



iPhone workspace in Artificial Intelligence: A Company Analysis

Kamala S¹, Dr.A. Jayanthiladevi²

Research Scholar, Institute of Computer Science and Information Science,

Srinivas University, Mangalore, India¹.

Professor, Institute of Computer Science & Information Science,

Srinivas University, Mangalore, India².

Abstract - Apple's most recent performance seems to have chosen a more modest but astute approach, offering several new features and improvements that are powered by artificial intelligence. Customers will have exceptional experiences as a result of the integration of machine learning and artificial intelligence into Apple products, allowing them to achieve things they never imagined they were capable of. To enhance user experiences, secure the privacy of Apple clients and staff, and integrate hardware and software across all of the company's products, engineers and researchers at Apple are working together. The world's best storage, processing, and analytics tools are being developed in this way, and they will allow them to handle the most challenging problems in artificial intelligence and machine learning. In this article, artificial intelligence methods for the iPhone workplace are proposed.

Keywords: iPhone, artificial intelligence, workspace, user experience, analytics tools

1. INTRODUCTION

Apple and its ambitions for artificial intelligence are well-known, including how it will incorporate it into its products and how it would benefit people. Apple is a business that has succeeded in the field of hardware innovation, including computers, iPods, and iPhones. In addition, Apple has excelled in software development, attaining prominent positions in operating systems, video editing software, and establishing some level of success with productivity programmes like Pages, Keynote, and Numbers. Apple is now increasing its market share in the business sector and is well-positioned to sustain this growth in the future [1-2]. The implementation of remote work has been the most significant cultural transformation inside the organization during the last year. Although some businesses may initially express enthusiasm about bringing employees back to the office, this trend is likely to fade away due to workers opting for other options, as they have done before. Araujo states that the most difficult aspect of the transformation will include a significant change in our cultural mindset about our methods and locations of operation. In the next year, more organizations such as Spotify and Salesforce will pledge to implement Work from Anywhere (WFA) initiatives. IT teams must modify their approach to ensure remote workers have the necessary access, security, and connection.

In 2019, IBM CIO Fletcher Previn highlighted the advantages of enhanced staff productivity and employee retention. He also reaffirmed that Apple's platforms had a cheaper total cost of ownership (TCO) compared to competitors and that they needed fewer tech support responsibilities. Workers like the autonomy that comes with the ability to choose their tools, as shown by the Bring Your Device (BYOD) trend [3-5]. The ease of use, inherent security, and familiarity with Apple all contribute to the sector's growth. According to some, the availability of information technology choices is influencing employment decisions. MDM and endpoint security solutions that are Apple-centric are becoming more essential to allow remote working, opening the door for a new era of remote technical support. Mostly was established in 2012 with an initial emphasis on education before expanding to the business market. Apple MDM is deployed on the cloud.

The use of data is leading to the increasing adoption of automation and artificial intelligence in the workplace, including Industry 4.0 deployments, digital twins, and robotic process automation (RPA). Araujo and other technology aficionados believe that the ongoing wave of innovation will provide workers with more freedom and enhance their overall quality of life. The article noted that RPA automates arduous and repetitive processes, relieving people from the need to do them. The use of digital twin technologies may facilitate the collection of real-time data, the creation of digital representations of goods in the field, and the examination of how product modifications might enhance the product [7-15]. Moreover, artificial intelligence facilitates the identification of valuable information and the anticipation of responses, enabling people to function with greater efficiency and intellect.

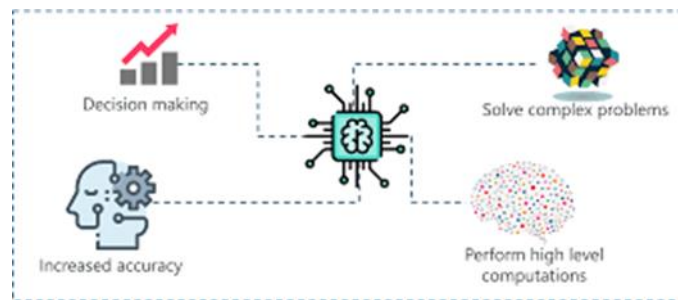


Figure 1: AI for iPhone workspace designing

The objective is to minimize the time and effort invested by IT experts in overseeing collections of Apple devices via the use of batching and automation. A significant number of individuals in data-driven organizations exhibit hesitancy in adopting further automation. However, it is essential that any new work environment that embraces automation prioritizes the well-being and needs of individuals. Despite technological advancements, the future will still need human "soft skills" such as critical thinking, problem-solving, and communication [16-20]. Artificial intelligence (AI) powers most of the features on your iPhone that enhance the convenience and simplify daily tasks. Apple has been actively promoting updates since the launch of iOS 10 to enable iPhones to think distinctly. The iPhone utilizes its ability to assess your location, activities, and information requirements to streamline your daily tasks and alleviate concerns.

