation ING is a trailblazer of conversational AI chatbots in the industry (How Artificial Intelligence Is Influencing the Banking of the Future, 2023). In the hospitality industry, AI is empowering service providers to streamline operations and increase efficiency, provide personalized service, ensure the safety and security of guests, design smart marketing and revenue management opportunities and elevate customer satisfaction in real time (Berman, 2017). For example, Marriott International has chatbot named *ChatBotlr* to assist guests with common inquiries, Hilton Hotels & Resorts has *Connie* robot that utilizes natural language processing and machine learning (ML) to interact with guests, InterContinental Hotels Group has partnered with IBM Watson and developed an AI-powered concierge named *Watson Assistant* (Takyar, 2023). In the aviation sector, airlines are investing a humongous amount to increase efficiency and competitiveness. Delta Air Lines, Swiss International Airlines, American Airlines and JetBlue have invested in AI to boost up their efficiency in predicting flight delays, managing fuel consumption, optimizing price, identifying potential aircraft malfunction, and automating inventory management (Vaughn College, 2023). Global brand Coca-Cola has collaborated with ChatGPT and Open AI to integrate its vending machine services with AI analytics (Rahman, 2019). In search of new opportunities, coffee chain Starbucks has collaborated with Microsoft to develop an AI-based recommendation engine named *Deep Brew* that facilitates selection from digital menus and ordering in-app (Kotorchevikj, 2021).

AI Service Providers across Industries:

All tech giants are in the race to provide AI-based enterprise solutions. This industry is getting bigger as new players with new capabilities are crowding the market. Artificial Intelligence as a Service (AIaaS) is the new business model which is a cloud-based service that provides AI outsourcing. As this industry is still developing and the technology is in embryonic stage, AIaaS providers allow large and small businesses to experience AI in business operations and scale up gradually with minimum investment and absorbable risk. Along with machine learning (ML), today's AI service providers are expanding their portfolios from predictive analytics to business intelligence (BI) to data warehousing (which has significantly facilitated CRM) to deep learning (DL). Major AI companies (Datamotion, 2023) that are dominating by industry are as follows:

Industry	Company Names
Cloud AI	<i>Google Cloud, IBM Cloud, Alibaba cloud, Amazon Web services, Microsoft Azure, Baidu AI cloud, Salesforce</i>
Healthcare AI	<i>Tempus, Suki. Ai, Nanox, Freenome, Neurala, Deep 6</i>
Financial AI	<i>HighRadius, Signifyd, Numberai, Cleo, Upstart, Brighterion</i>
Education AI	<i>Riiid, Iris.Ai, Rev.Com, Clarifai, HyperScience, Narrative Science</i>
Transportation AI	<i>Anduril Industries, AEye, Pony.Ai, Nauto, Nuro, Zoox</i>
E-commerce AI	<i>Algorithmia, The Trade Desk, Nvidia, Pymetrics, People.Ai</i>
Entertainment AI	<i>Discord, Tencent, AIBrain, SoundHound</i>
Security AI	<i>CrowdStrike, BlackBerry, DataVisor, Sherpa.Ai, BigPanda</i>

AI in Customer Relationship Management (CRM):

Today's increasingly impatient and sophisticated customers want a prompt response from service providers. Long waiting times or any lapse in response and interaction may push them to walk away from a particular brand (Krayewski, 2023). Managing customer relationships is critically important to win the hearts of these unpredictable and switchy customers (Fangyuan & Guanghai, 2022). All possible contact points marketers must consider so that they can hear from customers and create the best possible impression for potential sales. Human talent to deal with these opportunities is irrefutable. However, there are customer relationship management tasks which intelligent machines powered by AI can do better consistently and relentlessly. It's not just the conversation between customers and chatbot, people in the customer relationship department can automate follow-up calls, drafting emails, greetings during festivals and other happenings in customers' lives (Libai *et. al.*, 2020). To give customers a personalized experience or to communicate with a specific target market, AI bots integrated with customer databases can deliver outstanding outcomes. The AI in customer relationship management systems can intelligently integrate customer segmentation variables such as demographic, geographic, psychographic and behavioral data to offer better sales recommendations, accurate sales forecasts and customized customer experiences. Previous sales history and data generated from various contact points have created opportunities for deep learning and predictive analytics to give customers delightful experiences along the way to building long-term relationships (Deb *et. al.*, 2018). All these can be done by generative AI along with humans. In service marketing, it's a dauntingly challenging task to match up customers' diversified expectations which escalate with every positive experience that customers have. And for things that seem insanely improbable to meet customers' wild expectations, intelligent machines can make them seamlessly probable.

