

THE AI REVOLUTION AND WHAT
IT MEANS FOR THE MIDDLE EAST

The massive potential of AI — for good and for bad



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INTRODUCTION

The legendary business magnate Bill Gates wrote recently that the “development of artificial intelligence is as fundamental as the creation of the microprocessor, the personal computer, the internet, and the mobile phone¹.”

It certainly seems difficult to avoid AI these days; it has become the zeitgeist issue of the moment, dominating news, business and, increasingly, political discussions.

An Economist Impact report published in 2022 argued that we are in the early stages of an “AI Gold Rush,” with global investment in the technology having increased from \$0.8 billion in 2010 to \$78 billion in 2021².

Yet while investors increasingly rush toward AI, other people, including some of those who lead the businesses that have made significant breakthroughs in the technology, warn that it poses an “existential risk” to humanity³. This research paper considers the positive and potentially negative consequences, for the Middle East region in particular, of this apparent epoch in human history.

The narrative so far has been defined largely by the two poles of the argument. At one

extreme, we have those who see nothing but benefits from this revolution. At the other, we have those who fear we are about to enter an era of the killer robots from the “Terminator” movie franchise.

The optimists imagine the technological shift will infuse economies and unleash productivity. The pessimists are calling for strict regulation to control the use of AI before it is too late. Somewhere in between these two extremes, however, more substantive policy discussions on regulation, national strategies and international governance are taking place.

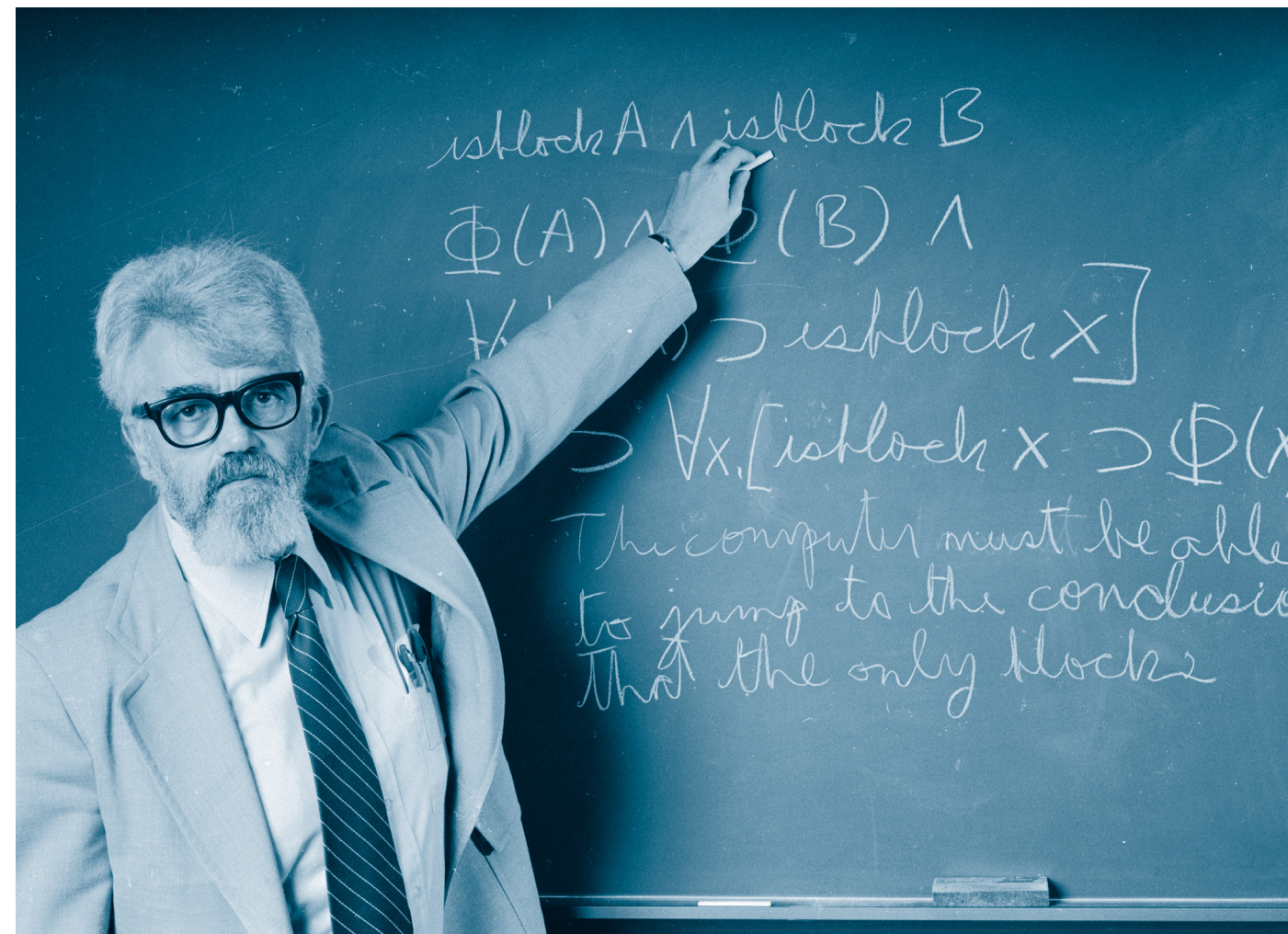
The coining of the term “artificial intelligence” can be attributed to John McCarthy, a cognitive scientist, in 1956. Now, it is used to describe computer software that can mimic or simulate some aspects of human intelligence.

