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Exploratory case study of artificial intelligence task force. lessons from India

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Abstract
The preliminary observation that inspires this study is the slow progress of artificial intelligence and technology in Lesotho. Lesotho has not adopted any artificial intelligence policy and task force till today, and this has manifested hindrance in the country's development in many respects. Many countries are acclimatizing to the new phenomenon of Artificial intelligence, and many countries in Asia and Europe, America and some in Africa have commenced the journey of AI policy making, legal frame work and implementation of AI task forces. Artificial intelligence since its establishment into the industry has proven that the world gets better with the core existence of technology and human. This was proven by Bill Gates when he stated that AI is the strongest helping hand to humans, stating it can be used to address difficult challenges that are beyond human power and mind. He states that even though AI comes with risks, innovation comes with new risks that need to be managed. In its rapid growth, AI has developed innovative capabilities of both governments and international organizations. In the modern world, AI is the major factor in development and economic growth. Countries like India utilize artificial intelligence in many aspects of their development. India established an AI task force on the 24th August 2017 with its main objectives being to create policy and legal framework for controlling technology, to provide recommendations to the government on how to utilize AI in defense of India, and provide how it in manufacturing areas can be used. The task force comprises of four committees that are responsible for submitting annual reports. India has taken steps towards the development of AI which would be of great importance if countries like Lesotho adopt such measures and move towards the right direction of AI development. This paper seeks to evaluate measures taken by both countries and how adopting the AI task force in Lesotho would help in its development.

Keywords: Ai, task force, policy, exploratory, India, Lesotho

Introduction

Without the aid of technology, nations and states have prospered economically during the previous centuries. In the current world, technology and artificial intelligence play a major role in the growth of many nations worldwide. Artificial Intelligence is a relatively new phenomenon that nations are using to solve problems and provide efficiency in most areas of growth. Scholars have described artificial intelligence as the capacity of computers and other devices to replicate the cognitive processes of the human mind. It can also refer to the capacity of robots to perform tasks that humans are capable of performing.

Numerous nations, including the United States of America, Germany, Singapore, India, China, Rwanda, and many more, have embraced AI in their various systems. Coming with different risks countries have constructed legal frame work that will deal with the after effects of AI. Scientist, philosophers and cognitive scientist have held discussions on how to deal with AI, if AI should be given legal personality and to this date no final conclusion has been given, the only solution present to this day is that with regard to legal personality, in instances where there is claim of liability the owners and programmers of AI are the one who will be liable for offences committed by AI.

After realizing that AI is a powerful weapon countries including India constructed AI strategies made up of different committees, with each committee paying attention to its respective task and accountably producing report at the end of the year. These AI mechanisms through their committees have helped countries address different challenges in light of AI. First they set up platforms and data analysis on AI, they then assessed on how they can use AI on identifying national missions in different sectors they again looked into mapping technological capabilities, key policy enablers recorded across sectors, skilling and re-skilling. And lastly they addressed cyber security safety, legal and ethical issues.

Countries like Lesotho have not adopted policies and task forces related to artificial intelligence and they are treading slowly towards AI development. This article seeks to explore the transformational abilities of AI and how the technology can fully unlock new potentials for growth, innovation, competition, and economic sustainability in Lesotho.

Literature review

Trends in AI policy making

Amber Sinha, Elonnai Hickok and Arindrajit Basu, AI in India: A Policy Agenda (05-Sept-2018). This article outlines how different countries have established their artificial intelligence policies, and the impact of AI on their different national sectors and society. When observing trends of AI policy making across the world Amber Sinha discussed in their article that. Amber signh in his article articulates that a lot of countries around the world have started contracting artificial intelligence polices and strategies. The United States took its measures in October 2016 when the white house released a report which seemed to be an instrument preparing for future of artificial intelligence. This report addressed many issues that included application for public

goods, regulation, economic impact, global security and fairness issues. The white house again released an instrument which was strategic plan for Federally-funded research and development in AI. The united kingdom also followed by announcing its 2020 national development strategy. The UK issued a government report to accelerate the application of AI by government agencies while in 2018 the Department for Business, Energy, and Industrial Strategy released the Policy Paper - AI Sector Deal. The Japanese government followed and released Artificial Intelligence Technology Strategy in 2017, while The European Union launched "SPARC," the world's largest civilian robotics R&D program, back in 2014.

