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## THE ROLE OF ARTIFICIAL INTELLIGENCE IN DAILY LIFE

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### ABSTRACT

Just over the last couple of decades, artificial intelligence (AI) has transitioned from a niche innovation to a fundamental tool addressing humanity's challenges. In this text, the author investigates the issues of AI effectiveness in numerous aspects of people's everyday lives, including AI in smart homes, healthcare, transport, AI in e-commerce, education, and social networks. For instance, AI enables the convenience of home automation, efficient provision of tailored recommendations, and timely health checks by employing machine learning, natural language processing, and other algorithms. While there are certain applications of AI in daily functions, this paper also considers significant risks, including, surveillance, over-reliance, job losses, and security and discrimination risks associated with the use of databases and algorithmic decision-making. This research underlines the importance of appropriate development and governance in order to exploit the advantages of AI technologies while reducing the risks to society. The observations embrace the perspective that AI will significantly undergo evolution and will penetrate into day to day practices. Nonetheless, a framework for ethical use of AI technologies should be formulated to guide such practices.

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### I. INTRODUCTION

Artificial intelligence (AI) has now become much more than a mere technology for the selective few, it is now an autonomous system that, in one way or the other enhances our day-to-day lives. Although initially only included in automation and machines specially designed for elaborate tasks, today the masses are using it without realizing it several times a day. Whether it is searching for a product on Amazon, and being shown only relevant recommendations, or listening to Siri and Alexa speak after all understanding the voice of the customer, these are all systems taught to predict the demand and needs and optimize various interrelated processes. AI has become so rampant that it has changed how one person operates in a day, but even how society itself functions, causing substantial effects on industries, education, health care and even people's life styles.

### II. LITERATURE REVIEW

A considerable amount of literature exists on the advancement, operation and the impact of AI in various areas such as smart homes, medicine, education, and personal devices. This literature review examines what has already been done on the role of the AI based solutions in everyday practices but puts more emphasis on their applicability, utility, and the moral issues brought about by particular acceptance of the technology.

#### i. AI in Smart Homes and Personal Devices

The aspect of AI enabled smart home devices in question has received substantial attention in recent years, as they aim to increase efficiency and make life easier. Writings by Lee and Cho (2020) explain that devices such as AI powered thermostats, lighting, and security cameras learn user preferences and behaviour patterns and therefore optimize energy usage and enhance home security. Personal voice-command assistants like Amazon's Alexa and Google Assistant have been found as useful devices due to their effectiveness in assisting users with locks, questions, and smart home systems (Hoy, 2018). Rabari and Storper (2015) argue that these technologies do not only simplify operations but are also conducive in building "smart cities" as all necessary AI controlled systems are engaged in optimal resource allocation at the community level.

#### ii. Healthcare Applications of AI

AI's use in the health-care sector is probably among the greatest developments within the sector. AI has been shown in previous studies to alter the course of diagnosis, patient care and medical research for the better. As of flooring, Topol (2019) was able to speak of supervised learning algorithms that are trained on large data and help physicians make better disease diagnoses than non AI-assisted methods. Devices such as Apple and Fitbit powered AI have clothes that help in the constant monitoring of a person's vitals enabling them to be in control of their health and also notice irregularities at an early stage (Piwek et al., 2016). Nonetheless, there are

challenges such as ethical issues on patient data protection, diagnosis reliability based on AI technologies according to Obermeyer and Emanuel (2016).

### III. METHODOLOGY

Going with a blend of qualitative and quantitative research methodologies, AI effects on a number of spheres, such as the smart home, healthcare, transportation, education or e-commerce, are covered. The study seeks to explain how people relate to AI, what pros and cons they experience, and the ethical issues of privacy, safety, and over-reliance.

#### i. Research Design

The mixed-method approach enables a holistic understanding of the trust and usage patterns of AI technologies by focusing on numbers and voices. The study consists of two broad segments:

**Quantitative Analysis:** Data obtained through cross-sectionally representative survey samples of AI users in different contexts to the presence of AI, activity level, satisfaction, or advantages and issues related to its usage.

**Qualitative Analysis:** Interviews or case studies to elaborate on personal understanding and involvement and their ethical concerns with the AI system.

#### ii. Data Collection Methods

**Surveys:** This type of survey involved the distribution of a structured survey online to members of the survey population composed of age, sex, occupation or place of residence which included 500 individuals. The main focus of the questions was based on the AI usage in everyday life activities, how the AI is attracted to the individuals, their privacy issues, and the general perception of the AI.