2. OBJECTIVES

- To get an understanding of the fundamental ideas behind the iPhone workspace via the use of artificial intelligence.
- To get an understanding of the technology behind artificial intelligence's growing appeal with the iPhone workplace.
- To conduct research comparing the effectiveness of the iPhone's performance to that of more traditional techniques.

3. AI for iPhone workspace

In July 2014, Apple became the pioneering firm to incorporate artificial intelligence (AI) into its smartphones with the debut of Siri. The first iteration of the intelligent assistant was plagued by several imperfections. Apple has made notable progress in technology by incorporating ML and DL Neural Networks, including CNNs and Gated Recurrent Units, which are some of the technologies used. In contrast, Apple has chosen to remain silent on the true nature of these improvements, simply revealing the necessary information. Consequently, a significant number of iPhone users are oblivious to the extent of artificial intelligence that drives the functionalities of their devices. You may be acquainted with the artificial intelligence-driven features of Siri, such as providing tips, suggesting to play music while at the gym, and advising to use the Do Not Disturb option.

3.1 AI-powered features of iPhones in workspace:

iPhone users may enjoy the convenience of a screen that immediately lights up when the phone is raised, eliminating the need to press any buttons to activate their devices. iPhones are now equipped with an accelerometer driven by artificial intelligence, which detects motion when the phone is picked up, causing the screen to immediately turn on. In addition, the feature detects when the phone is placed down and adjusts the screen brightness accordingly.

The Siri Shortcuts app provides the automation of a series of operations that are linked, allowing for the establishment of a routine that can be triggered using touch or voice commands. This software also enables the automation of sequences of actions that are driven by artificial intelligence. As an example, you might set up a voice command, such as "Waking up," to launch a series of operations, such as opening the news app and turning on the water heater in the bathroom among other things. Utilizing the Maps application, the following routes are suggested [21-23]: Within the course of your regular commute, the Map app will use artificial intelligence to assist you in navigating around regions that are crowded with traffic. Additionally, the programme will remember the routes that you like and will recommend them to you based on that information. In addition to this, it does a comprehensive analysis of your calendar to give you direction on the locations of your meetings in advance.



Text answers that are automatically generated: The messaging capabilities of your iPhone, which are powered by artificial intelligence, may direct the conversations you have via text. You will be able to offer a more acceptable time slot in your calendar for new meetings, as well as do other activities, thanks to these functions, which enable you to automatically send messages to those individuals with whom you have scheduled appointments if you are late for meetings for whatever reason. Within the Photo app, there is a technology called Facial recognition that allows for the identification and classification of images of individuals, such as those of your loved ones, colleagues at work, or those who serve as role models. When it was first introduced, this functionality was only available on Macintosh computers manufactured by Apple. The iPhone, on the other hand, is distinct from the Mac in that it does image processing locally on the device itself, as opposed to depending on services that are accessible online. Safety and confidentiality are both improved by this feature. Additionally, the Photo app has included a new feature that is referred to as "For You." This feature encourages users to share their photographs with other people and also proposes that they should reciprocate by sharing their photographs with the user once they have received the previous user's photographs.

Transcription of voicemails: Your iPhone may now automatically transcribe and store your voicemails as text messages. It is possible that reading textual transcriptions of voicemails is more convenient for you than listening to the actual messages themselves. This function gives you the ability to do precisely that. Apple has published developer tools that enable third-party software developers to include Siri recommendations in their applications. These tools are available for download. As a result of this integration, Siri will be able to monitor the activity of users across a wide variety of applications and will deliver recommendations shortly for how to make the most of these third-party applications. Users can request that Siri make these recommendations by using the "Add to Siri" buttons that are located inside the individual applications. Through the use of automated production, the new Memories app can make highlight movies by assembling video clips and images that were taken during occasions such as birthday celebrations.

Through the use of face recognition and machine learning, it can recognize and collect snippets and photographs of just the people who are significant to you. Additionally, it enables you to edit the films by lengthening or shortening them, or by highlighting certain periods or activities. The new News App categorizes articles automatically: Fig. 2 illustrates how this new automated feature categorizes news items to provide quick access to what you believe to be the most essential. Apple integrates machine learning models into its products through specialized software developed for this purpose. Electronic components that facilitate these tasks are included in this programme.

