

# New Aspects on using Artificial Intelligence to Shape the Future of Entrepreneurs

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**Abstract:** One way for enterprises to be successful in today's challenging market is to be agile and be flexible to handle market changes. Using a conceptual and operational framework for improving the enterprise and keeping their desired situation, is always required. In this paper, a service oriented decision support system-based framework is proposed. The framework seeks for service oriented architecture (SOA) governance and suggests the initial architecture of the enterprise to support agility and optimality. Also, for the stability purpose a structure including service platforms, analyzers and decision support systems are employed to analyze the enterprise and make better decisions.

**Keywords:** Artificial Intelligence, Machine learning, Entrepreneurship, AI applications, Empowering AI Leadership.

## 1 Introduction

The artificial intelligence is becoming merely a curious concept. However, it is the business asset that is worthy of each of the entrepreneur's attention. In the world of business, the rapid changes occurred and because of globalization and technological changes, competition rises in the market. This increases the need of entrepreneurs to use advanced technologies to attain a market competitive edge. The studies show that an emergence of the series of the new innovative technologies has become the propeller to an increasing progress of the activities of the entrepreneurship. In all these technologies, artificial intelligence is one of the most effective technological changes that carries out the significant positive impact on entrepreneurship because it helps to improve the operations, sales, and growth of the businesses in the market and reduce the chances of the business failure (Xu, et. Al., 2018). Due to the recent advancement in machine learning (ML), AI's applications had an increased scope and scale covering many areas and aspects of Entrepreneurs' abilities and skills. These advances enable the technology to improve their collaboration with multi stakeholder, and it helps to achieve privacy, accountability, impartiality, transparency, and to create trust (Forum, 2019).

## 2 Technology and Innovation

This refers to the main elements of economic growth and entrepreneurship. The study's results show that artificial intelligence is positively shaping the future of entrepreneurship because by this, the market has great potential to thrive. The usage of the artificial intelligence technology is predicted to produce a large amount of the innovation creating the new potential of entrepreneurial activities that lead to high sales and improve the business operations that lead to improved living standards. With the help of an artificial intelligence, the entrepreneurs can analyse the big data efficiently that helps them to improve their decision-making process. It can be seen that artificial intelligence is currently changing business operations as most of the operations are being handled by artificial intelligence which supplements/supports human power. This automation is possible because artificial intelligence makes a transformation in entrepreneurship activities (Boyd & Holton, 2017).

According to Kabir (2015), the recent advancements in the technologies in the field of artificial intelligence are transforming the entrepreneurial and the business landscape dramatically. Artificial intelligence has, at present, penetrated various areas such as professional, business, and personal life. The ability of artificial intelligence to streamline and to improve the business procedures, create the innovative services and the products, and to resolve the complex and challenging tasks is creating an unprecedented

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degree of the novel possibilities following the massive growth and success of the entrepreneurial activities. In Entrepreneurship, the knowledge is considered as the main success factor, and in the current situation of the world, the huge big data and information exists that make it difficult for the entrepreneurs to interpret them effectively without the help of the innovative advanced technologies. Therefore, the results of the studies show that artificial intelligence helps the entrepreneur to transfer big data into useful knowledge that supports them in making their business decisions. Entrepreneurship also gets benefits from artificial intelligence because it creates new growth opportunities for the business that support them to improve their operations with low cost and high efficiency and ensure high market growth. Overall, artificial intelligence transforms the future of Entrepreneurship in a positive manner (Kabir, 2015).

### 3 Economic and Social Impact of AI

Makridakis (2017) discussed how Artificial Intelligence (AI) will play a significant role in the business world and society in the future. In his research, he highlighted the social indicators and business dynamics which are impacted by AI. The business world is continuously changing by adopting modern technologies and advanced means of communication and information transmission. Accordingly, AI is aimed at changing the dynamics of businesses, organizations, and international institutions. AI has caused a digital revolution which would affect several aspects of modern societies. An important social indicator is employment. Under the domain of employment, societies also consider entrepreneurship, which is a form of excessive revenue generation and increase in economic activities. Accordingly, digital revolution has provided better employment and entrepreneurship opportunities for people. Big companies and large businesses need precise decisions making tools and techniques to implement their strategic plans effectively. For this purpose, AI has provided big data for analysing the organizational performance with the help of data analysis methods and tools.

Accordingly, new startups can provide data analysis services to big companies. Furthermore, the management of data is also vital for companies. Therefore, entrepreneurs can avail these opportunities by taking initiatives in the field of AI, which has a large number of domains to cover.