In any given news cycle, one might find at least one story about how AI is being used to benefit humanity, for example by highlighting how scientists have used the technology to help develop a new antibiotic to kill a deadly superbug⁴, alongside another in which, perhaps, public health experts warn that AI poses a “risk to health of millions⁵.”

Can AI really be so amazingly good and yet so terrifyingly bad for us — at the same time?



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Or is the question in fact really more about the ways in which humans choose to use and regulate the technology?

What is not disputed is that we have suddenly found ourselves at a radical technological crossroads. Speaking in July during the first-ever Security Council debate on AI, UN Secretary-General Antonio Guterres described the radical advances in the capabilities of the technology as “utterly unprecedented⁶.”

He went on to note that the printing press, a massive advance in its day, took decades to enter into widespread use, while the “large language model⁷” ChatGPT managed to attract 100 million users in just two months.

Even the developers responsible for much of the AI technology to date appear to have little idea where it will all lead. Instead, those seeking some middle ground between the hopelessly utopian and desperately apocalyptic visions have so far tended to resort to simply listing the arguments for both.

Yes, AI might help us turbocharge sustainable development, cure cancer, give us cities full of driverless cars, deliver advanced robotics, improve the protection of civilians in war zones and provide humanity with the tools to unlock

American computer scientist Prof. John McCarthy coined the term ‘artificial intelligence’ in 1955.
Getty Images

the seemingly insurmountable challenges of a warming climate.

But on the other hand, AI might also amplify societal rifts and reinforce discrimination, with devastating effect, through the use of generative tools that make it impossible for people to know what is true and what is not, or create killer viruses like nothing we have seen before.

Guterres argued for a global sense of urgency as we grapple with these two paradigms, and for people to adopt a “learners’ mindset⁸.”

George Orwell was again ahead of his time when he invented the concept of “doublethink,” or the ability to hold two contradictory beliefs in one’s mind simultaneously and accept both as true — which is perhaps the best holding approach to AI at this moment.

THE MIDDLE EAST CONTEXT

If we can all agree that AI is here to stay, that it is transformative, and that this could prove to be both a good and bad thing, what does this mean at the regional level in the Middle East?

Global accountancy firm PWC recently estimated that AI will contribute \$135.2 billion to Saudi Arabia’s economy by 2030,



which would represent an astonishing 12.4 percent increase in gross domestic product. This would make the Kingdom the biggest beneficiary of the technology in the region⁹.

