

PJBSR

MARKETING AUTOMATION IN FINANCIAL SERVICES: RISING TECHNOLOGIES AND SKILLS

Priyal Borole

Volume: 01

Issue: 01

Publication: 14 Aug 2021

Published Online: 15 Aug 2021

In-Text Citation: (Borole, 2021)

To Cite this Article: Borole, P. (2021). Marketing Automation in Financial Services; Rising Technologies and Skills. *Pacific Journal of Business and Societal Research*, 1 (1), 1-10.

Copyright: © 2021 The Author(s)

Published by [Pacific Educational Society](#)

This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at: <http://creativecommons.org/licences/by/4.0/legalcode>

Marketing Automation in Financial Services; Rising Technologies and Skills

Priyal Borole

Marketing Automation Expert, Lead Manager, Digital Marketing
Analytics at Large Global Investment Management Firm

priyal.borole@gmail.com

ABSTRACT

The marketers and leader always try to make their campaigns more productive by multi-channel communication with the support of self-learning and decision-making. The emerging technologies in marketing can also facilitate the financial services. Therefore, the research aimed to highlight the impact of marketing automation or application of technology in marketing to explore its influence on financial services sector. The data for this research were taken from reliable sources of literature and conclusion was drawn from them. The results highlight that the adoption of latest technologies in marketing can facilitate the financial services. This study is useful for marketing professionals, practitioners and researchers while making effective strategies for financial service sector. The marketing professionals can adopt the cloud computing, blockchain and mainly the artificial marketing intelligence for facilitating the financial services sector.

Keywords

Marketing Automation, Artificial Intelligence, Cloud Computing, Blockchain, Financial Service Sector, Digital Marketing, Intelligence

1. INTRODUCTION

The change in era not only effect the external environment but also it has great influence on the business environment. Similarly, this 21st century is known as the era of globalization, commercialization, development, progress, technology and competition because it has changed the traditional business method and strategies (Ali and Kaynak, 2000). The companies either operating at national level or international level, are constantly facing difficulties to survive with traditional techniques in this era because the sudden shift in business environment require the change in business processes or strategies (Babenko et al., 2019; Zeibote et al., 2019). The change in business strategies means the practical modification in financing, human resourcing and especially the marketing strategies. The marketing is foremost important to meet the identified social, psychological and actual needs of customers (Kotler et al., 2000). Kotler and Keller (2012) explained marketing as an important element to meet the need of customer by focusing on several activities including promoting, planning and placement of the goods or services. Therefore, the marketing automation or involvement of technology in marketing can facilitate the financial services.

1.1. Background

1.1.1. *Market size in financial services calls for Innovation!*

Multi-channel campaigns have been most important within digital marketing campaigns these days. According to Global Market Report (2021) financial services industry grown by \$22.5 Trillion in 2021 and expected to reach \$28.5 Trillion in upcoming years. Many time we got emails or face digital ads showing the way to using the credit card, obtaining the credit cards, checking account or how to do better investment of money? The financial services industry is one of the significant sector and marketers are striving to utilize technologies as much as possible to get the right message to retain, upsell, cross-sell existing clients, acquire potential new leads and nurture that relationship with communications in both business to business and business to customer space.

In the context of technology, SQLs with databases, its version with SQL Server, MySQL, Teradata, Oracle, Postgre and even MS Access are considered as the traditional way of doing customer analysis and segmentation. Little bit going beyond automation with the help of shell scripting, Python and UNIX combination developers used to implement processes within marketing automation. Study shows that trends are leading towards making tech stack that is much robust than previous years.