AI Analytics in Service Advertisement:

In the vast realm of the advertising world, AI can play a significant role in getting the best return on the advertising budget. Despite continuous evolution in the communication media, advertisement is still the widely used one to reach target audiences. As marketers are increasingly allocating advertising budgets to utilize online traffic in the digital world, AI analytics are becoming critically important to reach the target audiences precisely and

cost-effectively. In the era of information overload, savvy marketers don't want to be intrusive; rather the goal is to pinpoint the media habits of the target audiences and reach customers effortlessly so that they can make informed purchasing decisions. AI can assist service marketers with targeted advertising, automated campaign optimization, improved ad creativity, real-time ad analytics and spotting trends. Delving into consumer habits, interests, and interactions, AI can also reveal invaluable insights which can help in choosing ad appeals (i.e. emotional, musical, rational, fear, humor etc.) that resonate well with target consumers. Even in selecting the effective ad execution styles (i.e. slice of life, fantasy, demonstration, scarcity, endorsement etc.), AI analytics can be invaluable to convey the ad message that taps into target audiences' cognitive, affective and conative needs. Ubiquitous application of AI algorithms in programmatic and digital ads, email marketing, review and response automation is now widely used. Companies such as Google, IBM, Facebook, Amazon, LinkedIn, Salesforce, Vanguard (investment firm) and Affectiva (software firm) are the early beneficiaries of trailblazing AI analytics to advertise their market offerings (Schroer & Whitfield, 2024). From budgeting advertising expenditure across different platforms to monitoring the effectiveness of each media to gaining insight into competitors' advertising budgets, AI is better equipped than any form of traditional means. AI power tools such as AiAdvertising, Persado, OneScreen, Pathmatics, Beam.city, Albert and GumGum (Kaput, 2024) are some of the big names that service marketers often use to run smarter and scalable ad campaigns for hyper-personalized targeting and compelling ad messages.

Human Versus Machine Debate in Delivering Service:

The human versus machine debate isn't anything unique. Luddites, who oppose new technology or ways of working, used to live in every society. From the Stone Age to today's hyper-connected digital age, human society has gone through many phases fraught with turns and twists. Since its inception in the eighteenth century, the Industrial Revolution itself has gone through four distinctive phases with various durations, paces and developments. During the first industrial revolution in the late 1700s, societies across the world got to know steam engines, mechanical production and railroads. Then during the second industrial revolution in the late 1800s, the advent of electricity and mass production drastically changed the landscape of society and business practices. After that, in the

late 1900s the third industrial revolution, also called the digital revolution, marked the arrival of computers, electronics, semiconductors, and mainframe computing. Now, we are in the era of the fourth industrial revolution, Industry 4.0, which is characterized by virtual and physical systems of manufacturing that cooperate flexibly, often supported by cloud computing, artificial intelligence and the Internet of things (World Economic Forum, 2024). The most unprecedented traits of Industry 4.0 are quick development and rapid dissemination of technology across every sector. Earlier developments used to be slow, and society had time to cope with any sort of changeover. The companies in the service sector, therefore, have been experiencing tremendous shifts in recent years. Services that are traditionally provided by humans have been taken over by robots with intelligence, and sometimes intelligent machines outsmart humans in many performance indicators. The supremacy of humans is yet to be matched as traits such as creativity, empathy, compassion, improvisation and versatile decision-making ability are still uniquely human. However, the machine is scaling up very fast. How comfortable would the customers be to interact with humanoid robots is yet to be realized fully. Similarly, how developed would the machine be that is capable of imitating humans completely? Though time will decide the answer to these questions, service-providing companies by no means can stay complacent with the primacy of human service and ignore the inadequacy of the intelligent machine. Because ever-increasing integrated systems in Industry 4.0 are here to stay and will thrive incrementally. The co-existence of machines and humans deployed by companies in the service sector is going to shape the future in the coming days.

Impact of AI on Global Economy:

The world economy is preparing for a seismic shift due to the widespread application of AI. According to a study by PwC (2017), AI would add \$15.7 trillion to the global economy by 2030. Because of structural transformation, there is palpable apprehension that many jobs will disappear from the global job market altogether. A recent IMF (2024) report estimates that 40% of all jobs will be affected by AI and inequality is likely to worsen in the coming days. IMF's *AI Preparedness Index* also indicates that advanced economies along with some emerging ones are better equipped for AI adoption than low-income countries. Another study by McKinsey Global Institute (2017) has projected that some 800 million jobs

will disappear from the global economy because of automation, digitalization and intelligent machines; however, new job opportunities that require special new skills will also open up thanks to the changeover. It indicates that the service sector is also going to experience a tectonic transformation and the presence of intelligent machines alongside humans is going to set new standards at the workplace. This is going to be an unprecedented experience both for service receivers and service providers alike. Young workers with the propensity to acquire new skills in service sectors are likely to be less impacted than older workers who are not so adaptive (Ferdous, 2023). It's incumbent upon the policymakers, private sectors and global communities to take proactive measures so that AI works for the betterment of all, not for the advantage of a limited few.

