ARTIFICIAL INTELLIGENCE IN MARKETING IN COVID TIMES

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ABSTRACT

We explore the ways some sectors of marketing and health are utilizing Artificial Intelligence systems and it's sub-set machine learning, in the context of continuing COVID 19 pandemic wave and it's tail ends, which has accelerated difficulties in the path of new innovation needs for better products and services. Most experts are optimistic that the new advances will be transformational and are likely to revolutionize important sectors of business and health.

Artificial intelligence (AI), helps by making (i) making omnichannel and mobile shopping more profitable, notably by sharpening personalized recommendations, (ii) managing better in-store experience, (iii) improving payments, customer service and CRM, and (iv) improving logistics and inventory optimization. Major aspects like augmented reality, virtual reality, business AI, online behavioral targeting, reactive marketing, public relations, AI ethics, some recent COVID related AI applications are discussed. Success mantras involving most essential steps in AI applications now need faster, flexible and agile methods and vision. Successful strategizing innovations do require valuable experience from experts from relevant spheres, viz, academic, AI specialists, industry specialists and management gurus. There is worry regarding manipulation and misuse of this knowledge engineering.

Keywords: Artificial Intelligence, machine learning, new applications of AI, new innovation strategy, ethics.

Omnipresent Artificial Intelligence and its sub- set machine Learning system have a powerful potential to effectively tackle digitally led economies problems,challenges and risks generated by world-wide Covid-19 pandemic and its wave-tails, expected to last till 2022. Most experts are optimistic and hopeful that new advances in AI will be "transformational"[1]" and are likely to "revolutionize" [2] various important sector including healthcare. The strategic path of innovation and creativity for better products and services will have to be faster, with more flexibility and agility. Moreover, there will be problems and challenges for control of applications of AI both at national and international levels[(3]

The "changes caused by deployment of Artificial Intelligence" in our lives and communities in countless ways, which are difficult to understand and anticipate, are only 'accelerating' due to the ongoing COVID-19 pandemic" [4] In this context, all aspects of product innovation, including global extraction of new products, trends-forecasting, pricing and feature building, are being performed algorithmically by AI. These are expected to be next generation product innovations or innovative breakthroughs.[2]

In fact , the conception, utilization and working of AI is not only impacting the overall community but also transforming many more areas relating to business, retail, health and finance, to name a very few. Consequent on global economic slump caused by COVID-19 pandemic, every industry and its sub-sectors are faced with the huge task of harnessing A.I. for improving efficiency and performance, connecting with and improving relations with consumers and stakeholders. IDC, a research organization, released its forecast in August 2020 estimating that worldwide business spending on AI would hit $50 billion in 2020 and is expected to reach $ 110 billion annually by 2024. In fact, AI will be "the disrupting influence, changing entire industries over the next decade" [5].

Now, with persistence of the pandemic, online shopping has become almost the norm. Therefore e-Marketing now expects an overall 5.9% "growth" in search Ad spending during 2021. In their pre-pandemic expectations, e-Marketer had forecasted " search-Ad- spending" for 2024 of $ 91.32 billion which has now been forecasted upward to $99.22 billion, in " Benchmark Report 2021" [6]

Conceptual Background

Artificial Intelligence:

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It is a system's ability to interpret external data correctly, to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptations" (Kaplen & Haenleins) [7]. It is a computer based system that simulates characteristics of the human brain in order to perform activities that could otherwise only be performed by humans [3].AI will provide deeper understanding using existing data in data mining for trend analysis, targeting and business forecasting. Also collection of new data sets can be performed thereby providing decision support to managers.

Most big retailers are excited about artificial intelligence (AI), which offers the promise to (i) increase in-store sales, (ii) increase online sales and increase potential cross-sell(iii) improve supply chain efficiency, improve in-store operations and make payments more efficient.[8]

Thus, AI helps by (i) making omnichannal and mobile shopping more profitable, notably by sharpening personalized recommendations (ii) managing better in-store experience, (iii) improving payments, customer service and CRM, and (iv)improving logistics and inventory optimization[9] The CRM aspect has been well-explained by V. Kumar & Reinaxt Wenner [31].

Machine-learning

It is a component of AI as it learns from data, identifies patterns and takes decision without human interventions[10].It is therefore,a subset of AI with the ability to gain new knowledge from experience and perform activities not explicitly defined in its design or programmed instructions.

Marketing AI:

It is the development of Artificial agents that, given the information they have about consumers, competitions and the focal CO, suggest and /or takes marketing actions to achieve the best marketing outcomes[11].

Several outcomes of AI can contribute towards learning enhancement of customer relationship, while predictingas to which which customers are most likely to respond to marketing campaigns with demographic and psychographic variables.[12]

AI Apps should be used to augment human capabilities, eg., Assisted bots working with human service agents to respond to incoming customer service request. These bots can analyze a customer's tone, & thus provide the service agent greater insight into the customer interaction. It can also provide service agent a suitably scripted response, which may be used without modifications.[8]

AI can impact retailing in two main ways(i) Demand –side applications as in personalization/ recommendation systems, customer relationship management, in-store customer experience in management , payment management (ii) supply side applications- inventory optimization, logistics, and store payout optimization[9]

An area of customer engagement to provide AI customized recommendation on -spot is a significant factor improving value provided by retailers. Platforms such as Amazon Lex, Google Assistant, adopted by firms, enhance their performance and increases their customer interaction across marketing channels and improve market forecasting and automation.[12]

AI powered Augmented reality (AR) and virtual reality (VR) applications allow consumers to 'experience' products without physically touching them. The ongoing COVID-19 pandemic mode in-store shopping is unsafe. In response, retailers are looking to improve their sales effectiveness and efforts online by above methods.