**Sample Questions:** Examples include “How often do you use AI-powered personal assistants?”, “What aspects of AI usage in everyday life raises the biggest concerns for you?”, and “Do you think the comfort provided by AI technologies is worth of the time spent?”

**Interviews:** This type of interview features narrow focus group of 20 respondents who were extracted from the survey participants who responded the group targeted questions. The participants answered without restriction concerning the usage of AI on such targeting resources as and abuse, trust and dependence on AI.

**Interview Topics:** These also covered aspects like opinions on personal data privacy in AI, trust by AI systems on the people’s trust and AI user views on how vigorous AI takes out their daily life.

#### iii. Methods of Data Analysis

**Quantitative Data Analysis:** Determining the achievements of the survey results were carried out with the use of descriptive and inferential statistics. For instance, frequency distributions, means and standard deviations were computed using SPSS to interpret the patterns of AI usage within the sample population. Cross-tabulation was also employed in examining the demographic characteristics such as age or occupation in relation to AI use patterns.

**Qualitative Data Analysis:** The interview data was also thematically analyzed using NVivo software to assist in looking for the themes and patterns identified in the data. Some of the themes that came out were: privacy concerns, AI dependence and the benefits that are associated with such. In addition, the qualitative data was also coded in order to monitor sentiment projection, which facilitates an in-depth analysis of the participants views on AI.

#### iv. Purdy and Feasibility Stress Testing for Survey

**Reliability:** To avoid inconsistencies and ambiguity in survey and interview responses, a pilot testing involving thirty participants was carried out for fine-tuning the questions. In this study, internal consistency of survey questions was assessed using Cronbach’s alpha which returned alpha levels exceeding 0.80 and hence providing high dependability of results.

**Validity:** The validity of content was also given attention as relevant survey and interview questions were developed based on the research purpose. Experts, practicing in the area of AI ethics and technology, were consulted in order to evaluate if the questions were relevant and clearly formulated. The third means of strengthening the validity of the study is the use of multiple data sources (surveys, interviews and case studies) which also enable an examination of the role of AI in everyday life from different angles.

#### **v. Ethical Considerations**

**Informed Consent:** All participants of this study were made to provide informed consent before taking part in the survey or the interviews. They were briefed about the objectives of the study, what kinds of questions to expect as well as their ability to opt out at any time during the interview.

**Use of Anonymity:** This was done to ensure participants' confidentiality over the responses they gave. They were secure storage of this information and all seven identifying names from the queries were deleted from the final documentation as well.

**Privacy and Traced Data:** Because there are always privacy factors surrounding AI and technology, participants were told that any sensitive questions were mainly for research purposes and rather would not be revealed to the public.

#### **vi. Limitations**

Although this study adds important knowledge, there are still some limitations to it. Despite the great variation in sample size, they still do not appropriately represent the global population hence their findings might be affected in terms of external validity. In addition, qualitative data collection methods are retrospective and rely on the recollection of particular events that can be biased. In the future, research efforts might be routinized to increase their population and cross sectional surveys or focused groups might be adopted to understand how people's perceptions of AI changes over a period.

### **IV. CHALLENGES AND ETHICAL**

#### **Considerations**

The widespread integration of artificial intelligence (AI) in daily life brings numerous benefits, but it also raises significant challenges and ethical concerns. These challenges include issues related to privacy, data security, algorithmic bias, dependency on AI systems, and potential job displacement. Addressing these challenges is crucial to ensuring responsible and equitable AI development and implementation.

#### **i. Privacy Concerns and Data Security**

Probably the most significant ethical dilemma associated with the use of AI in everyday life is the right to privacy. The integration of AI systems into smart homes, social networks, health care institutions, and e-commerce facilitates the need for large amounts of personal information to provide tailored services and recommendations to individuals. Unfortunately, the acquisition of such information happens more often than not without the knowledge or consent of the individuals for whom the data was collected. As Binns (2018) notes, the companies that gather and process users' information might put users' privacy at risk either willingly or by ignorance, thus raising concerns of attorneys and ethicists on informed consent and transparency over such activities. Moreover, especially since more personal data has been put into AI-sophisticated systems, the likelihood of data breach and illicit exposure increases, putting many people at risk of identity theft and other privacy concerns.

#### **ii. Algorithmic Bias and Fairness**

Algorithmic bias is so entrenched within the AI sphere that it poses increasing threats as there now are systems that have made tangible recommendations relating to hiring, giving out loans and making medical diagnoses. Relying on the past data sets that include historical practices, AI models often perpetuate biases linked to ethnicity, gender, or class. Noble (2018) sheds light on such examples where developed algorithms with inherent biases have historically targeted the most disadvantaged minority groups. For instance, systems based on recognizing human faces have been proved to contain higher error rates ascribed to minority groups as a consequence making them over classed or misidentified unjustly.