One of the most obvious challenges arising from AI, and something that has arisen from previous radical new inventions and technological advances, is that it will render many jobs redundant. According to the PWC report, trajectories in automation, something that AI is likely to accelerate, might mean up to 30 percent of current jobs in the region will be automated within seven years. Many of the headline figures around what AI can or will bring are related to efficiency savings that come from automation.

What might this “jobs apocalypse” mean for a region that is already struggling with youth unemployment and in which the World Bank has said an additional 33 million jobs need to be created by 2030?

If we recall the importance of urgently adopting what the UN secretary-general described as a learners’ approach to AI, it might surprise some that, according to a global survey by strategy giant the Boston Consulting Group, employees in the Middle East are among those least worried about the potential effects of generative AI on their workplaces and jobs. Only about 25 percent expressed concern about this, compared with

UN Secretary-General Antonio Guterres addressed a formal meeting on AI’s global implications at UN Headquarters in New York on July 18, 2023. (Photo by Fatih Aktas/ Anadolu Agency via Getty Images). AFP

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more than 40 percent in some parts of Europe¹⁰.

Some of this lack of concern might be ascribed to different levels of focus and attention so far on Arabic versions of AI tools¹¹. Another reason could be that although Guterres has noted the rise of AI on a global scale is generally being led by the private sector, which is something that has few parallels in the history of strategic technology, this is perhaps less the case in the Middle East, where the state is already playing a more active role in the use of the technology.

Many governments in the region continue to face the long-standing issue of high youth unemployment and are therefore focusing on the ability of AI to bring about a shift in the labor market and create new jobs, rather than simply make old ones obsolete¹².

For example, the technology could allow people to become coders, even with limited programming knowledge. It could turbocharge jobs in the financial sector, allowing for deep learning about algorithmic trading, fraud analysis and investing, as well as smart portfolio management and customer profiling.

Saudi Arabia has been making significant efforts to adopt and promote the benefits of AI technologies as part of its Vision 2030



Saudi Arabia featured its Vision 2030 at GITEX 2017 exhibition at Dubai World Trade Center on October 8, 2017. AFP

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national development and diversification plan. The Kingdom already has a bespoke “Saudi Authority for Data and Artificial Intelligence¹³” and a National Strategy for Data and AI that aims to make the country a global leader in the technology by 2030¹⁴.

The country is, in theory, well placed to take advantage of the AI revolution, in part due to its wealth and ability to invest, but also as a result of the priority it places within Vision 2030 on plans to diversify its economy.

New smart cities and infrastructure projects can function almost as experiments in AI, when combined with the integration of the technology into e-governance, data, healthcare, agriculture and education, to name but a few potential front-line priorities.

Egypt, meanwhile, started to develop its AI strategy in 2019 and launched its National Council for AI in the same year. The focus there is on the use of AI to help the country develop, with an emphasis on ensuring its people have the skills to be part of an “AI Industry” — which admittedly is a slightly amorphous concept at present. Again, this looks to be an attempt to grasp AI’s potential to shift jobs rather than decimate them.

While countries such as Saudi Arabia and Egypt might be leading the way in understanding, investing in and strategizing about AI, however, some others in the region

are lagging and there is a danger that the technology might accentuate and widen existing economic inequalities.

That said, countries such as Iraq¹⁵, which have a significantly large youth population, might find that AI is able to turbocharge the education sector, therefore preparing the next generation for what is to come.

Indeed, a recent World Economic Forum analysis highlighted the ability of AI to unlock differentiated instruction, intelligent textbooks, improved assessment and personalized learning, without the vast costs and institutional revolution that this would entail without the technology¹⁶.

About 89 million people in the Middle East and North Africa region depend on agriculture, including fishing and livestock¹⁷. Climate change and intensified land use have resulted in particularly high rates of water stress, which is something that AI can help populations respond to¹⁸.

AI-informed farming has the potential to combine the benefits of the best soil-management practices with the most effective data-management techniques to maximize yields and minimize costs. The technology could help farmers to understand exactly which areas need irrigation, fertilization or treatment with pesticides¹⁹. Of course, the key word here is “potential.”