Ajay Agarwal et al. (2017) determined various aspects of AI, which will bring a positive change in different fields including business, management, machine learning, and big data. They highlighted the future expectations from artificial intelligence, which can positively transform the economies, societies, and information technologies (Ajay Agrawal, 2017). Starting from a change in business places, this study sheds light on how managers and workplaces may change in the coming years because everything will be digitalized with the advanced implementation of

machine learning and big data analysis. AI will bring innovation and cost reduction for businesses and entrepreneurs. The digital and smart ways in which things can be done are highly attributed to business growth and expansion. Several big companies, including Google and Apple, are supporting AI start-ups, which implies that AI has reshaped the future of entrepreneurship. It has created more opportunities in the technology sector with a huge focus on reshaping things through innovation and digital transformation. Thus, AI needs advanced tools and widespread recognition for its implementation because every person has a particular way of looking at things. Accordingly, when different minds join, they can make better analysis tools and AI codes, which are then interpreted by smart machine and tools. Interestingly, AI startups are already providing great services to big companies and individual clients. For instance, a New York-based start-up provides virtual assistants for office scheduling and managing appointments. Dirican (2015), in his study, determined the impacts of Robotics and AI on businesses and economies. The industrial revolution has already provided great support for an increase in economic activities and expansion of businesses. Additionally, with an increase in mobile and internet technologies, people are seeking more positive impacts of digital technologies in every field of life. Thus, innovation and digital transformation have become a huge area of interest and businesses are investing in advanced technologies to benefit from it. The debate on Robotics and AI has reached the World Economic Forum because every country is now transforming their daily activities using modern technologies and innovative digital methods. AI has transformed businesses and economies by providing a large number of analysis tools which can analyse the data effectively. AI has made it simple for the government and large economies to analyse data related to unemployment and other social indicators.

Accordingly, they can apply modified strategies to improve their economic efficiency. Also, better economic indicators provide better opportunities for entrepreneurs. Entrepreneurs can arrange more resources in a developed economy. They can also provide AI services to different companies and institutions only if those institutions are working in developed economies which rely on advanced technologies to get data and analytics.

Dirk Helbing et al. (2018) discussed the changes which are necessary for a democratic society after big data and AI revolution. The digital revolution has made several changes to contemporary societies which are not limited to organizations. Today, people are also highly influenced by the changes made by advanced technologies, including machine learning, big data, and AI. According to an estimate, within ten years, the number of networked measuring sensors will increase to 150 billion. So, the technology is highly impacting our lives. Nevertheless, in a democratic society, where things are quite predefined,

we should analyse the impacts of technological changes which are going to affect our generations. From the automation of data to intelligent machines, AI has provided everything we need to automate our surroundings. However, we have never analysed how these advanced technologies are affecting our society. For this purpose, we must ensure that we apply the latest educational concepts, critical thinking, and entrepreneurship. The need for modifying entrepreneurship has increased after the digital transformation because more and more start-ups and AI initiatives are making progress and it is highly important to reshape AI by improving the existing concepts with the help of new technologies.

Nicholas Chen et al. (2016) determined globally the impacts of AI. The computational devices and systems have provided huge support to businesses in terms of improving their business processes and activities. The implementation of AI in business processes has increased business intelligence and data analysis (Intelligence, 2016). These opportunities have proved beneficial for global economic conditions because businesses are increasingly contributing to the international economy. With improved organizational management and processes, businesses can implement precise strategies to generate more revenues. Ultimately, the collective effect of progress in the business sector is observed at the global level because international business organizations are part of the global economy. Accordingly, with improved global economic conditions, there are a large number of opportunities available for entrepreneurs. Therefore, AI is impacting entrepreneurship positively at both the local and international level.

#### 4 AI Changing the Face of Business

One of the studies shows that artificial intelligence changes entrepreneurial activities because it changes the way business is carried out. It supports the use of the technologies that support rising customer's retention, close rate of the sales, NPS, and the pre-qualify pointers that help entrepreneurs to prosper in the market. The study also shows that artificial intelligence also helps entrepreneurs to detect their customers, suppliers, and the employee's emotions that help them manage their business operations and set the strategies in a better manner. It is also seen that customers require fast service and they also want companies to respond to their queries and orders immediately. Hence, artificial intelligence will help business improve their operations as the businesses use artificial intelligence technologies that respond to customers on immediate bases and ensure their efficient experience that help the entrepreneur to improve their customer's relations which also improve the revenue of the entrepreneurs (R. & Daugherty, 2018).

The study shows that artificial intelligence is making big splashes in the B2B lead generation and the B2B sales that gain the great attention of entrepreneurs. For example,

businesses who use artificial intelligence will reduce their call time to approximately 70% and raise the number of leads by approximately 50%. The study also shows that it has been predicted that up to 85% of the tasks of businesses would be outsourced to machines or robots by 2020. This is because many entrepreneurs and business leaders believed that artificial intelligence ensure high accuracy and efficiency of work and also ensure low-cost, efficient operations that help the businesses to attain high sales, and customers volume with cost-benefit advantage that ensure high profitability in the market. Entrepreneurs after using artificial intelligence must spend less time on contacts gathering and research because they are done with the help of machines automatically, and this allows businesses to focus on the actual sales. So, this shows that automation with the help of artificial intelligence will change entrepreneurial activities (Obschonka, et., al., 2018).