For bias to be addressed, these AI developers have to on the forefront position themselves as inclusive by embracing the need for efforts to avoid, timely portray a wider representation and scope of data sets and evaluate their algorithms in a fair manner. Aside from that AI systems produced by organizations must also be treated as vulnerable so that every discriminatory tendency can be suppressed proactively.

#### **iii. Overreliance on AI and Degeneration of Human**

Intelligence

It is observed that, frequently, people are getting too dependent on the AI for basic activities like following

directions, keeping time, or making recommendations, which can eventually harm one's self-initiative and critical thinking abilities. The more accurate the AI system gets in anticipating what someone wants or needs, the less likely that person will make decisions on their own instead of opting to employ AI. This tendency may reduce problem-solving abilities and the capability of individuals to act without AI support in decision-making. Next, AI recommenders can be as credible as a friend when people start trusting them uncritically, which can be dangerous for ones' well-being. One of the important issues is the right understanding of digital competence and moderation of the relationship with AI tech to fight over-dependency.

#### **iv. Job Displacement and Economic Impact**

AI and automation are transforming industries and simplifying tasks while minimizing the amount of labor required to perform them. However, it is important to note that such advances come hand in hand with the possibility of job losses, especially in industries such as manufacturing, transportation, or customer service. As suggested in recent research by Brynjolfsson and McAfee (2014), we may need to confront the reality that certain jobs will be taken over by artificial intelligence, creating hardships for individuals in jobs at risk of ultra-modern 'technological obsolescence'.

Possibility of job loss in massive amounts (ultra-large scale) has triggered fears on the reverse side - economic infrastructure in the context of workers and employment in general. However, in order to extend the life span of these future challenges, cooperation between state and commercial heads is imperative in providing reskill and upskill education amongst the work force.

#### **v. Accountability and Transparency**

AI systems have also certain negative ramifications especially when the decisions taken by AI system holds high value. For instance, self driven cars as well as the AI systems in medical professions are prone to errors like any other professionals and if misdiagnoses or an accident involving these types of technologies occurs, does it become the responsibility of the AI architects, the users - the ones driving the vehicles or the institutions that provided these types of technologies? In addition, the unexplained nature of AI systems' algorithms - what is now commonly called a "black box" - adds another layer of difficulty to addressing this issue, for how can we come to know the particulars of how certain decisions are made.

AI systems must be designed in such a way that ex- ANTE trust can be built enabling confidence amongst all while also being able to apportion blame where necessary in case something goes wrong. This is made up of the ability to provide i.e. rationales for AI outputs, the possibility of human in the loop and the clear specification of the individuals responsible for any mistakes or wrong outputs.

#### **vi. Ethical Use of AI in Sensitive Areas**

There are certain sectors such as health care, criminal justice, and finance where application of AI technologies raises additional ethical concerns. For example, the development of automated systems enabling AI-based healthcare diagnostics must always be focused on the well-being of the patient, while the application of AI in the context of the criminal justice system must guarantee treatment of individuals without aggravating the bias already present in the society. With the growing use of AI in areas where human intelligence was used, such aspects of ethical considerations as fairness, empathy, and respect for human dignity become a key focus.

In this respect, it is possible to prevent the abuse of AI technologies in sensitive sectors by developing ethical standards for AI use and establishing authority. It is important that AI developers and public policy, ethical or public representatives work closely together in order to develop ethical strategies that guarantee the rights of individuals and ensure justice for all.

### **V. THE FUTURE OF AI IN DAILY LIFE**

The prospects for inclusion of AI into our everyday routine seem bright.

With the development of technology, life is anticipated to become more customized and focused and artificial intelligence is likely to develop in all walks of human activity as a result of continuous revolution, making former tasks easier, complex processes manageable, and life in total better. However, with the aforementioned developments also arise crucial issues like ethical oversight, safeguarding privacy data and accessibility.

#### **i. Refined Individualization and Engagement**

While AI is already active across a number of industries, its future possibilities are more exciting especially

when it comes to increased involvement of each user. AI systems will become even more proficient with time in understanding the needs, behavior patterns and environments of specific individuals and providing them with a wide assortment of personalized options and services. Down the road, a next generation of smart houses may predict some requirements even before they exist – modifying lights, temperature and security systems automatically as actual information stream from people and the surroundings. As for health care, smart gadgets will not only monitor a person's wellbeing, but also foresee the chances of one getting ill and provide necessary reminders. More intelligent and interacting experiences will also become reality thanks to voice-controlled virtual assistants which will easily be able to carry out several interrelated steps.