Several of the most critical software features present in Apple [24-30]:

- i) Facial Recognition (also known as facial recognition technology). Facial Recognition is sometimes referred to as facial recognition technology. Facial recognition patterns are used to construct an individualized representation of your face for this technology, which may then be employed to unlock your phone or carry out tasks on it.
- ii) The FaceID feature of HomeKit. In the realm of Apple development, this feature is notably intriguing as it allows you to store facial recognition models and patterns on your devices. Consequently, when someone rings your doorbell, the camera linked to HomeKit can accurately identify the individual positioned in front of your residence.

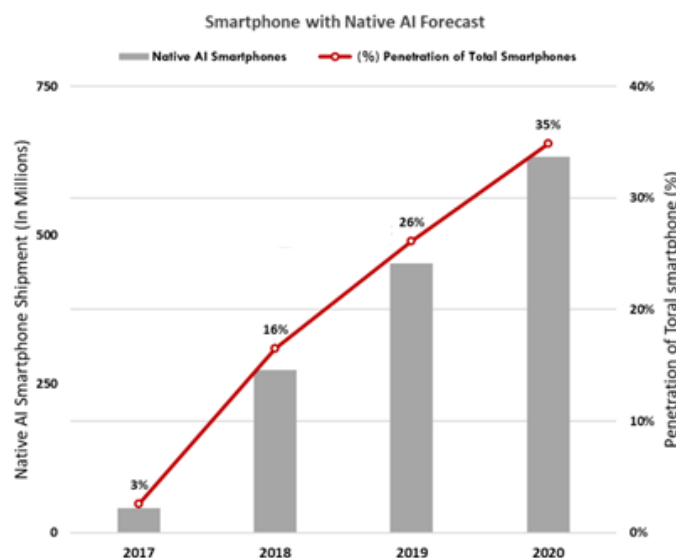


Figure 2. Statistics for Native purchasing with AI-based iPhones



iii) The Apple Pencil may be used to write on the iPad by using machine learning models and extensive typing data. This enables the recognition and conversion of a stroke into an ASCII source character.

iv) Hand washing - Given that we are in the year 2020 and that COVID care is an integral part of everyone's day, the Apple Watch is capable of detecting when someone is washing their hands; these versions have a 20-second timer that "guarantees" the hand washing procedure's effectiveness.

3.2 Advantages

Given the potential impact of artificial intelligence on a broad variety of professions, it is essential to address the potential disadvantages of emerging technology. Businesses must overcome the trust and bias issues around artificial intelligence (AI) by developing an effective and successful deployment strategy that makes the technology accessible to everyone. Authorities must ensure that the advantages of artificial intelligence are widely dispersed across society to prevent socioeconomic disparities between those who profit and those who do not. Employers should prioritize upskilling current employees to capitalize on the additional cost savings associated with the use of AI technology.

To fully use artificial intelligence's potential, we must address the issue at both the educational and commercial levels. Education systems must put a high premium on educating students for professions using artificial intelligence, such as programmers and data analysts. This requires a stronger emphasis on STEM subjects (science, technology, engineering and mathematics). Additionally, themes emphasizing the growth of creative, social, and emotional skills should be encouraged.

4. RECOMMENDATIONS

- While artificial intelligence will eventually outperform human workers at routine tasks, the World Economic Forum reports that humans will always outperform computers in professions that involve relationship-building and creativity. The impact of artificial intelligence on our lives, both inside and outside the professional sphere, will be substantial.
- Rather of being paralyzed by fear of automation, businesses must embrace these new technologies in order to ensure that the most effective artificial intelligence systems are used to augment and supplement human cognition.

5. CONCLUSION

Artificial intelligence is the driving force behind the many automated features that are available on your iPhone. Your smartphone has evolved into a virtual assistant that can do tasks such as establishing schedules, setting reminders, and offering ideas without requiring you to make a specific request for them. The frequent iOS updates that Apple releases make it possible for your iPhone to become more intelligent over time. This raises the advantages of interacting with your phone to a level that goes beyond that of a simple communication device. The research may address brand awareness concerns by conducting a comparative analysis of relevant models and theories, while also taking into consideration the characteristics of the brands that will be used as a case study.

