

SEZ's role in the interaction of AI with humans and nation states

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Many thinkers, experts and science fiction writers have put pen to paper to speculate about the dystopian life that may arise from Artificial Intelligence (AI) becoming too "intelligent."



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But there are two major obstacles to the dystopian scenario of robot lording over humanity. The first is that of consciousness. Byron was able to write poems because he has desires, imagination and consciousness of the past and the future. The second is as pointed out by Yuval Noah Harari, that humans flexibly collaborate inter-subjectively.

On the other hand, there are many men and women who toil on a daily basis to bestow unto the world AI algorithms that are better, craftier and faster. Are these hard-working folk taking humanity to an inexorable dystopian future where mankind will be subservient to the intelligent computer? Or, are they working to change this life that is "not in the harmony of things?"

This hard decree of a life that is the present economic system is pervasive throughout. Taking us to a better life where machines will work in harmony with humankind to engender an economy that elevates Humanism and many of humanity from the yoke of being the under-class.

The AI revolution together with its brethren in the Fourth Industrial Revolution, is a long-term process. It will take between 20-50 years to reach the heights of its most ardent proponents. That is, it will give the world, for the first time, a social system where the underclass does not exist for humanity. Instead, computers and intelligent devices play the role of the underclass. An understandable analogue is captured succinctly by Yuval Noah Harari, when referring to human beings (as the overlords) and the rest of the animal world as the underclass.

AI is a megatrend

Consequently, in its final form, AI is a megatrend that will take decades to unfold, and it has to be seen and managed as such. AI is by nature mutable and mercurial, it is difficult to pin down. Thus, the focus will be on two aspects as a discussion point: (a) Machine Learning (including Deep Learning) and (b) Blockchain Technologies.

Firstly, the “Machine” in Machine Learning is not a creaking robot with servos and steel, but mere software. Software that may one day become your colleague, or takeover tedious tasks that you would rather not do. Machine Learning is becoming an accessible “commodity” that is attained through the utilisation of computing algorithms that are done, using data science.

A question that often comes to mind: “What can government do to manage this megatrend?” There are two major levers that government can use:

- The first is that the business of government in South Africa is mostly governed by the Public Finance Management Act (PFMA). Thus, the processes in government are fixed and may tend to have their own inaction, which may be malign and lead to misuse, abuse and malfeasance as government is the custodianship of public funds.

Machine learning can be brought in to bear in terms of Robotic Process Automation (RPA) and specifically the RPA for government and public sector referred to as RegTech. The RPA will be combined with another AI technology, which is, Natural Language Processing (NLP). This will be in the form of chatbots that will be utilised mainly for service delivery. This in itself can release billions of rands that are at the moment either misdirected or misappropriated, to drive economic growth and social cohesion.

- The second aspect in which the South African government can leverage AI is through Policy. Many governments around the world with nation states such as Germany and China as well as many States in the US have innovative policies to promote firstly the industry of AI, which itself is already worth 100's of Billions of US Dollars; and secondly to ensure that AI propels industrialisation, with Special Economic Zones (SEZ) being one of the drivers in this process.

Utilisation of Digital Transformation and Artificial Intelligence in South Africa's Special Economic Zones:

South Africa would do well by being like the intelligent thieving magpie (bird) and copy from the above-mentioned nations' policies. It could also pivot its re-industrialisation strategy by utilising AI as an instrument.

The traditional economy in SA is growing slowly, and therefore the development of new emerging industries could gain

momentum with increased contributions to the economic growth of the country. Emerging industries include: inter alia; information technology; electronics and communication equipment manufacturing; cloud computing; big data, virtual reality; aerospace manufacturing; artificial intelligence; 3D technology; medical services; robotics; to mention but a few. Utilisation of the SEZ's can focus governments' effort, and as it were, use SEZ's as the thin end of the wedge to be an accelerator of re-industrialisation through new technologies.

SEZ's should not only foster new driving forces, but also transform and upgrade old driving forces in order to achieve coordinated development of both old and new driving. Industrial innovation therefore remains an urgent matter.

The Internet of Things (IoT) will be able to greatly reduce intermediation, monopolisation, and information asymmetry as well as company costs. It will leave the following service space to SEZ's:

- It will increase the need for the development of smarter cities around the SEZ. The corresponding intelligent services will be provided in the process of making public services – including urban medical treatment, health and environmental protection – more intelligent.
- It will generate more need for intelligent production. The traditional enterprises in the SEZ's will be upgraded and transformed into factories manufacturing or utilising AI.

SEZ's would need to adjust and be more closely integrated into the division of labour in the global industrial chain so as to build more extensive and deeper economic trade contacts with internal value chains and extend abroad.

AI has the potential to release humans to perform more “engaging tasks”, and deal with the repeated and mundane tasks. However, there are ethical considerations attached to AI. In RegTech, as an example if AI is deployed in public sector procurement and is able to adjudicate and select a successful tenderer, the process of doing so, that is the algorithm of selecting, must be transparent and understood by the data scientist who develops it, management in supply chain, internal and external audit as well as stakeholders.

It is also important that Deep Learning Neural Networks are not deployed for malign purposes or to do harm. These challenges also give an indication to the new skills that need to be deployed in the area of AI, inter alia in data science, management, monitoring functions such as Analytics as well as Audit functions.

What are the risks involved?

I spoke about getting rid of an underclass in human beings as conscious and self-aware entities, through the utilisation of an “underclass” of intelligent machines who, for which it would be difficult to create consciousness and self-awareness in the near and medium future. There are risks that however may make this un-dystopian (as opposed to utopian) scenarios I have argued above.

Firstly, it may be that the benefit of the digital transformation accrues to those who possess and/or utilise AI in an intensive manner. These will be joined by those who are skilled in the new digital technologies and those individuals who possess flexibility to embrace the productivity impacts of digital transformation in their field of expertise. The rest of the workforce may be left behind, and even though, there will be reduced unemployment, these will be jobs that are of a lower economic value, that cannot be in a feasible manner, either due to their nature or cost-benefit scenario, be not suitable for AI.

However, this should not be a major concern as the opportunity for up- and re-skilling in an effort to adapt to AI remains as one of the important cornerstones of Industry 4.0.

South Africa is a developing country, and developing countries, need to industrialise to attain “developed” status. The choices that the country makes will either allow it to utilise the productivity-inducing AI technologies or seek to follow the labour-intensive economic sectors such as textile and garment making.

These are sectors that may be the last to be affected by digital transformation but have a downside of being economically low in value due to low productivity. South Africa thus may then find itself, on choosing its industrialisation trajectory, to be on the high road of AI productivity enhancement and human self-actualisation. Or it may find itself slipping to be a Transition Economy whose economic activity and job creation is in the low economic value or primary sector.

Thus, the economic classification of Developed, Developing and Transition Economies may be defined solely by how the country is embracing and utilising AI Digital Transformation.

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