In the future, changes in the HR practices of business are also expected because of artificial intelligence. The hiring of employees in businesses can also be done with the help of artificial intelligence products that reduce the chances of bias and ensure that the company hire an efficient, talented workforce. In the future, many entrepreneurs because of high adoption rate of artificial intelligence would give more attention towards this and make new innovative artificial intelligence products that would ensure both business and economic growth (Medal, 2019).

#### 5 AI Transforms Processes of Entrepreneurship

Artificial intelligence does not only transform the future of the entrepreneurship, but they also transform the processes of entrepreneurship. Through the help of artificial intelligence, entrepreneurs were able to know what the current trend is, the future demands of people, and how they can shape the future of people. With artificial intelligence, it is easy to interpret big data into knowledgeable information that will help entrepreneurs to make the right decisions related to their business operations and the new products and services that help the business grow (Hosanagar, 2019).

With the help of artificial intelligence, the shopping experience of customers also helped businesses to attain high growth. Through artificial intelligence, a faster shopping, billing, and transaction process is attained. This requires minimal time for one purchase, less staff, and cost-effective operations leading to high growth. Also, artificial intelligence positively impacts entrepreneurial growth and shape their future in the global market (Eugenio, 2016).

Artificial intelligence is progressing gradually with advanced innovations. The computer is not designed for performing tasks, facial recognition to the minor duties. A primary goal of artificial intelligence is to develop an advanced and complex system to perform the tasks like solving equation and playing chess. This study presents the future goal of artificial intelligence, which is perfect for

human activities and also provides solutions to problems. The automated system also has human functions to control the cars for a computerized business that have many challenges. The development of lethal arms is harmful to humans for its attacking purpose. However, AI, which is a paramount invention, has an advanced technology that helps in times of war. The study explains that advanced technology is helping in poverty eradication (Poola, 2017).

The common models and the algorithms of artificial intelligence are explained in the study. Its merits include the cost-effectiveness of decision making. It is also applied in the field of businesses and based on testing the failure and success in life for increasing the reliability of the applications. The model of AI is very useful and common in all fields and is used by the entrepreneur system to avail the best outcome for the new business and to grow the revenue so as to make a place in the global market. The models are designed on the basis of the scientific findings and algorithms which include: Decision tree, Ant Colony Algorithm, Neural Network, immune Algorithm, and Deep learning. It helps in understanding. Consequently, technological advancement of ML and AI are usually transforming the Entrepreneurial landscapes. Also, artificial business intelligence penetrated the firms in the spheres of professional, personal life, and business. The study improves the business activities and also creates innovative services. In addition, it helps to solve the complex tasks for producing an unprecedented level in massive growth through entrepreneurial activities. The study aims to explore the knowledge of entrepreneurship methods and process with components that are considered vital. It also proposes the framework which includes opportunity development, exploitation, and identification that is useful in the guideline for initiating, building, and understanding the knowledge of the entrepreneurship endeavour. The companies recognize the value of artificial intelligence for automating the standardized tasks. The entrepreneurs also understand the AI-based applications, products, tools, and services. In AI-induced proliferation, the entrepreneurship has the knowledge of production to understand many different methods to examine the processes of entrepreneurship for the freshers (Nouwen, 2018).

Small businesses have small technologies that are oriented by the business of entrepreneurs. The study fills the gap between groups to create the objectives and goals with different communication styles. The study also gives the basic assistance for entrepreneurs that are involved in artificial intelligence and offers the synthesis of the standard capital-raising and business-planning practices. This study has the main areas that are discussed in details, which includes the developing business plan, developing corporate strategy, and approaching the

sources of capital. The strategy shows the business, operation suppliers, and the marketing which is important for developing the product and increasing sales. In this

study, the entrepreneurs have experiences in proposing the concept of capitalizing the business. It also has the AI technology description along with their successor and predecessor technologies (Fnkiknbeig&Hensler, 2016).

In addition, this study has all the business processes that have a significant impact on the innovation, research, and the market deployment for the future in the business models. It has a design with three-dimensional models that are based on Neo-Schumpeterian economies by forces of knowledge, entrepreneurship, and innovation. The dimensions of the innovation and research deal with artificial intelligence. Furthermore, this paper has the strategic objectives and the global market that employs the artificial intelligence implication on the dark sides. It provides results that are obtained by a first-dimensional analysis which is State-of-the-Art (SOTA) in artificial intelligence. The factors of core technology are increasing the connectivity and automation towards the industrial revolution. An innovative process with global competitiveness has the strength for the outcome of adoption through the corporate firms to become the Artificial intelligence firms. It also grows advance technology and wins the technological race. The analysis provides the information of AI reshaping of the market for the new businesses (Soni, et., al., 2019).

