

Machine learning and artificial intelligence

[Technology](#), [Artificial Intelligence](#)



It is a fact that Machine Learning (ML) and Artificial Intelligence (AI) are changing our everyday lives. From Google's self-driving cars, to more nuanced, personal uses such as Siri or Alexa; it has become evident that this technological revolution will not stop or slow down anytime soon. If anything, it will explode exponentially. How does this affect Latin America? Why should we care, and more importantly, why should we jump on the bandwagon?

Fears and opportunities in the unknown: A perhaps obvious consequence of introducing AI and ML is the automation of several processes in the business value chain. With it, the loss of jobs across several industries. A McKinsey report for instance predicts that 800 million jobs could be lost by 2030, around a fifth of today's global labour force. One could argue that Latin America would be a particularly vulnerable region to this phenomenon of creative destruction (as Joseph Schumpeter would put it) given that its economic activities are still relatively rudimentary in the value-added hierarchy (i. e. crops, minerals and other raw resources, are the perfect candidates for automation, with some exceptions in the larger economies).

As such, corporations in the region are currently in a race to re-think the way in which they execute their everyday tasks. But even as ML and AI initially seem to be daunting and difficult to embrace, the possibilities for pushing the region to the next development step are endless. For example, bilateral and multilateral trade activities. With the sheer amount of data that exporting/importing firms generate, it is completely possible (and in fact, already a reality) for AI analytics to increase firm's productivity and ergo, size. Through AI and ML, firms can respond to internal and external shocks more efficiently, by predicting consumer behaviour, diversifying production,

avoiding shortages/overages and adjusting to price fluctuations, among others. Moreover, it can create smarter contracts and even identify potential clients based on existing preferences. Things that would be either done inefficiently, slowly or not at all in the absence of AI.

The Economics of Artificial Intelligence: Extrapolating this to Latin America at the macroeconomic –and even diplomatic- level, this means being able to predict how successful or beneficial a trade agreement could be and even pre-selecting potential trade partners. This would optimize how trade policy and foreign relations are thought of, pushing them up to a smarter, more strategic level. For a region that relies so much on international trade, this should be of utmost importance. At the microeconomic level, regional efforts are already underway to apply artificial intelligence for alleviating poverty and inequality in a green, sustainable way with many multilateral organizations such as the UN, World Bank and the World Health Organization, injecting large amounts of capital into them, as the latest AI for Good Summit shows.

However, within most of these initiatives, Latin American governments act more as hosts, merely reacting to said organizations and implementing partners' ideas, than designing smart policies on their own. This is largely due to not understanding exactly what AI and ML are, and what are their potential benefits, as a 2017 ECLAC session on AI highlighted. This is further problematized by the neck-breaking speed at which AI and ML advance. Thus, while AI/ML investment in the region has tripled in the last couple years, it is not governmental research and development (R&D) investment.

Often, AI and ML are not even in their radar as a crucial element of an overarching innovation policy. It is the Latin American private sector, who is predictably paving the way for AI advancement, seizing the interest (and funding) of multilateral donors. In Argentina, for instance, UNICEF's Venture Fund is supporting Dymaxion Labs who are developing ML-based satellite-imagery algorithms to improve disaster responses and monitor informal communities and settlements across Latin America. This concerns technological progress for urban development and planning, which are central to public governance. Investing intelligently for Defence

On the other hand, AI can also be used for defence and intelligence purposes. It is no secret that governments are increasingly obliged to attempt to regulate activity on the internet, specifically with regards to transnational crime in the form of financial cyber fraud, terrorism, human and drugs trafficking, and arms dealing. The agenda surrounding the access to the internet as a means of representation in the 21st century, versus its use as a tool against international security, highlights the importance of being a step ahead technology-wise. AI algorithms can detect, analyse and predict behaviour (human or otherwise), which has tremendous potential for all the issues abovementioned and more. From everyday uses such security within cities (for instance the analysis of satellite-imagery on gang movement, a pervasive issue in Latin America) to deeper, more complex issues, such as guerrilla or drug cartel movements (which has now arguably become a transnational security issue for the region). Many regional issues can be solved with the right technology and the infrastructure in place, but

more importantly, with the right vision and political will that Latin American governments seem to be slowly adopting if at all.

All in all, Latin America is behind the AI race by a wide margin. The rest of the world, governments from developed states more importantly, are jumping on the bandwagon because they realize is the next development stage. Right now, the region needs to aggressively invest in an initial AI R&D policy framework, even if policy-makers do not fully comprehend it yet. That is, if they do not want to finish the race last.