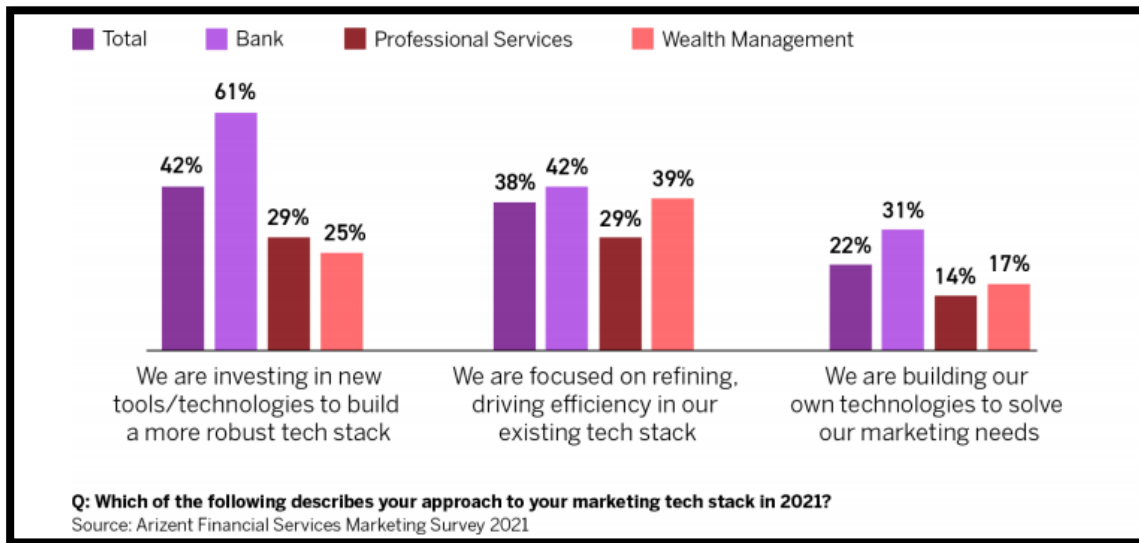


Figure 1: Approach to marketing tech stack, Source: (Fitzgerald, 2021)

2. LITERATURE REVIEW

In order to achieve the marketing goals at the same time to maintain the scalability, technologies like artificial intelligence, data analytics, block-chain and RCA can be helpful. Here are top 4 emerging technologies and cross fusion of these used in digital marketing within financial markets as well as tech skillsets.

2.1. Artificial Intelligence

The artificial intelligence and its application in marketing can be defined as “a method of leveraging customer data and AI concepts like machine learning to anticipate your customer’s next move and improve the customer journey” (Rekha, Abdulla, & Asharaf, 2016). The combination of marketing with intelligence lead to artificial marketing intelligence which is defined by Martínez-López and Casillas, J. (2013) as “marketing intelligence is the everyday information relevant to a company’s markets, gathered and analyzed specifically for the purpose of accurate and confident decision-making in determining market opportunity, market penetration strategy, and market development metrics”. In FinTech artificial intelligence is used in processing client requests and transactions, for example multiple retail banks have employed Chatbots to deal with everyday customer problems and processes. No doubt artificial intelligence brings great deal automation there, but it can significantly improve communication channels by identifying accurate segments and predictions backed by analyzed data on client’s preferences, past interactions. Segmentation based on artificial intelligence can derive decisions on multiple factors transactions, demographics, firmographics, geographic and more to predict the probability of a particular group of clients deciding to make next financial decisions, trends and investment

choices. In turn artificial intelligence also reduces the information asymmetry and uncertainty of transactions. The application of ‘Artificial Intelligence’ technology in the financial industry plays an important role as well in content customizations, aiming for the right time for personalized services. For example, it’s important to know that how many database marketers or analysts wonder and what would be the best time to send a marketing email campaign? Instead, many of the emails are being sent as mass email today. Deloitte (2019) highlighted that 56.5% companies are using AI in marketing for content personalization predictive analytics. The top uses of AI in marketing by economic sector are shown in figure 2.

Activity	Overall	B2B Product	B2B Services	B2C Product	B2C Services
Content personalization	56.5%	57.1%	62.2%	61.9%	40.9%
Predictive analytics for customer insights	56.5%	54.3%	48.6%	61.9%	68.2%
Targeting decisions	49.6%	37.1%	40.5%	61.9%	72.7%
Customer segmentation	40.9%	34.3%	32.4%	61.9%	45.5%
Programmatic advertising and media buying	38.3%	31.4%	29.7%	42.9%	59.1%
Improving marketing ROI by optimizing marketing content and timing	33.9%	31.4%	35.1%	28.6%	40.9%
Conversational AI for customer service	25.2%	22.9%	24.3%	19.0%	36.4%
Next best offer	14.8%	5.7%	21.6%	9.5%	22.7%
Augmented and virtual reality	10.4%	11.4%	10.8%	9.5%	9.1%
Autonomous objects/systems	2.6%	2.9%	0.0%	4.8%	4.5%
Facial recognition and visual search	1.7%	2.9%	2.7%	0.0%	0.0%
Biometrics, also known as chipping	0.0%	0.0%	0.0%	0.0%	0.0%