## 6 Reflections of AI and the Big Data

The potential disruption of the artificial intelligence is a cause for concern and is drawing attention in the variety of applications and research fields. The paper presents the collection and reflections of AI and the Big DATA for emergency areas in applications of the entrepreneurship research. The machine intelligence has the technologies in the entrepreneurship research, and it places emphasis on the reciprocity of involving the field's practices and research of entrepreneurship. The paper also focuses on AI that contributes to the productive transformation for the ethical issues having challenges by potential contraction among the ruledriven of AI and entrepreneurial rationality. The external enablers for entrepreneurial activities have the function of technological changes. It has resources to progress the technological knowledge for making good innovative strategies that can help the freshers. The practitioners and researchers showcase to concrete the research in developing the field. The study calls on entrepreneurship educators, practitioners, and scholars to prepare it for future scenarios (Obschonka&Audretsch, 2019).

In one of the articles, Kiulian (2017) claims that AI is shaping the future of entrepreneurs while offering emerging trends in business, especially when it comes to promoting business activities through a wide range of data. Therefore, the author claims that AI has resolved the issue of gathering data in a secure and beneficial manner while overcoming the barriers entrepreneurs usually face in regard to shaping



data. The author stated that AI has also paved the way for the rapid growth of algorithmic society, providing a digital atmosphere to take business actions accordingly. In other words, AI has directed entrepreneurs to take actions before the implementation of their business plans because it works like a machine through which it has become easier even to identify future obstacle and changes required such as adding people through online platform of Facebook, following modern AI algorithms at the backend, etc. (Kiulian, 2017).

AI is not limited to human thinking, as it has many useful applications for the improved form of entrepreneurship. AI offers a direction and acts like a support to deal with various matters that occur within the business circle of

entrepreneurs. Khalid (2018) in one of his articles stated that AI is an integral part of entrepreneurship by means of the fact that it helps entrepreneurs to work through modern means of digital marketing while using modern marketing tools and techniques. The author also stated that AI is also shaping the future of entrepreneurs because it offers the chance to increase the efficiency level through utilizing AI-supported innovation-based solutions which is creative in nature and suitable to be used as a business strategy. Finally, the author within the study concludes that AI plays a very important role in shaping the future of entrepreneurs. This is especially because AI offers entrepreneurs the suitable way to promote their products and services through modern marketing techniques by creating value for entrepreneurs especially by targeting intended audience, leading to a durable and reliable competitive edge towards entrepreneurship (Khalid, 2018).

Kabir (2018) claims that the recent advancements within the domain of AI have shaped a new outlook for entrepreneurs and changing business, as a whole, especially because of the combination of machine learning following advancements in AI. He also claims that knowledge gathering and its effective use for various productions means, to resolve complex problems, to work through the use of vital components, creating fresh and useful chances for beneficial entrepreneurship-based tasks, have formed the necessary part for the constant and rapid growth of entrepreneurship (Kabir, 2018).

Pando (2017), in his research, stated that artificial intelligence is becoming the commonplace in the households, and governments is broadly considering the effects of these AI technologies on the labour force. The automation in work as a result of artificial intelligence have replaced the labour force with the machines so as to attain high productivity at a low cost that boosts the profits of the entrepreneurs. However, these technologies only replace certain jobs for some time period and do not destroy the labour market. Consequently, it creates more sustainable jobs because it replaces the low skilled labour jobs with highly skilled job positions. Due to artificial intelligence, more efficient solutions are being derived that supports entrepreneurs. Artificial intelligence have led to a rise in the

challenges for entrepreneurs in the future, which has led to the advancement in artificial intelligence and the need for entrepreneurs to focus on innovation. Entrepreneurs in future have to be able to invent or innovate on an entirely new continuum. Also, they have to give focus more to the innovation and less on routine administrative works. Findings of this study show that artificial intelligence requires entrepreneurs to become more innovative in the future and achieve high success rate in the market.

## 7 Cloud Computing Infrastructures

One of the studies shows that because of the advancement in artificial intelligence, the cloud computing gains high adoption. Thus, cloud computing includes mobile service, electronic commerce, online social and web service, and knowledge discovery. The study highlighted the future opportunities from artificial intelligence that can positively transform the economies, societies, and information technologies. This requires entrepreneurs to develop the efficient infrastructure that use effective cloud computing systems which helps them to grow and attain high customer's satisfaction. This cloud computing offers various benefits to the entrepreneurs of the world who are struggling hard to achieve high competitive edge and profits and are looking for ways to reduce costs. It happened that many of the entrepreneurs because of the fear of failure do not implement the new ideas in the market. However, the study shows that with the help of the cloud computing which is one of the forms of the artificial intelligence, they are able to test the new ideas at a low cost and quick manner. This show that the cloud computing lowers the risk of the entrepreneurs and boosts the entrepreneurial activities in the world. With the help of the cloud computing and the other technologies of the artificial intelligence like the big data analysis tools, entrepreneurs in the future are able to use the new advanced technologies as a tool, embrace new ideas and innovation, try, fail and will become closer to achieve great success in a highly competitive market. Although this cloud computing also have some challenges that include privacy issue, data security, fear of the vendor lock-in and compliance, but all these can be mitigated by the entrepreneurs in the future through proper understanding of artificial intelligence and by introducing new solutions (Kshetri, Fredriksson, Carolina, & Torres, 2017).