Additionally Amber sigh stipulated that countries such as Canada, China, the UAE, Singapore, South Korea, and France have also set up their national AI strategic instruments, while there was an agreement made by 24 EU states to develop uniform AI policies of EU model. Countries such as Mexico and Malaysia are also progressing towards models of AI polices and strategies

What this suggests is that AI is quickly emerging as central to national plans around the development of science and technology as well as economic and national security and development. There is also a focus on investments enabling AI innovation in critical national domains as a means of addressing key challenges facing nations. India has followed this trend and in 2018 the government published two AI roadmaps - the Report of Task Force on Artificial Intelligence by the AI Task Force constituted by the Ministry of Commerce and Industry and the National Strategy for Artificial Intelligence by Niti Aayog.

Background to the formation of AI task force in India

Elonnai Hickok, Shweta Mohandas and Swaraj Paul Barooah, The AI Task Force Report - The first steps towards India's AI framework (2018). This report introduces the establishment of AI task force and the first steps taken to leverage AI for economic benefits, and provide policy recommendations on the deployment of AI for India. The reports also emphasizes that there is lack of international participation by researcher, AI developers and government agencies in global discussions around AI. However On the subject of participation by the government it recommends regular presence in International AI policy forums. Hence, emphasizing the need for India's active participation in global conversations around AI and international rulemaking. This article seems to agree with the hypothesis in that active participation In international forums helps in developing clear policy frame work.

Bajpai, Nirupam, Wadhwa Artificial Intelligence and Healthcare in India (January 2020). This paper addresses the impacts of AI on health sector of India. AI and its applications have proven to be a boon in dealing with the COVID-19 situation in India. This new technology is helpful in tracking the pandemic, screening of COVID-19 cases, containment of corona virus, contact tracing, enforcing quarantine and social distancing, tracking of suspects, treatment and remote monitoring of COVID-19 patients, vaccine and drug development etc. As per PwC India and as per its report, India witnessed the highest increase in use of artificial intelligence (AI) during COVID-19 times (Press Trust of India 2020a). As per the survey, around 73% of healthcare and pharmacy companies adopted AI during the year. This paper seems to agree with the hypothesis in that it shows how AI has brought development in health sector of India.

Sunil Kumar Srivastava, "artificial intelligence: way forward for India" (march 2018**).** The journal discusses advantages that come with AI and addresses its importance on daily basis, and how AI can help in development going forward. The applications of AI in education include answering the queries of the students, asking questions and providing feedback, assessment of narrative answers. A study has predicted that AI would transform education during the next 4-5 years. AI systems have been developed for contract analysis, especially in corporate sector. Contract analysis involves going through a large number of contract and related documents used over a period of time to find the significant clauses. Often the time required for this is too long and it may not be practically possible to complete the task in many situations. In such a situation, it is possible to use AI-based systems to go through the documents and highlight the most relevant clauses. State Bank of India, HDFC Bank, ICICI Bank and Axis Bank have started using AI-based applications for providing customer services in India. These are few examples of applications of AI in different aspects of which agree with the hypothesis in that there is AI development in National sectors.

Saumyaa Naidu, AI and Manufacturing and Services Industry in India (2018). The article addresses the impacts of AI on manufacturing and service industry, the improvements brought by AI and how that has contributed to the economy. As an example of AI in autonomous vehicles, Flux Auto is developing a modular self driving technology for new and existing commercial vehicles. This is accomplished by means of functions including AI-assisted lane maintenance, collision avoidance, and cruise control. Hi Tech Robotic Systems' Novus-Drive is a fully autonomous electric car that allows users to choose destinations and use cloud-based intelligence as a fleet management tool. While the Indian manufacturing and services industry has shown a strong inclination to implement AI, there are several global prerequisites that are essential to ensure successful utilization of AI. Due to India's unique socio-economic conditions, there exist several challenges that come in the way of fulfilling these prerequisites. Indeed AI proves to have some significant development in India, which contribute to economic growth, which is the focal point of this study that for purposes of economic growth Lesotho needs to take some lessons from India

Chinmaya Naik, Sonali Jain, Jai Sehgal, "Analysis and Comparative Study of the Development of Technology with Artificial Intelligence in India" (4 June 2020). This paper addresses the achievements in Artificial Intelligence based on technical aspects, studies the market of artificial intelligence and its development features, studies structural trend of application in the field of artificial intelligence and development with artificial intelligence and studies of competitions and associated patterns in the field of artificial intelligence.