Figure 2: Top uses of AI in marketing by economic sector, Source: (Deloitte, 2019)

In Customer segmentation different aspects of AI such as machine learning, computer vision, natural language processing, self-supervised learning jointly accelerates the flow of real-time financial information and derive an accurate decision tree, propensity model or support vector to get an accurate target and derive personalization for client groups.

2.2.Block-chain

Online concerned topics such as privacy, personal data and habits are areas of security and loss prevention. Retails Banks compete to leverage Facebook ads, google ads and other platforms. According to Smith (2019), the advertisement losses would reach \$100 billion by 2023 because of ad fraudsters and spoofers. Due to decentralized ledger, block-chain can put an end to such practices by vendors. That is where Blockchain comes

into picture which is basically a distributed public ledger. It has the characteristics of point-to-point direct exchange of value, transparency and connects business to clients directly.

Block-chain is already studied and highlighted in the fields of digital currency, cross-border payment, securities clearing, trade financing, cross-chain protocols, hybrid collaborative innovation, and DeFi (Decentralized Finance) reducing the operating costs of financial institutions. Blockchain can play vital role in:

- Identifying the target audience- With a set of automated rules, campaigns can accurately pinpoint clients without risk of leveraging inflated metrics. Engagement will not only help existing clients but grow leads and subscribers.
- Data management with utilizing the right KPI simply for decision making for the next best treatment for clients.
- Control and customization - dynamic ad, banner placements and content personalization can be much easier.

Due to blockchain's decentralized nature, marketers can collect all campaign metrics without any misinterpretation, which would ultimately help in accurate analysis

2.3. Robotic Process Automation (RPA)

Financial Institutions often use Robotic Process Automation (RPA) to eliminate manual errors in speeding up compliance processes, increasing procedural efficiency and account reconciliations. Moreover, the RPA can be leveraged in optimizing digital marketing processes while running marketing campaigns which is a repetitive task.

Enhancing Customer engagement - With the rise of Robo advisors and self-financial planning. Enhancing the experience means a great deal in taking conversation from start to final conversion. Robotics processes can leverage unassisted, autonomous bots to react with client's keyword inputs, one great example is chatbots integrations enabling compelling discussion with clients and providing repetitive research results to marketers. Another characteristic of RPA is to maintain consistent data and speed up record level assignments across multiple systems which helps greatly in leading engagement much faster. The benefits of machine learning can be attained with robotic process automation which applies algorithms for learning insights and leverage experienced decision making in addition to specified rules. This reduces great time dependency on repeat analysis on online advertisement placement campaigns.

2.4. Cloud Computing and Big data

Organizations usually collect, store massive amounts of data and utilize when there is dire need. However many times data is scattered across multiple business units and in various formats and pose challenges in unification of all consumer profiles. Cloud services provide database marketers scalability, computations power and functionalities to find insights in the high-volume data in real time and can enable decision making for the marketing activation, as an alternative to building all infrastructure, data centers and designing solutions costing a fortune. When it comes to leverage cloud computing, there is need to compare 3 service types based what's offered and when to use:

- Infrastructure as a service (IaaS): For example, storage and servers from AWS, Azure, Rackspace, Linode, Google. Organizations get more control but need a team of professionals to manage applications, data, middleware and operating systems.

Who can use- Organizations looking to control complete applications and use of infrastructure, budgetary concerns or companies that are growing fast and need for scalability sooner than later.

- Platform as a Service (PaaS): For example, where developers can build applications, automate on top of services provided by AWS Elastic Beanstalk, Google app engine or IBM Bluemix. Highly available, easier deployments but complex integrations and data security concerns on consumer's personal data.