Artificial Intelligence comprises of expert systems, natural language, game playing, robotics, and neural networks. Thus, its function is to substitute humans with computers. The best area of artificial intelligence is the neural networks that are successful in the discipline like actual-language and voice recognition processing. Many programming languages are known as the artificial languages as they are used for AI applications. Artificial intelligence work to decrease the efforts of human with less growth. Hence, it is used to develop intelligent software and machines. The goals of the AI research include planning, communication,

reasoning, object manipulation and moving ability, and learning.

Some of the tools include logic and mathematical methods that are based on economics and probability. The components of AI include a user interface, search engine, and information base. Since there are many branches of artificial intelligence which include genetic programming, optimization and search, it makes the work easier and decrease the manual work (Agarwal, 2015).

Basically, innovation is the main engine to improve the living standards of people. The process of innovation makes the older and past technologies obsolete. All around the world, the data science, big data, Internet of Things, blockchain, artificial intelligence, and cloud computing are emerging technology. All emerging technologies have the potential for transforming living standards and the lifestyles of humans which also impact on the business models of operations in all the companies. The study investigates many effects to increase the intelligent behaviour of the machines on the growth rate. The AI algorithm helps to increase productivity, make fast business decisions, cost and time efficiency, reducing human errors, sales maximization, and predicting customer preference. This paper also explains the benefits of AI in business as it provides significant growth and a tremendous rise in increasing the economy all over the world. Companies and industries are using artificial intelligence, and even healthcare centre and education systems are exploring artificial intelligence. It is important to know both the limitations and capabilities of the machine intelligence along with their potential impact on business and human life (Neha, Enakshi, & Narotam, 2018).

This study discusses the benefits and risks of artificial intelligence. It has an impact to transform the customer engagement and increase employees' performance rate. Through the process of clinical research and drug formation, artificial intelligence is used for analysing molecular information which can relate to the drug candidates. Artificial intelligence is important for businesses as it is very beneficial for the standardization of products to get the best outcomes. Many companies used to deal with market needs. AI ensures that the organization have the ability to carry out a process of logistics. Therefore, artificial intelligence has misconceptions and risks to replace humans who are less mindful due to emotional dimension (Nadimpalli, 2017).

The study explores artificial intelligence in conjunction with the Big Data technologies. It can also help the organization to bring business and operational transformation. Artificial intelligence allows users of the big data to enhance and automate complex predictive and descriptive analytical techniques. Thus, the Big Data has the technology to have leverage Machine Learning methods in manufacturing the industries. The paper investigates the

AI on the big data to get a significant impact on data and focus on the problems, which include the development of the software (Hussain & Manhas, 2016).

Artificial intelligence gains a strong momentum to leading business and it leads to business process and business models innovation. The study explains the AI technologies like decision, intelligent search, and machine learning to discuss its roles in business innovation.

It identifies the potential risks for quantification of AI related to the operational risk. The increase in the flexibility and optimization of the business process usually drives technologies of artificial intelligence in the application domains. The study introduces the blueprint for quantification of the operational risk to combine the AI technology that is based on the conclusion cycle. AI-based methods have a strong control in proving the control loops in the business. The key elements also provide the references for the desired behaviour for developing the systematic notion of the stability for the AI systems. As AI technology is accompanied by strong interest, it has operational risks. Business procedure is designed for achieving business output to provide values to the customers. It also helps the business in trading, creative thing, and teaching in manufacturing the business process. Artificial intelligence gives more opportunities, but it also has the challenges of making innovative changes

(Koehler, 2018).

## 8 Empowering AI Leadership and Challenges

The benefits of this technology must be well recognised and reviewed by the corporate business leader. In addition, the amount of needed design and control system should be put into consideration before any action might be taken to deploy the AI-associated technology. Thus, perceived challenges in adopting AI in the organizations public or private is discussed here.

### 8.1 Current Use of Data

One of the issues in either public or private organizations is how to handle and take advantage of a great volume and variety of data created by the digital world. Most organizations have a very fundamental understanding of their data and answers to the following question, what is the number of databases an organization has, which database contains what information, or what are the data collection method, can be challenging. This is a significant problem given that data drives modern AI solutions.

Figure 1 shows that there appears to be roadblocks in data governance processes (Forum, 2019). Organizations that do not possess the capabilities to understand and manage their data cannot use AI.