Vidushi Marda, Artificial intelligence policy in India: a framework for engaging the limits of data-driven decision-making 15 October 2018**.** It is addressed in this article that the development, adoption and promotion of AI have been visibly high on the list of priorities of the Indian Government, an approach that rests on the premise that AI has the potential to make lives easier and make society more

equal. The Union government in 2018 allocated substantial funding towards research, training and skilling in emerging technologies like AI, a 100% increase from previous investment. This article relates to the hypotheses in that funding AI activities is paving a clear way of AI development in India

Amit Kumar, National AI Policy/Strategy of India and China: A Comparative Analysis June 2021**.** The objective of this discussion paper is to provide a comprehensive and in-depth overview and analysis of such policies/strategies in India and China while carrying-out a comparative analysis of them as well. Amit Kumar stated that the analysis demonstrated that there are some fundamental differences in the approaches taken by India and China towards the development of AI. After analyzing challenges outlined in NITI Aayog that include inadequate availability of AI expertise, low intensity of AI research, Amit Kumar suggested that those challenges need to be addressed as far as India is concerned This wisdom relates to the current study in that although the focus is on the development of AI there are some gaps and challenges that need to be addressed in India.

Sudipta Ghosh, How AI is reshaping jobs in India JUNE 2018. This paper tries to bring out the Indian perspective by focusing on the benefits that individuals get across sectors (manufacturing, healthcare, education, ITeS, and banking and financial services, etc.) benefits that AI has for businesses and society. Sudipta Ghosh clearly states that AI-enabled systems are already being used for diagnosing and detecting diseases from reports and medical images, building personalized health trackers and predicting health risks; they are also connecting patients with doctors via a chat interface. AI-enabled robots can also assist surgeons in conducting precise surgical procedures. AI in India has thus been enhancing the productivity and availability of doctors. This article seems to agree with the hypotheses as it shows the developments of AI in the health sector.

Objectives

1. To analyze the effectiveness of artificial task force in India
2. To analyze the effort of Lesotho on AI
3. To compare the framework of Lesotho as compared to India and analyze the importance of adoption of AI task force in Lesotho.

Hypothesis

Artificial intelligence seems to be the focal point of development in the modern world. States have constructed Artificial intelligence task force to have a clear strategy of development through AI. India, China, USA and European countries are examples of countries that have constructed AI task force for sustainable development. This development mechanism has helped them in many aspects including agriculture, education, health sector and many more. Through exploration of AI task force in India. This research hypothesizes that adoption and implementation of AI task force and AI policies will play instrumental role in economic development of Lesotho.

Research methodology

This is a doctrinal based research, where secondary sources from other scholars will be used in the analysis of the research. Articles, books, journals and other library material will be used. Internet sources will also be used in providing relevant information that will be helpful in proving the importance of artificial intelligence task force.

Discussions

Introduction

In February 2018, the Ministry of Electronics and IT also set up four committees to prepare a roadmap for a national AI-programs. The four committees are presently studying AI in context of citizen centric services; data platforms; skilling, re-skilling and R&D; and legal, regulatory and cyber security perspectives. These study hypotheses that the formation of AI task force has proven to have positive impacts in the development of India. The four committees of task force are classified from A to D. committee A focuses on platform and data analyses, committee B focuses on leveraging AI for indentifying national missions in AI, committee C mainly looks into mapping technological capabilities, key policy enablers require across sectors, skilling and re skilling. While committee D is on cyber security, safety, legal and ethical issues.