One area, where Al could "completely change the game is lending where access to capital is difficult in part because banks often struggle to get an accurate picture of a small business viability and creditworthiness [13] " During the COVID-19 pandemic, an AI powered credit card fraud detection systems was not able to cope with what seemed to be erratic consumer behavior[14].

Conclusion: if there is a change in customer behaviours Al — powered marketing tools and systems must change and adapt, taking input from new events and circumstances[15]

Google Maps and Waze have real-time traffic data offering a real time dynamic understanding of traffic flow patterns[16]. Content Intelligence is an application of AI in content Marketing. These intelligence systems convert the raw data into the content Management Policy for its effective implementation Data being the foundation for the content management strategy must be trust worthy. Right results/outputs can be achieved from lead generation, enhanced traffic to customer engagement.

Online "behavioral targeting" involves placing online advertisement to only those individuals/users who are most likely

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interested in purchase decision for a particular product category. Potential interest is determined by user online site behaviour, captured by cookies[17].“Behavioral targeting is often used in “programmatic advertising” in which software is used based on algorithms that analyze a visitor's behavior allowing for real time serving of ads for an audience more likely to commit” Eighty eight percent of display ads in the VS will become programmatic by 2021 end. [18] As it involves automation & AI, programmatic advertising is much faster and leads to higher conversion rate. Its implementation involves real time bidding in online auction, but still requires minimal human skill and intervention.

The COVID-19 wreaked havoc across the globe to the advertising industry during 2020, as it caused significant drop in advertising spend particularly in advanced economies of the U.S, Germany and France [19]. Due to shift of consumer activities to shopping on-line, one particular segment-search ads-soared. Experts, however believe that advertisers will spend upto $99.22 Billion on search ads in 2024 [20].

As for social media, AI powered systems can scan and are smart intelligent & experts in handling queries. They also can post responses on social media in real time for client and manage the crisis [2].The number of social media users worldwide was 3.80 billion, as of Jan 2020 [22)]. It is projected to increase to 4.41 billion by 2025 [23]. However, in India, there were 624 million internet users in Jan, 2021, with an internet penetration of 45%. As for social media, there were 448 million media users, equivalent to 32.3% of total population of India in Jan 2021. As regards mobile connections, these were 1.10 billion in Jan 2021, equivalent to 79% of the total population, which would get reduced by many people having more than one mobile connection [24].

In Reactive Marketing Public Relations, AI plays the role of content intelligence. Having the ability of social listening, it can notify the public relations history so as prevent any emerging crises due to negative publicity. Besides, promotional campaign management issues, viz, content part, targeting, identifying influencers, suitability of channels, can be supported by A.I [21]. But, retailers too must retain customer trust and loyalty through responsible AI practices.

With artificial intelligence systems growing by leaps and bounds, worry signals are becoming louder, casting reflection on “ how these systems collect, use and process big data” [25]. This has led to development and publications of “100 AI ethics principles and guidelines” [25]. For example, consumer privacy issues were researched in the context of behavioral targeting to develop guidelines as to how for targeting should go and when ethical boundaries might be crossed. Several cases have surfaced which “demonstrate biased algorithms and their impact on individuals and society”. In the context of fraud and advertising, some multinationals were found to be not ethical. Most common principles generalized from a review of top companies are: “transparency, justice and fairness, non-maleficence responsibility and privacy [26]. Often in the realm of search, advertising and privacy, the example of search engine Google (which harvests as much information as possible and sells that to generate ad revenue is contrasted with” DuckDuckGo” which is completely focused on providing private search, and markets itself as “ ethical by design and is, therefore, trying to differentiate itself from Google, based on ethics and principles.

Thus, AI ethics does require actual ethics [27]. It requires real ethical due diligence at the organizational level [25]. Dekker rightly admonishes that organizations must find “the political, practical and operational means” to invest in ethics, “ even under pressures of scarcity and competition”. That is when such investments are needed the most, when the incentives to cut corners are greatest [28].In the context of COVID-19 pandemic, it may be relevant to reproduce Dave Lauer's lament that “ medical field has been confronted with the shortcomings and subjectivity of putting into action four settled “ Principles of Biomedical Ethics- non-maleficence, beneficence, autonomy, and justice” [29]. However, there are glaring new examples and models which are indeed inspiring. For example, IIT, Mumbai, has invented a unique chip, which has been utilized to fabricate a Smart Ward through Artificial Intelligence at Loknayak Hospital, New Delhi [30].

Infact, other smart Technology enabled and proven new innovative softwares are being usefully utilized under the current Covid pandemic. For example, Cloud Physician, the start-up by two young Indian doctors in 2017 at Ohio, has utilized its proven smart technology to save 3500 Covid patients in Karnatka, besides those in Maharashtra ICUs. Its new innovative technology helped to resolve shortage of trained Specialist Doctors for Covid patients under ventilators at the ICUs. These two Specialists- Dr Dhruv Joshi and Dr. Dileep Raman- have received appreciation of the State Govts concerned and the Indian Press [32]. The ground breaking AI innovative technologies follow established “success Mantras” with passion and mission. These are also called “essential nine steps [2]. In the current pandemic, strategizing successful innovation would require experience of experts from all spheres- academic, specialists of new technology (AI and related sub-sets), industry concerned experts and management gurus. This may be called “Innovation

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Management leadership Team", which is expected to give "transformational" results [33]. Indeed, "AI can be great to increase the wealth and happiness of humans but we must be making more intelligent choices about when to let it in", thus opines Dr. Akshat Tyagi, AI and Automat on specialist and writer of prominent Book entitled " Now that we're here the future of everything" (Penguin). But he also warns against the manipulation / misuse of knowledge engineering, citing choices likely to lead there- to [34].

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