REFERENCES

- [1] Aaker, D.A. (2021), "Measuring brand equity across products and markets", *California Management Review*, 38(3), pp. 102-120.
- [2] Aaker, D.A. (2000), *Building Strong Brands*, the Free Press, New York.
- [3] Adamson, A. P. (2008), *Brand Digital: Simple Ways Top Brands Succeed in the Digital World*, 1st edition, New York: Palgrave Macmillan.
- [4] Armstrong, G. et al. (2009). *Marketing: An Introduction*. Harlow, England: Financial Times Prentice Hall.
- [5] Arnold, D. (2018), *The Handbook of Brand Management*, London: Century Business. Ary, D. et al. (2009) *Introduction to Research in Education*, 8th edition, Belmont, CA: Wadsworth Cengage Learning.
- [6] Berreby, D. (2008). *Us and Them: The Science of Identity*. Chicago: University of Chicago Press. Blokdiijk, G. (2008), *iPhone 100 Need to Know Time Savers*, Australia: Emereo Publishing.
- [7] Blythe, J. (2010). *Marketing*, London: SAGE Publications.
- [8] Boyatzis, R. E. (1982) *the Competent Manager: A Model for Effective Performance*, New York: Wiley, cop.
- [9] Cabiddu et al. (2010), *the relation between consumer innovativeness and innovation success: The case of iPhone*.
- [10] In Simos, T. E. et al. (Ed.) *Marketing and Management Sciences: Proceedings of the International Conference on ICMMS 2008*, pp. 50-57, London: Imperial College Press.
- [11] Cant, M. C. et al. (2006) *Marketing Management*, 5th edition, Cape Town, South Africa: Juta Academic. Chapman,



- [12] R. and Hoskisson, R. E. (2009) Apple Computer, Inc.: Maintaining the music business while introducing iPhone and Apple TV. In Ireland,
- [13] R. D. et al. (Ed.) Understanding Business Strategy: Concepts and Cases, 2nd edition, pp. 13-19, Mason, OH: South-Western Cengage Learning. de Chernatony,
- [14] L. and Riley, F. D. (1998), "Modelling the components of the brand," Dibb, S. & Simkin, L. (1996).
- [15] The Market Segmentation Workbook: Target Marketing for Marketing Managers. London; New York: Routledge.
- [16] Dibb, S. and Simkin, L. (1994). The Marketing Casebook: Cases and Concepts. London; USA; Canada: Routledge. Drummond, G. & Ensor, J. (2005).
- [17] Introduction to Marketing Concepts. Oxford, England; Burlington, Mass.: Elsevier Butterworth-Heinemann.
- [18] Engel et al. (1994) Consumer Behaviour (7th ed.). Orland, Florida:
- [19] Dryden. Ethridge, D. E. (2004). Research Methodology in Applied Economics: Organizing, Planning and Conducting Economic Research (2nd ed.).
- [20] Ames (Iowa); Oxford; Carlton: Blackwell. European Journal of Marketing, 32 (11), 1074-90.
- [21] Farquhar, P.H. (1989), "Managing brand equity", Marketing Research, Vol. 1 pp. 24-33.
- [22] Ferreira, G. (2009) Exploring consumer perceptions of global branding and iconization. In Lentz, C. A. (Ed.) The Refractive Thinker, Volume II: Research Methodology, Vol. 2, pp. 175-197
- [23] Vegas, NV: Lentz Leadership Institute Gunelius, S. (2009), Building Brand Value the Playboy Way, Basingstoke, Hampshire; New York: Palgrave Macmillan.
- [24] Hollensen, S. (2008). Essentials of Global Marketing, Harlow, Essex, England: Pearson Education. Isaac, B. (2000) Brand Protection Matters, London: Sweet & Maxwell.
- [25] Jackson, J.S., & Antonucci, T.C. (1994). Survey methodology in life-span human development research. In S.H. Cohen & H.W. Reese (Eds.), Life-span developmental psychology: Methodological contributions (pp. 65-94). Hillsdale: NJ: Lawrence Erlbaum.
- [26] Kapferer, J. (2004), the New Strategic Brand Management: Creating And Sustaining Brand Equity Long Term. London: Kogan Page.
- [27] Keller, K. L. (1993), "Conceptualizing, measuring, and managing customer-based brand equity", Journal of Marketing, Vol.57 (1). pp. 1-22.
- [28] Keller, K. L. (1998), Strategic Brand Management: Building, Measuring and Managing Brand Equity, Upper Saddle River, New Jersey: Prentice Hall.
- [29] Keller, K. L. (2003) Strategic Brand Management, Singapore: Pearson Education, Inc. Keller.
- [30] K. L. et al. (2008), Strategic Brand Management: A European Perspective, Harlow, England; New York: Prentice Hall Financial Times. Kotler, P. and Armstrong, G. (2004). Principles of Marketing (10th Ed.)