Committee A

As already mentioned above India has already established artificial intelligence task force that comprises of 4 committees. Committee A is about platforms and data on artificial intelligence. In July 2019 a report on committee A was produced. This report recommended the development of an enriched National Artificial Intelligence (AI) Resource Platform (NAIRP) of India: a platform that will bring together all publicly shareable data, information, tools, literature, solutions, best-practices to enable a large number of people to individually and in collaboration take up AI tasks to fuel all aspects from capacity building to building solutions in different domains that will benefit the society, enrich national prosperity and enable international cooperation. The platform will also allow for the sharing and advancement of policies, norms, entrepreneurship, and the growth of the creative economy.

The platform will be a key component of the Indian AI ecosystem which will also consist of Knowledge Parks, Mission Programs and Projects, Capacity Building and Re-Skilling and Policies and Guidelines. This National AI Resource Platform (NAIRP) has the potential to develop into a central repository of various components of the AI Ecosystem making it a critical knowledge integration and dissemination base. This National AI Platform (NAIRP) will be an Open Data and Knowledge-cum-Innovation Platform that will enable usage by all categories of users for a variety of purposes including but not limited to training, research, projects including educational, competitive, funded and mission projects, start-ups and commercial development for socio-economic good. It will encourage the highest quality talent and innovators from all over the country and world to participate in these programs and help solve national challenges.

This platform will also catalyze the development of a partnership/ collaboration/ contribution/ participation model for knowledge sharing, data sharing, meta-data structure, annotation, API framework, IP creation, innovation, value added AI services, government adoption and human interactions. The success of the National Digital Library of India (NDLI) Project (https://ndl.iitkgp.ac.in/) will be

replicated for developing this AI repository and the potential of the data.gov.in resource can be the starting point to develop this National AI Resource Platform (NAIRP). It is recommended that the initial development of NAIRP be carried out in project mode to be funded by the Government of India through MeitY. This Committee is willing to take up the responsibility to carry out this project through a National Institute of Importance such as IIT Kharagpur (which has successfully developed the National Digital Library of India) in collaboration with National Informatics Centre (NIC), other academic institutes and industry partners.

Committee B

A Report of Committee - B On Leveraging A.I For Identifying National Missions in key Sectors was also released in July 2019. As the main focus of the committee is to use AI to the advantage of national missions, the report states that AI can play an impactful role in India if it is applied to problems that are important, and which are amenable to AI technology. The report stated that the protection of Crop, Crop State and Yield Streamlining production and integration of demand and supply is imperative for the Indian agricultural economy. Advancements in this area are possible with deeper understanding of high resolution satellite images. AI could augment remote sensing and overhead imagery data. Advances in fine grain image understanding capabilities and closely monitoring the crop type, state, and the geographical distribution. Also, the market for such yield or the scarcity thereof for both short-term and long-term can be better analyzed, predicted and planned for. Superimposition of climatic fluctuations on agro-ecology can be predicted and dynamic contingency operations initiated. Such advice can only be generated by developing dynamic systems to integrate macro, miso and micro-level agro-meteorological data. Innovative crop planning strategies can neither be tracked nor disseminated without using AI applications, big data and advances in machine/deep learning.

Inspection of Food Quality directly correlates to the health of the country. In the past, there have been dedicated labs and testing systems in place. It is now possible to develop scalable and affordable techniques, kits, solutions for variety of food items with advances in sensors, and sensor understanding. AI can contribute to the development of techniques for inspection of food and allied materials, including fruits, vegetables, grains, milk etc. Food inspection for presence of pesticides, method of ripening, residuals of chemical agents etc, can directly help in controlling the penetration of unhealthy practices in fruits and vegetables. Minimizing Post Harvest Losses Indian agriculture reports a significant loss after harvesting. Techniques that help in minimizing post harvest losses are needed in many sectors. Advances in storage, logistics and financing infrastructure can reduce the post harvest losses. Distributed and coordinated storage, better technologies for packing and transportation, etc. could include the directions. Sensors for baskets in a large storage center, often only one isolated pack/bag gets deteriorated in quality and there is no systematic process to keep track the health/state of the individual bags/packs. Identification of packs/baskets from a large collection with food items that have started to degrade/rot with intelligent sensing is required.