Major Research Trends on AI in Marketing:

Myriads of scholars are researching to reveal the broader application of AI in marketing (Chui et al., 2018; Davenport et al., 2019; Huang & Rust, 2018; Verma et al., 2021; Mariani et al., 2022; Chatterjee et al., 2020; Forrest & Hoanca, 2015; Bughin et al., 2017; Wirth, 2018). Alongside the AI-driven tentative transformation in marketing practices, industry implications and recommended actions are the frequent patterns of these research outcomes of marketing scholars and practitioners (Kumar et al., 2021; Wirtz, 2018; Liye & Baohong, 2020). Though not exhaustive, generic research themes (Mustak, et al., 2021; Shaista & Gowhar, 2022) on artificial intelligence (AI) in marketing management are:

- AI to meet the real-time needs of customers
- AI to analyze the performance of competitors
- AI in digital marketing and analytics
- AI in product, price, place and promotion management
- AI in customer relationship management
- AI in stock control and distribution management
- AI in customer-driven marketing strategy
- AI in predictive analytics to speculate demand and market trends
- AI in repetitive and mundane marketing tasks
- AI and predictive marketing from an ethical perspective

AI in Service Marketing: A Perspective from SERVQUAL Model

To measure service quality, the SERVQUAL model, coined by Parasuraman *et. al.* (1988) is a good barometer. For the sake of argument, based on the five indicators (reliability, assurance, tangibles, empathy and responsiveness) of service quality, if human versus machine performance is posited against one another, which party seems to outperform the other? The obvious answer is—it depends on the context and nature of the job. The general opinion is that human service is better when it comes to serving with empathy, assurance, care, compassion; and if the task at hand requires emotional intelligence, impromptu decision and understanding of the complex context (Ong, 2020). However, machines often outsmart human service if the task is repetitive, needs to do the same task reliably in a regular programmable manner and doesn't require comprehending versatile context. Therefore, based on service quality indicators, the performance of humans and machines presumably overlap. The prevalent notion is that with the rapid progress in advanced algorithms, machines are becoming more intelligent and relentlessly aspiring to match the standard of human intelligence (Schwab, 2017). Machines may or may not surpass human intelligence, but the continuous advancement of intelligent machines is an undeniable fact. Change is inevitable, and a radical shift in the ubiquitous usage of AI in every sphere of life is what the future of human beings is destined to. Large-scale AI adoption depends on many dynamics, but it is here to stay for sure. Companies that are resilient to change and comfortably fit with newness will lead from the front in their respective industry.

AI in the Service Sector of Bangladesh:

Complying with the global phenomenon, Bangladesh's economy is set to experience certain upheaval due to the gradual intrusion of AI in numerous sectors. Intelligent Machines (2023), a Dhaka-based AI service provider, reports that along with the big players such as Unilever (*Fordo*, a precision marketing AI product) and BAT (*Shabdo*, a speech recognition AI product), the service-based companies such as bKash (*Nimontron* and *Biponon*, two retail AI products), IDLC (*Dharapat*, a FinTech AI product), Telenor (*Borno* and *Chotur*, two document verification AI products) have already started to reap the benefits of AI in their respective business operations. The purview of AI is expanding fast: as service-dominant sectors (for instance, Ridesharing, MFS, E-commerce and Financial Services) have become the early adopters of AI in Bangladesh and are very

much engaged in the race to trailblaze their business operations with AI-based solutions. According to an ICT Division (2020) report titled National Strategy for Artificial Intelligence, in the service sector, high-level AI adoption is happening in high-tech, telecom and financial services; mid-level adoption in retail (e-commerce), media and entertainment (OTT platforms); and low-level adoption in education, healthcare, travel and tourism sectors. The national vision for *Smart Bangladesh* powered by widespread hi-tech and digital adoption will accelerate the usage of AI in many more sectors in the coming days. The ICT sector of Bangladesh is to earn \$5b and aim to employ 2.5 million people by 2025 (BSS, 2023). The national agenda to prioritize ICT is apparent, but preparing the huge number of populations with appropriate skills is going to be the most decisive point. Collaboration between the private and public sectors, synchronization of the state policies, and contemporizing the education system can play a vital role in facing AI changeover in the coming days.

Conclusion:

Though AI is still in its infancy, it's developing fast. With continuous improvement, companies are racing to get the early benefits of it. Regulatory issues regarding AI are yet to be set unanimously but its foundation is justifiably consolidated to revolutionize customer services, service marketing and business practices at large. Every revolutionary technology has gone through trial and error to take its seamless present form. Similar things will happen with AI to ensure the best use of it. Ethical debate and discourse surrounding the empowerment of machines will continue, and so will its exponential progress. The companies that are in the right frame of mind and at ease with creative destruction will lead in the coming days. And the laggards are doomed to fail badly. For service marketers, it's the opportunity to uplift customer experience to a new height, probably to eradicate the inherent distinction between human and machine slowly but surely. Interesting to see if service marketers will set the trends, or let the trends compel them to reset their existing arrangements.

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