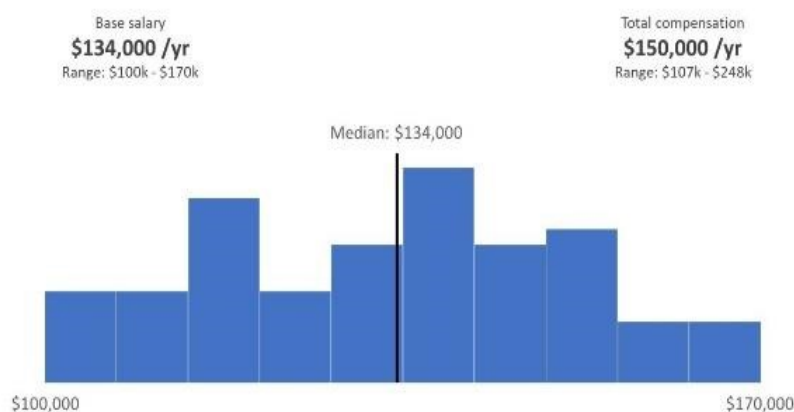
### 8.2 Data and AI Skills

Developing AI is difficult. As such, data management and

constituents' rights such as privacy and the government's long-term ability to deploy AI with full public support. This can have an effect on AI procurement as a result of lack of



**Fig. 1:** Example of AI use of data (Forum, 2019).



**Fig.2:** Histogram shows the average salary for AI jobs (Forum, 2019).

AI skills are in small supply. AI talent cannot be hired with insufficient budget like that of the government. Most Public agencies find themselves in dearth of AI. This leads to inability to deploy and operate AI solutions.

Although one of the skills which top managers and supervisors possess is technical skills, and most of them still do not have enough understanding about data which concerns privacy. Most importantly for large amount of data, it is vital to understand their ethical and legal implications. Also, embarking on AI projects requires a full understanding of applicable local laws which threatens

technical AI skills (see Figure 2) (Forum, 2019).

### 8.3 The AI Setting

The AI setting is multifaceted and is also continuously changing. The number of players and the speed of change in the AI market is huge enough to potentially hinder a buyer who is new to the AI market. Many buyers might not even be aware of the complete landscape in the first place.

### 8.4 Legacy Culture

All organizations are challenged in adopting new technologies. However, public entities tend to be less responsive than private entities due to their established practices and processes. As a result, positive performance is been rewarded and employees take less risks.

Government employees' work of delivering opportunities and positive impacts to society gives them satisfaction. However, it can be difficult to adopt a transformative technology such as AI if quickness is not integral to the organization's culture.

### 8.5 Purchasing Mechanisms

AI presents challenges that current purchasing mechanisms do not address, for example, the private sector treats algorithms as IP. As it is required based on the tool's lifecycle, governments who purchase off-the-shelf algorithms may want to understand and edit them despite the fact that it has the tendency to be objected by the providers of AI.

In cases where algorithms are treated like IP, the inability of government to avoid vendor lock-in is considered as a parallel discussion. This is because the original provider would most likely not consent to other AI developers accessing their algorithm. It affects maintenance for a lot of technologies, and for AI, it has a significant impact on how the algorithm is updated with new data by the government.

## 9 AI in the Near Future

Combining AI with accelerating science and technology will obviously be associated with transformational impacts where large scale databases or supercomputers hardware is involved or even 3D/4D printing is engaged. This will give rise to the movement towards smart cities. It is expected

that those vehicles will drive themselves and be out all day to earn and make profits to share with owners or manufacturers.

Entrepreneurs involved in businesses will experience a revolutionised business structure resulting in the entire organisation to be a form of software with no need for human involvement.

### 9.1 Case of Shaping the Future of the Built Environment with Artificial Intelligence

Computer is rapidly changing the lives of people. It is important to take advantage of AI because there is a whole lot in regard to AI. The main factors believed to have an impact on shaping the future of the built environment are performance, transition, governance and data, and skills and ethics. Regarding performance, computer systems that can analyse large volumes of data to highlight patterns in the performance and use of existing infrastructure assets would facilitate good decision making on infrastructure types and it can be implemented easily (Thinks, 2019). Therefore, AI will consequently increase the efficiency of infrastructure design, delivery, and maintenance. It would also result in improving the performance of the built environment sector. The created data and information about an asset for a long period represents a rich source of analysis which is called "Digital Twin". The digital twin of the built environment helps to monitor and improve its performance. This could virtually deliver more productive infrastructure and optimize the assets. It can also reflect changes in the physical environment and working out the right respond to them. Therefore, the digital twins must be adaptable and predictable in order to establish an improved assets modelling. The benefits include: Harmonization of operations to deliver optimal user outcomes; clash identification and automated remediation; and reduced costs and risk (see Figure 3 below) (Forum, Empowering AI Leadership, 2019).