Committee C

Report of Committee – C On Mapping Technological Capabilities, Key Policy Enablers Required Across Sectors, Skilling and Re-Skilling, R&D. The Prime Minister himself has provided the central perspective for the AI fraternity with his statement: “We need to Make Artificial Intelligence in India and Make Artificial Intelligence work for India”. Consequently, the Committee has adopted the vision for AI for India as: “Leverage the power of AI for National and Global Challenges and Opportunities”. This will necessarily require building AI research and development capabilities, capacity to apply them in various domains (which itself is still an active area of research, e.g. Transfer Learning1) which can help the country. We must have a massive program to train and re-skill manpower for AI. Our research and development must also be globally competitive.

Coming to the issue of creating and nurturing talent, there are a few institutions which have Masters level specialization in AI and Machine Intelligence. Nevertheless, AI is often taught as electives in most BE/BTech/MCA/MTech programs in India. But lack of quality faculty, absence of opportunities and experience in practical applications make this largely ineffective or inadequate. It should also be emphasized that developing AI applications requires a process significantly different from the usual software development process, thanks to its heavy reliance on extensive knowledge bases, inherent uncertainty, and the difficulty in acquiring adequate domain knowledge ahead of implementation. In data driven domains like deep learning and machine learning, there are clear stages of training and testing. All these make the development of quality human resources in this area, a challenge that needs to be addressed for India to successfully use AI in addressing its myriad problems. Existing Indian IT workforce also needs to be re-skilled in the changing scenario, as companies are adopting solutions powered by technologies like AI, to address some of their tasks. A significant part of our workforce in IT is engaged in such areas. Given that a lot of the new applications being developed under the AI umbrella are data intensive with aspects like data cleaning, and preprocessing, we need to re-skill our workforce for these tasks too.

Committee D

Committee D is primarily concerned with developing India's defense. It was noted that India's defense expenditure rose to 33% in 2021. Additionally, a defense symposium was held in Delhi in July 2022, with 75 AI items on display. The minister unveiled a number of products, including autonomous driving tanks, robots, and drones. On the borders with China and Pakistan, India has already placed cameras, radars, and sensors. 140 AI surveillance systems in all have been deployed to obtain real-time broadcasts across borders.

Drones are also installed for purposes of surveillance and reconnaissance, border security, search and rescue missions, target acquisition, battlefield monitoring, and mine detection and clearance. Advanced military weapons that easily detect target are also introduced. Uses of automated lethal robots are also introduced.

The Impact of AI in Lesotho

Study proves that Lesotho, a small country in southern Africa, is undergoing a significant transformation in its

economy and society thanks to the adoption of artificial intelligence (AI) technologies. While the impact of AI is still in its early stages, it is already having a profound effect on the country's job market. One of the most significant impacts of AI on Lesotho's job market is the automation of many routine and repetitive tasks. This has resulted to unemployment as in manufacturing industry as people are now replaced by machines. While this has resulted in job losses, it has also created new opportunities for workers with skills in areas such as programming, data analysis, and robotics.

Another impact of AI on Lesotho's job market is the creation of new jobs in industries that are emerging as a result of AI adoption. For example, the development of AI-powered chat bots and virtual assistants has created a demand for workers with skills in natural language processing and machine learning. Similarly, the growth of e-commerce platforms has created new opportunities for workers with skills in digital marketing and logistics. However, the adoption of AI in Lesotho's job market is not without its challenges. One of the biggest challenges is the need for workers to acquire new skills to remain relevant in the job market. This requires investment in education and training programs that equip workers with the skills needed to work alongside AI technologies.

Another challenge is the potential for AI to exacerbate existing inequalities in the job market. For example, workers in low-skilled jobs are more likely to be displaced by automation, while workers in high-skilled jobs are more likely to benefit from the new opportunities created by AI. This could lead to a widening of the income gap between different groups of workers. Despite these challenges, the adoption of AI in Lesotho's job market has the potential to bring significant benefits to the country's economy and society. For example, AI can help to increase productivity and efficiency in industries such as agriculture, which is a major contributor to the country's economy. By using AI-powered tools such as drones and sensors, farmers can improve crop yields and reduce waste, leading to increased profits and food security.

