International Telecommunication Union

MetMUNC XLVIII

Topic: Artificial Intelligence (AI)

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"Robots are becoming "smarter" over time. Many new models have the ability to learn, and advances in artificial intelligence will only accelerate the value of these robots."

-United Nations University (UNU)[1]

"As the UN specialized agency for information and communication technologies, ITU is well placed to guide AI innovation towards the achievement of the UN Sustainable Development Goals. We are providing a neutral platform for international dialogue aimed at building a common understanding of the capabilities of emerging AI technologies."

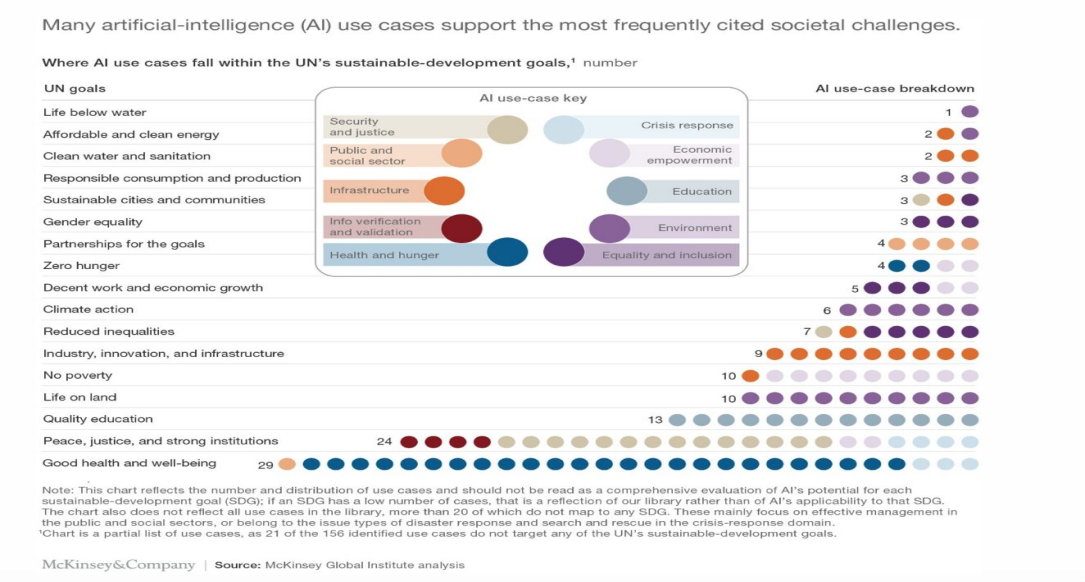
- Houlin Zhao, Secretary General of ITU

Introduction to AI Integration

Artificial intelligence can be defined as the branch of computer science dealing with the simulation of intelligent behavior in computers or the capability of a machine to imitate intelligent human behavior.[2] As the field of artificial intelligence continues to develop and advance, the future will see more extensive use and reliability of artificial intelligence (AI) and artificial neural networks (ANN) in order to perform everyday tasks that were once considered too difficult for anything other than a human. It is important that we address this topic from a global perspective, with the aim of creating new applications and restrictions on the use of AI.

[1] https://unu.edu/publications/articles/is-technological-innovation-making-society-more-unequal
[2] https://www.merriam-webster.com/dictionary/artificial%20intelligence

There are limitless uses for AI, ranging from data interpretation, to diagnostic tools in healthcare facilities, to providing cheap or free labor to businesses. There are many advantages to AI, especially from a UN standpoint: AI can improve responses to humanitarian emergencies, increase agricultural productivity, and help doctors identify illnesses. They can also be used in situations where it is dangerous for human intervention such as measuring levels of nuclear fallout radiation levels, autonomous exploration of space and oceans, and monitoring weather in remote areas. AI can be used to make faster actions and decisions on topics such as fraud detection, security threats, and even planning events. An important application of AI is machine learning, which is the ability to derive conclusions from data sets that are too large for humans to look at. With this they can create improved predictions with fewer errors. When AI is leveraged to be used positively, it can be safe and beneficial for all and can accelerate progress towards the UN Sustainable Development Goals.[3] [4]