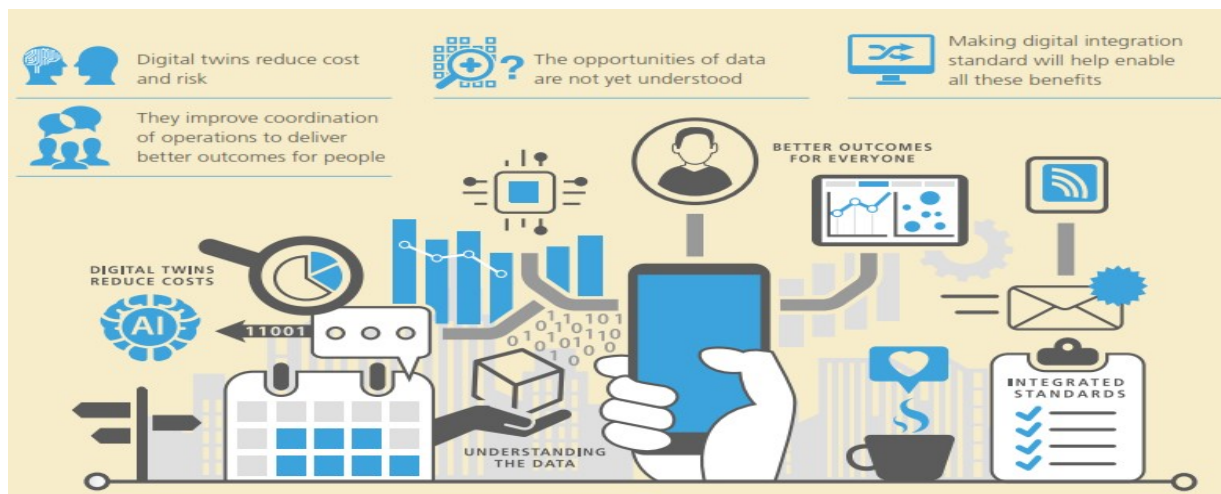
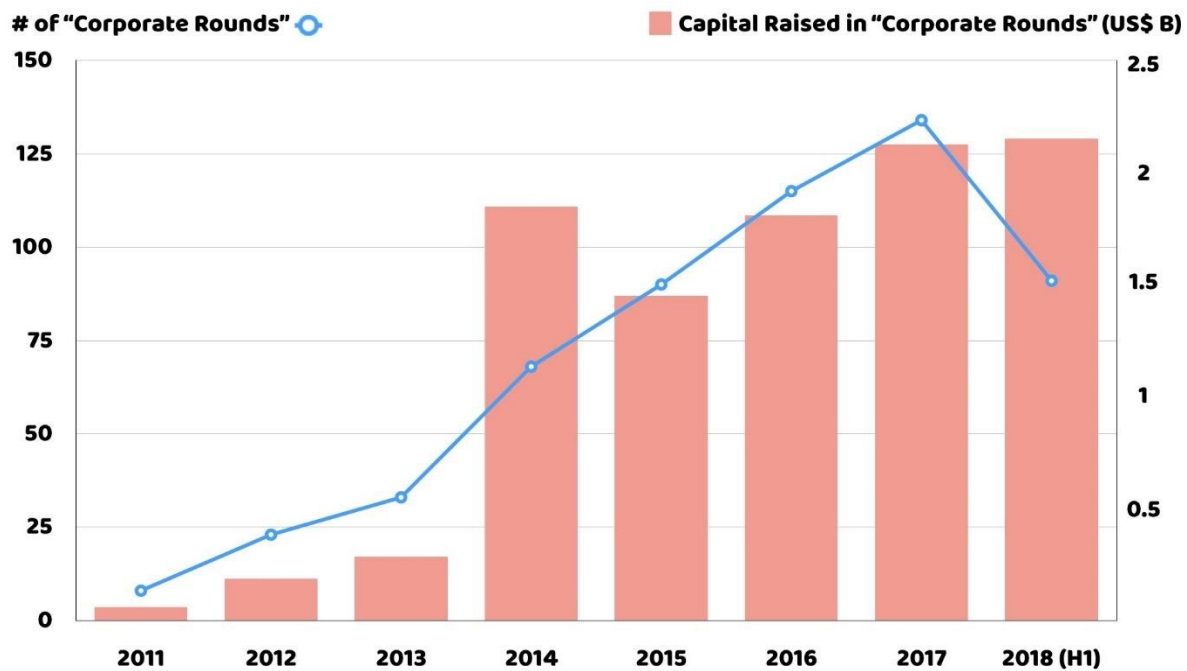


Fig. 3: The benefits of digital twins (Forum, Empowering AI Leadership, 2019).