AI can also help to improve access to healthcare in Lesotho, which has one of the highest rates of HIV/AIDS in the world. By using AI-powered diagnostic tools, healthcare workers can identify patients who are at risk of developing HIV/AIDS and provide them with early treatment. This can help to reduce the spread of the disease and improve the health outcomes of patients. In conclusion, the adoption of AI in Lesotho's job market is transforming the country's economy and society in significant ways. While there are challenges to be addressed, the potential benefits of AI are enormous, from increasing productivity and efficiency to improving access to healthcare. As Lesotho continues to embrace AI technologies, it will be important to ensure that the benefits are shared equitably across different groups of workers and that investment is made in education and training programs to equip workers with the skills needed to work alongside AI.

Having identified small advancements of AI in Lesotho as stipulated above, Lesotho has no policy, frame work or task force that mainly address artificial intelligence in its entirety. Lesotho lacks adopted laws to regulate and specify cyber crimes to this date. For sustainable development Lesotho needs to invest into AI, needs to construct AI policies and task force that will give clear guidance on how to utilize AI.

Lessons that Lesotho can take from artificial intelligence task force in India

Research has it that Lesotho is a country that has potential to grow and develop economically, and that can be made possible by taking good examples from other states. AI task force model of India is a good example that Lesotho can take and use it in addressing its own problems. The task force has committee A which specifically addresses establishment of platforms and data on AI. Its main recommendation is development of open national resource platform, to develop a standard skill of AI, to create mechanism for data integration from all contributors and to carry out gap analysis. Similarly Lesotho can create a model that is made up of different committees and one specifically establishing platform and data on AI. Lesotho is a country rich in education it has experts who can contribute immensely in this project. Having good relations with other states delegates can be sent in different parts of the world to gather information and data can be significance in setting up the model. As India this strategy can be profitable in so many aspects. After following privacy and security best practices on this data, releasing it into the public domain as open data will attract some of the brightest minds in the field to identify and solve Lesotho's problems. Privacy and security are also major concerns when it comes to AI. Lesotho does not have a comprehensive data protection framework, which makes it difficult to protect the privacy of citizens' data. The government needs to develop a robust data protection framework that can ensure the privacy and security of citizens' data.

Committee B also forms part of the task force which focuses on leveraging AI on identifying national missions in key sectors. This committee seeks the implementation of AI on key sectors of the government. Sectors such as education where the committee recommends that AI should be included in syllabus of higher learning of which will create environment that grooms generation that is rich in AI. This has already been implemented as universities such as Chandigarh and many other have included AI modules in institutions. This committee can also be relevant in Lesotho if institutions such as National University of Lesotho, Lerotholi Polytechnic and NTTC can include AI modules and ensure that students are well knowledgeable on AI. Another key sector is health sectors that India seeks to implement AI of there are already developments. In Delhi there is a hospital that uses AI in dealing with eye defects. The use of AI can be used to detect diseases at the very early stages making them to be easily treated. Lesotho is struggling to deal with health challenges sometimes patients are taken to other neighboring countries because of lack of knowledge and machinery so implementing AI would really be of importance as the country will deal with its own health issues and address them efficiently.

Another important sector is agriculture; this committee states that the use of AI in agriculture would increase production. As a result the country will be able to feed its self and export to other countries. Indian government in 2021-2022, has allotted funds to the tune of INR 1756.3 cores and INR 2422.7 crores to the states for introducing new technologies including drones, artificial intelligence, chain block, remote sensing in agriculture. Lesotho's economy depends on agriculture, with the majority of the population depending on agriculture for their livelihood. Artificial intelligence can be used to develop agricultural