Aside from the economic effects of the use of AI there are also security implications. In a region long beset by concerns about nuclear proliferation by Israel and Iran, along comes a technology that does not require rare materials or highly skilled expertise to engineer. Instead, it is largely open source and available to all.

A particular concern, in a part of the world with recent memories of the dramatic rise of Daesh, is whether or not AI chatbots might be used by terrorist groups to groom vulnerable individuals and persuade them to launch attacks.

In addition, the ability of AI to promote disinformation raises concerns about the possibility that it could be used to manufacture false, inflammatory stories about the desecration of religious texts and symbols — similar to recent real-life incidents in Sweden and Denmark in which copies of the Qur'an were burned by protesters — present them as credible reports and spread them in an attempt to create unrest and spark riots, or worse, before anyone even realizes what is happening.

Yet again, we can see the conflicting, two-sided, Janus-faced nature of AI technology means that it can just as easily become a tool for creating disinformation as it can be used to create better tools to address the problem.

Already, tools exist that can ascertain whether text has been “written” by a large language model and there is no reason why future developments in this area could not put a squeeze on fake news, including deepfake imagery and audio.

However, The Economist has argued that the MENA region is “behind on policies ensuring the responsible use of AI²⁰.” This brings us to a regulatory debate that is ongoing.

A REGULATED FUTURE?

As ever, critics of regulation argue that it stifles innovation, whereas proponents insist that essential guardrails must be put in place, urgently, given the scale of the potential risks from the misuse of AI.

The issues to examine during these conversations about regulation certainly include more-philosophical questions such as whether AI should be created with a moral compass, and the very role of machines in society.

But they also include more fundamental and practical questions, such as whether there should be rules about transparency so that, for example, people are aware when they are interacting with an AI.

Regulation proponents point out that safety mechanisms such as the seat belt followed the invention of the motor car. Sam Altman, the CEO of OpenAI, the creator of ChatGPT, has



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said that he would like to see an international body — modeled after nuclear watchdog the International Atomic Energy Agency, which operates autonomously as part of the UN system — established to oversee and regulate the development of AI²¹.

The most comprehensive effort to this end so far has come in the form of the proposed EU AI Act legislation, which is assessing the different levels of risk arising from AI and whether it will require more or less regulation. Once approved, it will set out the world's first laws governing the use of AI, according to the European Parliament²².

The first-ever global AI Security Summit²³, due to take place this year, will provide a platform for assessing whether there is international agreement on the need for a new UN agency to provide global governance of the technology.

In the meantime there will be a continuing focus in many countries on domestic legislation and how that will affect the use of AI by the state, businesses and individuals. Action on a national level will be informed, in part, by the nature of local public debates about the technology.

Currently the level of attention being paid to AI is high but there is still a low level of general understanding about what it actually is, resulting in a slightly absurd race to be better at something even though few people are quite sure exactly what it is, nor how it should be measured.

