The unspoken global race for artificial intelligence

Two men walk into a bar, the first one says: “robots will conquer our civilisation and make us their servants within ten years”, the second one responds: “No, the principle of artificial intelligence (AI) is a far-fetched goal that will never see light”. The bartender smiles, analyses their facial expressions, assigns a sentiment score to their sentences, evaluates their historical drinking trends, and decides to pour the first one a glass of gin and tonic, and the second one a glass of Scotch. Here is the spoiler: both men are lying; and the bartender is a robot.

Not a funny joke, but a reality that is shadowing all conventional discussions about the future prospects of AI. In order to avoid such binary discussions about the goodness and possibilities of machine intelligence, and to eliminate the ‘hype’ surrounding the topic, this article aims to unveil the slowly cooking, quietly simmering, unspoken truths of the inevitable global arms race of AI.

For the last 60 years or so, AI has been a romantic fairytale, one that scholars philosophise about and admire. Then *‘data’* showed up, big data, and rekindled the promise and possibility of AI. Historically, the focus was always on improving the quality of the *algorithm* to improve the outputs. In this decade, however, research is focused on practices that alleviate the *data* and use it as fuel to the *algorithm* for more intelligible outputs.

This *novel data-driven approach* was essentially a rebirth of machine learning, and of AI in general. It is already solving problems in healthcare, energy, education, politics, agriculture, cybersecurity, warfare, and many other domains. Ok, great, but so what? Well, as we are increasingly seeing, if bartenders, lawyers, nurses, soldiers, and cab drivers are being replaced by robot-like agents, then this must seem as if we found a better nature of ourselves; maybe an evolved species that can take better decisions using trillions of data points. Something we were never able to accomplish prior. As a result, today, data are the next best national commodity, and a major player in the economy of many countries around the world. The *data-driven approach* therefore, will surely be at the nexus of the next global arms race.

If more data means more intelligence, and if AI is a baby growing to becoming the next genius *Jack* of all trades, then *Jack* will be Chinese! But why? Well, China’s 700 million users of the internet create more data than any country in the world. Plus, that data are completely protected by the great firewall of China (available for Chinese use only). Besides the colossal amounts of data that China can centralise, the Chinese government is investing big bucks (or big yuans if you’d rather) in AI. China is also the biggest investor in American AI startups, and the US government views that investment as a potential threat to national security.

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Today, the US is still the number one innovator in AI. However, many are racing closely behind (besides China). Japan, Great Britain, Canada, and Germany are other major players. Most of these countries defined a national AI plan to avoid lagging behind, and allow for the allocation of funds to AI projects. China stands apart though (along with the US); a study by PwC indicated that China is already looking at $7 trillion in GDP gains by 2030. Tianjin for instance (a province in northern China), released $16 billion in funding for AI research. Most importantly, China designed a comprehensive plan declaring AI a 'national priority'. Additionally, many new science centres are already established; and companies such as Baidu, Tencent, and AliBaba are already among the top global leaders in AI. Nevertheless, there are certain aspects of AI where China is lagging behind. The field of robotics, for example, is completely dominated by the US and Japan (accounting for 64 per cent of robotics companies around the world). Hardware design, academic research, and potential other aspects are amongst the challenges that China still needs to overcome to lead the world in AI.

The global race is still 'unspoken', but given the proximate availability of the technology, massive returns on investment in AI projects locally and globally, the race is inevitable. Therefore, it is critical for the US and the countries of the west to define (collectively) the path forward. In order to obtain *bigger* data, change is required at all levels of society (government, industry, and academia); so how will this race affect you? Data are non-conventional commodities where you are not the consumer, instead, you are the producer! Consequently, open data regulations, online privacy, net-neutrality, and internet freedoms are increasingly becoming major concerns amongst Americans. The development of data-driven solutions will be hindered or accelerated based on the availability of data that will be affected by the resolutions of such issues.

The transistor revolution in Silicon Valley was seen by computer scientists as the *rise* of number of chips on a transistor (Moore's Law), while economists see it as a *drop* in the price of a transistor. Similarly, for AI, its *rise* will be driven by the *drop* in limitations that produce and consume valid and legitimate data. Therefore, for AI to 'work', our data need to be open and democratised, and the public ought to be part of the deployment process. This new arms race needs another inspirational *moon shot*, because as the clock is ticking (tick…tock…tick…tock), AI might be shifting towards the orient, or out of our hands towards eventual monopolies.

It is after midnight, the bar is emptying up, but the bartender is not tired or weary. As 'it' continues to work, it hums these words from 1962: "We choose to build *ethical AI* in this decade and do the other things, not because they are easy, but because they are hard; because that goal will serve to organise and measure the best of our energies and skills, because that challenge is one that we are willing to accept, and one we are unwilling to postpone" – Robot out.

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Notes:

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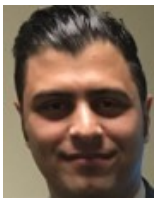

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