technologies that help farmers optimize their crops. This not only improves food security, but also increases farmers' incomes, leading to poverty reduction. Artificial intelligence can also be used to improve the services of the Lesotho authorities. The country's population is small and the government has limited resources to provide services to its citizens. Artificial intelligence can be used to automate some government services, such as tax collection and public transport management. This will not only improve the efficiency of these services, but also reduce corruption and increase transparency. Another fundamental committee is committee C, which sets its focus on mapping technological capabilities, key policy enablers required across sectors, skilling and re skilling. They research and understand the international standard of other countries. This committee recommends establishment of strong research and development platform. Application of AI in key factors such as education, agriculture, health. It encourages offering AI skill to people in forms of workshops, re-skilling of people and training. This are activities that can be done in Lesotho to ensure that people are aware of AI, regular workshops can be hosted in different districts, those who are already skilled in technology can be re-skilled in AI. These activities would make a very knowledgeable society thereby contributing to excellence and development.

The last committee is committee D which is focused on AI and defense sector. In 2021 India noticed 33% increase budget to defense. In July 2022 defense symposium was organized in Delhi where there was exhibition of 75 AI products. The products were launched by the defense minister who included robots, drones, and automated driven vehicles. India has already installed cameras, radars sensors on Pakistan and china borders. Total of 140 AI surveillance systems are installed to get live broadcast in borders. Implementing AI in defense sector in Lesotho would be a good idea there are a lot of incidents happening in Lesotho as a result disturbing security. In the mountainous part of the country there is high rate of cattle theft. And it is not easy to deal with this kind of situations in the absence of AI. AI would simplify operations because soldiers and police would just look at the cameras and surveillance systems and make sure perpetrators are held accountable. People steal cars from Lesotho to South Africa and vice versa. So the use of AI would trace the movement of the vehicle from its starting point to its point of destination. So implementing AI would assist in dealing with crime rate at a very simple way.

Key findings

First adopting artificial intelligence policies and legal frame work has helped in dealing with technology and cybercrime in a much better way. This is proven in literature review where countries have adopted policies that will assist in regulating AI.

Secondly investing in artificial intelligence will help Lesotho deal with the current challenges efficiently. Taking lessons from India on how India has invested in AI from policy making to AI implementation.

Thirdly artificial intelligence can play a fundamental role in agricultural sector thereby increasing production which will lead to economy growth as more produced goods are exported to neighboring countries. As seen in committee c, implementation of AI in agriculture resolves so many agricultural problems, from dealing with crop plantation, crop pests, crop production. Taking lesson from India Lesotho can be a very high producing country if it invest AI in agriculture.

Artificial intelligence can also play pivotal role in the health sector, as seen in India, where in some hospitals surgeries, eyes and other medical issues are addressed with the help of artificial intelligence. Taking lesson from India on how it has implemented AI on health sector would be fundamental for Lesotho as it is a small country battling HIV and AIDS, tuberculosis and many others serious diseases.

Education is one important sector that can improve in Lesotho if influenced by artificial intelligence. India has already implemented AI in educational institutions; universities are already providing AI courses which is a good initiative towards building the digital nation. Taking lesson from India, Lesotho can also improve educationally by implementing AI into higher learning institutions.

Conclusion

The impacts of AI are seen at a very slow margin in Lesotho, this is because of lack of awareness and lack of education on artificial intelligence. This paper calls on to Lesotho to invest in AI and establish mechanisms that will address the current challenges with the current solutions such as the use of AI. The world has transformed into the world of artificial intelligence, where current problems are solved and addressed with the use of algorithms, machines robots and computers. The significance of AI is that it is sufficient, and sufficiency leads towards development. If Lesotho establishes AI task force, it will help in assisting and strategizing a clear way on how to deal with the current challenges. It will help in improving the economy because the government will have to fund and ensure that AI implementation runs smoothly in national sectors. This paper recommends that Lesotho should be more serious on issues relating to AI, it should create its own AI task force that will ensure that in all districts and all national key sectors there is implementation of AI there by creating a nation that is digital. In conclusion, AI presents significant opportunities for Lesotho to improve its economy and the lives of its citizens. However, there are also challenges that need to be addressed for the country to fully realize the potential of AI. The government needs to invest in infrastructure development, education and training, and data protection to ensure that the country can fully leverage the potential of AI. With the right policies and investments, Lesotho can become a leader in AI in the region and improve the lives of its citizens.

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