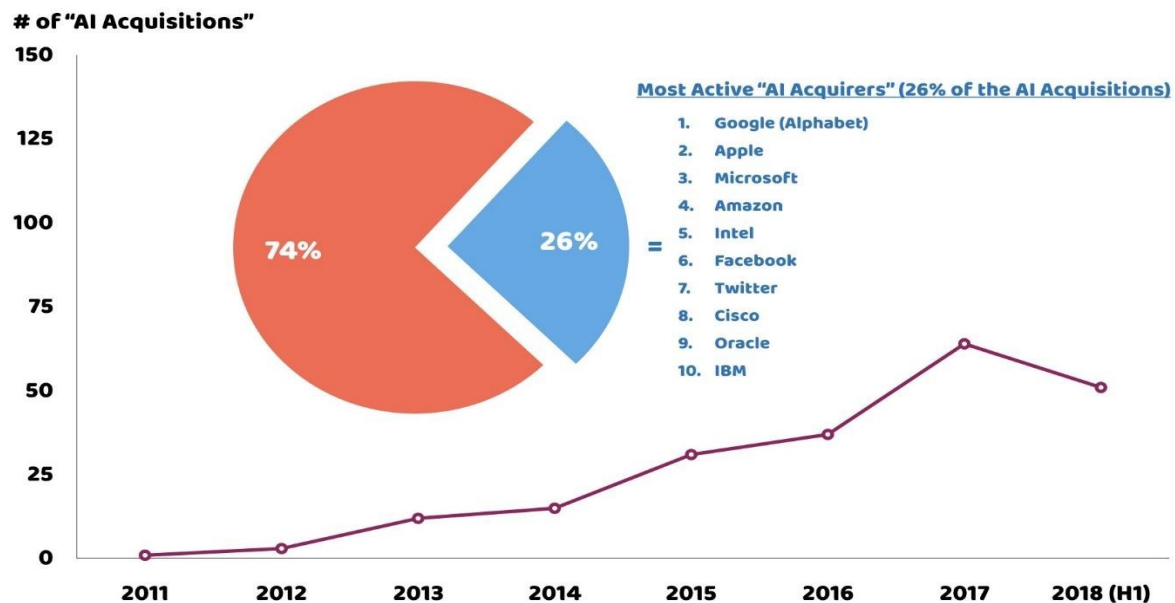


To be successful, entrepreneurs must be able to cope with significant ambiguity. Oftentimes, the operation of businesses takes place in unsettled industries. There is, however, a lot of uncertainties in starting a new business due to ambiguities. To get support, it is important for the entrepreneur to have a “vision” in regard to the environment and should be able to foster communication with others. Metaphor development was discussed by entrepreneurs.

Basically, metaphors serve as a basis to communicate within an organization and as a common language, and it is used in concepts that are abstract (Hill, 1995). Through metaphor(s), an organisation develops a common language, an understanding of the task environment, and a means of interpreting events. For instance, Figure 4 and 5 (Vermeulen, 2019) show data of corporate involvement in venture capital deals & acquisitions—data from crunch base for the period.



**Fig. 4:** Corporate Involvement in Venture Capital Deals & Acquisitions—Data from Crunch base (Vermeulen, 2019).



**Fig. 5:** Corporate "AI" Acquisitions (2011–2018 H1)—Data from Crunch base (Vermeulen, 2019).

## 9.2 How could AI help Entrepreneurs become more Productive and Efficient?

It is essential for entrepreneurs to maximize their resources to achieve high business efficiency. AI-related technology collects a huge amount of unlimited data that could be well analysed to measure entrepreneurs' performance by providing quick solutions and guidance for their practices. Having all practices done using software, driving the business aspects, including operations and productions with an automated procedure, will change the way entrepreneurs are performing and could result in an optimized scale of productions with innovated processes that are not available in our days. Therefore, the methodologies for performing the created business by entrepreneurs will also be controlled by AI associated systems and facilities. This will require new policies and regulations.

## 9.3 What about the Safe Use of AI Associated Systems?

It is obvious that all super-intelligent AI are not human and do not have emotions. AI does not have expectations to become malevolent or benevolent. However, these systems might become a risk as experts anticipate some scenarios to think about. For instance, AI can be designed to perform a task that is advantageous or disadvantageous (Institute, 2019). These examples demonstrate that the advanced AI is not malevolence but have competence. A super-intelligent AI in best cases will achieve its goals and if not, then an expected problem might appear which could well be escalated when there is no proper control system.

## 10 Conclusions

Artificial intelligence is now becoming important in every aspect. It saves time by growing the income of every business. Many organisations and companies are using it, as it makes the work easier and computer-based. It has many methods and technologies and supports computer language. It helps humans in their work to apply less effort. Artificial intelligence is having a positive impact on the entrepreneurial growth, which is improving the growth of the global market. Entrepreneurship is getting all the benefits from artificial intelligence, as it creates unique opportunities to grow the business and also support to improve business operation at a very cost and along with high efficiency that helps to ensure the growth of the business in the global market. Artificial intelligence has a modern and an advanced technology programs which is much beneficial for all the industries in this world. All of these studies give the results that artificial intelligence is very important for making entrepreneurship attain huge success in the future like growing the world's economy.

This paper overviewed the past and present developments in AI associated applications and overlooked the future prospects of the use and implementation of such systems for entrepreneurs. The present research work presented many aspects and practical applications for the AI systems in this regard. It also pointed out the fact that those systems will need a highly sophisticated control system that controls the reactions of the AI associated systems; otherwise, they will not be practically applicable.

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