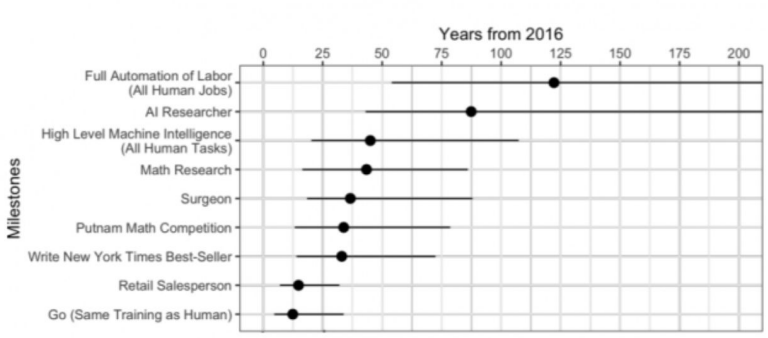


[3] https://www.itu.int/en/sustainable-world/Pages/default.aspx

[4] https://www.undp.org/content/undp/en/home/blog/2019/Using_AI_to_help_achieve_Sustainable_Development_Goals.html

With the advantages of AI come certain disadvantages that also need to be considered: transparency issues, trust, security & cyber-security, displacement of jobs when the global unemployment rate is already a concern, and worsening inequality. Already, AI has started to take jobs away from lesser-skilled workers in factories and assembly lines. In fact, the number of robots currently in the global workforce, 2.25 million, has multiplied threefold over the past 20 years, doubling since 2010.[5] An Oxford Economics report also estimated that by 2030, 8.5% of the global workforce will be replaced by robots and 20 million jobs will be lost.[6] AI is good at doing assembly line work and as it improves, may also replace low-skilled workers. This will ultimately cause a greater division of wealth as company owners will profit off of faster production but many more people will be put out of jobs. Another issue is that there will be power gaps when considering who has availability to use, create, or implement these new AIs.

A new issue is whether medical institutions should implement AI technologies to help treat patients or analyze test results. AI in hospitals can be used to do image analysis of CT scans and X-rays up to 1000 times faster and provide input for surgeons. They also are able to do administrative tasks such as scheduling appointments, analyze previous medical papers, and authorize prescriptions. There are even some hospitals that use



5 https://www.usnews.com/news/economy/articles/2019-06-26/report-robots-will-replace-20-million-manufacturing-jobs-by-2030

6 https://www.usnews.com/news/economy/articles/2019-06-26/report-robots-will-replace-20-million-manufacturing-jobs-by-2030

them to aid in clinical diagnosis.[7] Eventually we may see AI perform surgeries with little to no human guidance; there are already advanced machines being used in surgeries today.

Leaders of Artificial Intelligence[8]

1. China: The State Council of the People's Republic of China has announced its goal to become a $150 billion AI global leader by the year 2030, which is achievable because China is already a world leader in AI research. They have also published more research papers on deep learning (machine learning on a level that mimics human neural networks; for example, machines that have individual belief systems) than any other countries in the past few years.
2. Germany: Berlin recently became Europe's leading hub for AI innovation, and is poised to become a leader in robotics, autonomous vehicles, and quantum computing. Also, Germany's Cyber Valley[9] is becoming a leading research organization in AI intelligence.
3. Norway: Becoming one of the new leaders in the AI race; Norway has recently started to develop their AI program with a new $11 million accelerator program.
4. Sweden: Sweden's use of AI in the workplace is one of the most developed of any country. Nearly 80% of Swedes responded positively about AI and support automation.
5. The United Kingdom: The UK has 121 AI firms and in 2017 raised $8.6 billion in investments for development of AI technologies. As a result of AI in the UK, it is

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7 https://www.forbes.com/sites/bernardmarr/2018/07/27/how-is-ai-used-in-healthcare-5-powerful-real-world-examples-that-show-the-latest-advances/#57d6c5885dfb

8 https://www.thetechedvocate.org/six-countries-leading-the-ai-race/

9 https://www.research-in-germany.org/en/infoservice/newsletter/newsletter-2019/february-2019/cyber-valley_from-basic-ai-research-to-application_infocus_.html

estimated that the GDP of the UK with increase by 10% by 2030 ($266 billion increase). Recently the UK government announced a budgeting of $78 million to fund robotics and AI.