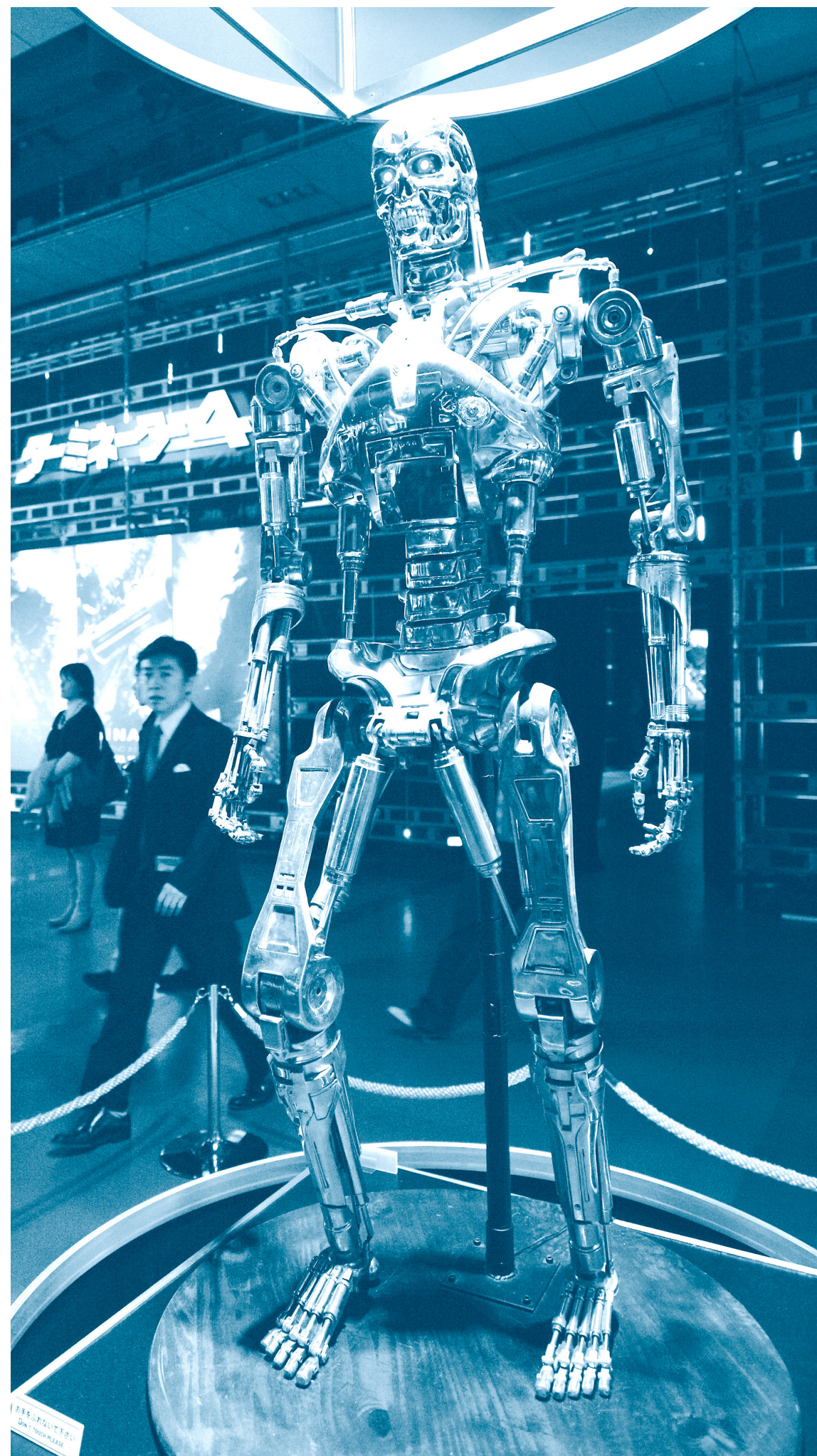
American mathematician and philosopher Norbert Wiener famously said that “we shall never receive the right answers to our questions unless we ask the right questions ... the hour is very late, and the choice of good and evil knocks at our door²⁴.” When we understand something we lose the fear of it.

Speaking at a conference in London in July, veteran AI industry leader Vishal Sikka put the level of knowledge about the technology into perspective. Globally, he said, fewer than 2 million people can build an AI system, only about 200,000 know how to operate an AI system and fewer than 50,000 can explain to you how ChatGPT works²⁵.

While the conversation on AI policy currently is currently centered on regulation, education remains the undiscovered country.

Politics took a long time to catch up with the Industrial Revolution and, similarly, we are still in the foothills of exploring and understanding AI, let alone utilizing it. Considering the head start countries such as Egypt and some of the Gulf states have given themselves, the MENA region appears uniquely suited to take full advantage of brave new world that AI might herald.

One of the narratives about the future of AI is characterized by a fear of destructive robots like the ones from the 'Terminator' movie. AFP



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