### **ii. Healthcare Advancements**

Again, AI will be a game-changer in the operations of these medical providers; improving the outreach of medical services while increasing its precision. Through improved predictive analytics and machine-learning algorithms, diseases will be diagnosed in their early stages, enabling the development of personalized medication and tracking of headstart plans. AI might even reach mental illnesses to some extent, through the use of mobile phone or intelligent wristwatch data, which may indicate signs of depression, anxiety or stress and provide assistance or refer to the authority automatically. This could undoubtedly help shorten the period of the diagnosis and the treatment of quite a number of ailments, hence, increasing survival of patients. Surely, AI will improve telemedicine as physicians will conduct a virtual consultation of patients with the aid of automated diagnostics and patient's real time data.

### **iii. Transportation and Autonomous Systems**

Autonomous vehicles are one of the most anticipated advancements in AI, with the potential to transform how we commute and travel. Future transportation systems will likely incorporate AI-driven vehicles that communicate with each other and with traffic management systems to minimize congestion, reduce accidents, and improve fuel efficiency. Self-driving cars will enable more efficient travel and reduce the burden of commuting, especially in urban areas. AI will also enhance logistics and supply chains, making the delivery of goods faster and more sustainable. As these systems become more reliable and accessible, transportation will shift toward a model of shared autonomous vehicles, potentially reducing individual car ownership and the environmental impact of transportation.

### **iv. Ethics and Governance of AI**

With the increased integration of AI during everyday tasks, the moral and governance problems will also become more intense. There is an aspect of the AI of the future that will demand responsible approaches, particularly in the areas of privacy, transparency, and accountability. It is anticipated that breakthroughs in AI ethics studies will enhance the development of objective algorithms that will minimize discrimination and extend fair justice across all categories. New policies governing governments and industries will also come into place as more use of AI enhances decision making and this will protect the rights, data and privacy of individuals. Explainable AI, or AI systems that can explain how they reached their conclusions will be crucial in addressing the issue of trust in AI technologies.

### **v. Environmental Impact and Sustainability**

AI deficiency will also not apply for AI deficiency. Climate change might be one of those areas where AI usage will have an enhanced impact on AI systems; prevailing AI systems will focus on advanced energy usage, waste management, and improving resource efficiencies. AI-supported smart grids might help overcome the imbalance between energy demand and supply, allowing the transfer of electricity from renewable sources. Agriculture will be another area where AI will have high impact because of precision farming. Such methods should increase yields while using fewer resources and reducing environmental harm. In this context, AI can offer societies the possibility to pursue and achieve environmental oriented goals with AI technology supporting growth.

## **VI. CONCLUSION**

AI is becoming a major component of everyday life and it is changing how people interact with technology throughout society, be it in medicine, transport, education, or personal devices. A vast number of people are already using AI in some basic forms, as the majority of smartphone users own devices that possess voice assistants, or devices that rely on AI technology. AI has brought many advantages, as this research suggests,



such as easier access to services, greater efficiency, and greater personalization. From smart homes that respond to user preferences to AI-based health devices and overall health management, AI proved that it can increase the standard of living in novel ways.

On the other hand, the implementation of AI also brings to light important issues and concerns including privacy issues, algorithm bias, addiction, and loss of jobs. These concerns do have to be tackled to make sure that the progress in AI technology will positively relate to human society, and will not infringe anyone's right. Ethics of such technologies and their application always comes in hand with AI, playing a major role in ensuring safety without restraining the use of AI.

The future of AI in daily life will instill a greater scope of personalization, improved industrialization, cleaner and more efficient systems and processes, and even further evolution of artificial intelligence. Not only will the ongoing processes of AI development change people's lifestyles, but the entire social and environmental systems as well. However, finding the right equilibrium of creativity and responsibility is essential for realizing the benefits of AI. This will enable society to use AI as a leverage for change in a manner that will ensure the effective distribution of its benefits and management of its risks through the embracement of ethical, transparent, and inclusive systems. To sum up, if the development and regulations of AI are done with care, it has the capacity to revolutionize life without infringing the rights of individuals, and societies. AI usage is inevitable and the acceptance of this reality is very key for the future, the future will see an AI that goes beyond just enabling technology and aids in improving human lives.

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