6. <u>The United States:</u> The future of AI in the US is uncertain but the established tech culture of the US is a prominent leader in the AI race. It has $10 billion used towards AI research but has been facing recent reductions for AI research.

It is important to note that AI is a highly competitive field and that most countries tend to compete with each other, rather than work together.

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[10] https://www.weforum.org/agenda/2018/09/learning-from-one-another-a-look-at-national-ai-policy-frameworks/

Artificial Intelligence Today

1. AI for Good Global Summit: A yearly summit starting in 2017 in Geneva, Switzerland that was organized by the ITU to identify practical applications and supporting strategies to improve the quality and sustainability of life on Earth.[11]

2. United Nations Activities on Artificial Intelligence[12]
    a. Comprehensive Nuclear-Test-Ban Treaty Organization: Uses artificial neural networks at the International Data Center to organize and classify data gathered from the International Monitoring System about possible signs of nuclear explosions.
    b. World Food Programme: Use AI for assessment and analysis of hard to access areas.
    c. International Civil Aviation Organization: Use AI to get around language barriers and decrease "noise" when communicating with airplanes.
3. UNICRI Centre for Artificial Intelligence and Robotics: A UN centre aimed at understanding the risk-benefit duality of Artificial Intelligence and Robotics through

[11] https://www.itu.int/en/ITU-T/AI/2018/Pages/default.aspx
https://www.unglobalpulse.org/news/AIforGoodGlobalSummit2018Takeaways
[12] https://www.itu.int/dms_pub/itu-s/opb/gen/S-GEN-UNACT-2018-1-PDF-E.pdf

improved coordination, knowledge collection and dissemination, awareness-raising and outreach activities.[13]

Delegates should work together to coordinate international policy and research regarding AI. Since AI has such prevalent societal implication, especially within the economy, it is important that international nations take certain measures to prevent collapsing economies and out-of-control AI. It is also beneficial for nations to cumulatively research AI so as to advance the field at an accelerated pace.

[13] http://www.unicri.it/in_focus/on/UNICRI_Centre_Artificial_Robotics

Questions to Consider

1. Does your nation have an AI program? How established is the AI program in your nation?
2. How has your nation used AI to improve quality of life? How has the UN used AI to advance international efforts to combat different types of crises? What else can AI be used for?
3. How should we regulate usage of AI? How will we enforce these regulations or punish those that abuse them? Do these regulations apply only to governments, or to private companies as well?
4. Should we invest more resources into exploring AI and deep learning?
5. Should we allow AI to operate in the medical field? What should we use it for in the medical field?
6. Does your nation agree with some of the regulations on robotics and AI set by the UNICRI?
7. Does your nation have the resources to be at the forefront of AI research/regulation?

Helpful Links

- https://medium.com/politics-ai/an-overview-of-national-ai-strategies-2a70ec6edfd
- https://daytradingz.com/pros-and-cons-of-artificial-intelligence/
- https://www.ohchr.org/EN/Issues/FreedomOpinion/Pages/ReportGA73.aspx
- https://issues.org/perspective-should-artificial-intelligence-be-regulated/

- https://healthitanalytics.com/news/arguing-the-pros-and-cons-of-artificial-intelligence-in-healthcare
- https://www.loc.gov/law/help/artificial-intelligence/international.php
- https://www.weforum.org/agenda/2018/09/learning-from-one-another-a-look-at-national-ai-policy-frameworks/
- https://www2.deloitte.com/us/en/insights/focus/cognitive-technologies/ai-investment-by-country.html