Who can use - Organizations looking to create their own Martech analytics applications, flexibility on deployment of project worked on by different team of developers.

- Software as a Service (SaaS): These services are pretty much used out of the box such as Hubspot, adobe creative cloud or Salesforce. Sales and Marketers directly install an application or use a web browser. Organizations do not need technical development teams or spend on maintaining the hardware or software but have almost no control over applications, servers and limited customizations.

Who can use - Firms that are looking for a quick and easy way, launch their marketing engagement faster without losing time on maintaining services, hardware or software.

“Cloud services offer access to a variety of analytical tools to measure leads, test and compare channels, content performance, optimize operations and ultimately uplift productivity.” Cloud computing is seen to be one of the top choices within the financial industry due to the realization of on-demand supply, possibility of more efficient and low-cost at the same time reducing time to market. However, security, as the primary factor that enterprises need to consider when applying cloud computing, needs to be squarely addressed and valued.

3. METHODOLOGY

The research can be conducted by using two techniques, one is qualitative and second is quantitative. The quantitative strategy is adopted when aim to quantify the data or do numerical analysis. Whereas, in qualitative analysis the data is taken from literature. Similarly, this research is based on literature analysis and provide the conceptual understanding of marketing automation. Moreover, the study is exploratory in nature and data were taken from secondary sources.

4. RESULTS AND DICUSSION

Data and technology professionals such as data analysts, data scientists, and campaign architects analyze, construct code, and integrate fine tune algorithms with machine learning. On the basis of technology option including artificial intelligence, block-chain, RPA and cloud computing, an organization can choose to build an inhouse team to run everything or keep functional resources to utilize and keep operations running or almost outsource most of it. Although it is undeniable that at any level of role analytical ability and business acumen of financial processes is utmost important.



Figure 3: Marketing Management, Source: Dilbert by Scott Adams (1994)

While Organizations eager to leverage these emerging technologies and fill the gaps between marketing operations and IT, below are some technical skill sets that can help in onboarding and move things faster.

4.1. Database marketing

It is a broad terminology similar to data analysis where one needs to extract, clean, process and transform data to produce meaningful outcomes. It covers a range of technical skills but SQL is core skill, with that knowledge of databases (SQL Server/Oracle/Hadoop/Hive and others), UNIX, XML and more. In many cases data analysis requires functional knowledge of Python, machine learning, R and SAS to be able to be usable for visualizations, derive logical conclusions based on that and communicate effectively.

4.2. Artificial Intelligence (AI)

Working with AI as data scientists means having a background in computing or mathematics, advanced computing, data visualization, in addition to championing other data analysis skills. Data scientists need to pack programming knowledge with Python, R, Julia, Data visualizations (Matlab) in conjunction with Jupyter, Colab Notebooks. Having proficiency in such skills is important to deploy an efficient marketing segmentation model. People working around data in their daily lives also need to develop and apply structured thinking, storytelling behind the data, curiosity and communication skills.

4.3. Cloud Services and Big Data

In cloud services mainly technology focused skills are essential when it comes to facilitating the infrastructure as a service or platform as a service. A choice can be made from below in regard to different aspects of Big Data environments.

4.3.1. Database skills: It includes the majority of data analysis however more focused on Hadoop, Pig, Hive, Cassandra, MongoDB etc.

4.3.2. Programming skills: In cloud computing application development, proficiency in languages such as Java, JavaScript, .Net and Php is highly sought. Knowing Python, Ruby, C, C++ is definitely a perk.

4.4. Networking Skills:

Integrating with networks and servers requires familiarity with concepts of WAN/LAN architectures, firewall, security, DNS, MPLS, hardware and a range of programming languages. It is important to understand how cloud servers services are provided while working in the field of cloud computing. An individual should familiarize themselves with cloud services such as AWS, Microsoft Azure and OpenStack.

4.5. Blockchain Development:

To be in blockchain networks and functionality usage, one needs to have fundamental understanding of Object-Oriented Programming, Data Structures, flat or relational databases. In addition, it is crucial to understand hash functions as SHA256 or KECCAK256 which go with cryptography skill. Deep working knowledge of smart contracts and blockchain architecture and combined with web development knowledge are essential in these roles. A few driving tools towards these are Java, Solidity, Python, C++, peer to peer networks, node.js,

mathematical algebra, DevOps tools as Jenkins/ Travis and open-source software programming.

4.6. Marketer (Business)

The digital marketing as a broad spectrum of business skills help in driving the campaigns from start to end. Marketers are expected to recommend the next logical actionable campaign based on review of insightful data, content A/B testing statistics, reactivity and interactions based on past campaigns. In addition, this role needs to maintain knowledge of SEO/SEM, practices in email marketing, authoring content, and attention to details on reports, adaptability and strategic planning. Every organization has its own technology path but having solid base of these technologies with marketing would make things move faster and reduce time to market.

5. CONCLUSION

The advancement in technology is the driving force that has facilitated the emergence and growth of digital marketing. Financial services with ingrained legacy processes struggled with technology migrations however pandemic has given leaders and marketers a new outlook towards leveraging deeper insights with creating an omni-channel experience. As being global nature of financial services products and services technologies driving marketing are critical part of the organization in retention and leads generation. As the technology and automation continue to evolve, digital marketing campaigns automation will be easier and widely used.

6. LIMITATIONS AND RECOMMENDATIONS

Many studies have focused on the concept of marketing automation but its implication to facilitate the financial sector is not much addressed. Therefore, this research has highlighted the broad context and explained the marketing technologies that can facilitate the sector but still it is having several limitations. These limitations can be future recommendations and help the researchers. First of all the study has highlighted only four types of technologies including, cloud computing, block-chain, artificial intelligence and RPA. The studies in future can also highlight the perspective of call analytics. Secondly, this research is literature based and only considered the secondary data, the researchers in future can develop the empirical investigation by taking view of senior marketing managers.

REFERENCES

- Adam, D. b. (1994). Retrieved August 2021, from <https://dilbert.com/strip/1994-10-07>
- Ali, A. J., & Kaynak, E. (2000). *Globalization of business: Practice and theory*. Routledge.
- Babenko, V., Perevozova, I., Mandych, O., Kvyatko, T., Maliy, O., & Mykolenko, I. (2019). World Informatization In Conditions Of International Globalization: Factors Of Influence.
- Deloitte. (2019, October). *How Companies Are Using Artificial Intelligence in Their Marketing Activities, 2019*. Retrieved August 3, 2021, from Digital Marketing Statistics & Metrics: (<https://www.digitalmarketingcommunity.com/indicators/ai-marketing-activities-2019/>)
- Fitzgerald, K. (2021). *Closing The Digital Marketing Gaps*. United States: FINANCIAL SERVICES MARKETING.
- Global Market Report. (2021, August). *Global Market Reports*. Retrieved from The Business Research Company: <https://www.thebusinessresearchcompany.com/global-market-reports>
- Smith, S. (2019). *Advertising Fraud Losses To Reach \$42 Billion In 2019, Driven By Evolving Tactics By Fraudsters*. Retrieved August 6, 2021, from Juniper research: <https://www.juniperresearch.com/press/advertising-fraud-losses-to-reach-42-bn-2019>.
- Kotler, P., Armstrong, G., Saunders, J., Wong, V., Miquel, S., Bigné, E., & Cámara, D. (2000). *Introducción Al Marketing*. Pearson Prentice Hall.
- Kotler, P., & Keller, K. L. (2012). *Marketing Management* 13 New Jersey: Pearson Prentice Hall.
- Rekha, A. G., Abdulla, M. S., & Asharaf, S. (2016). Artificial Intelligence Marketing: An application of a novel Lightly Trained Support Vector Data Description. *Journal of Information and Optimization Sciences*, 37(5), 681-691.
- Martínez-López, F. J., & Casillas, J. (2013). Artificial Intelligence-Based Systems Applied In Industrial Marketing: An Historical Overview, Current and Future Insights. *Industrial Marketing Management*, 42(4), 489-495.
- Zeibote, Z., Volkova, T., & Todorov, K. (2019). The Impact Of Globalization On Regional Development And Competitiveness: Cases Of Selected Regions. *Insights Into Regional Development*, 1(1), 33-47.