Artificial Intelligence. The industrial revolution underway.

The new industrial revolution that we are experiencing is not only limited to new clean energy sources or inviolable software systems or new medical treatments based on genetics, it also affects the daily way in which we are going to develop our lives and this is thanks to the most unknown of all advances, Artificial Intelligence (AI). Outside of thinking about robot armies and things like that that may or may not be science fiction, AI is used in everyday applications that greatly facilitate and improve our lives. Its development in the last decade is typical of a science fiction movie.

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It has been more than ten years since I had my last major sports accident. The severity of this, my many previous accidents added to my age, had me prostrate for a long time between plaster and other equipment. The immense amount of tests that they did to me in those nine months, led me to discover something to which until then I had not paid enough attention. Every time I had an NMR, they no longer gave me an unintelligible film except by an expert, but instead gave me a series of three dimensional images, understandable by the most profane in the field. Not only could I see the parts of my body that were being rebuilt, but the images themselves alerted us to the areas of "conflict". I was experiencing the first great advances in artificial intelligence (AI) applied to medicine.

"The advance of AI in the last ten years is higher than that of television in the last forty"

Seen in perspective, that in reference to what it is now, is like comparing the b/w TV with horned antennas in the area without coverage with the current 8K with 1TB fiber optic, and perhaps I am even falling short.

Currently IA allows a doctor to diagnose not only a bilateral pneumonia, but also the affected lung areas and the intensity of the affection without even being an expert in reading a simple film. Imagine the speed and accuracy of diagnosis it brings, and the amount of human error it eliminates. And this is important in the first world, but in the third where health resources are scarce, it is like talking about light in a moonless night and a sunny day without clouds.

"AI applied to medicine is important for the first world, but it is vital for the third world where resources are so scarce"

It is there, in the third world, where the same doctor must know how to diagnose a corneal ulcer to a transverse myelitis, which in other words is as if we asked a philologist to build a bridge. Not if you, but at least I would try not to go over the bridge.

I have talked about medicine, but the applications of artificial intelligence are gigantic. There are applications in cybersecurity, in supply of the logistics chain, in defense, in robotics, ... The applications and the fields in which they are applied are becoming larger and more intensive.

Being able to try on our clothes from a distance and see how we have it or know when the brakes of the car are going to break are not things of the future, but they are simple applications of AI that we already have. But there are going to be so many that are going to change the way we consume. We will be more selective, because as they always say, information is power, but in this case it will also be at our service and not that of others.

AI will be like the alphabet that humans have with which books are written that provide us with knowledge

But, what is artificial intelligence? I will try to explain it to the vast majority of people who read me, and may the experts, among whom I am not, forgive me for the simplicity employed.

Artificial intelligence is neither more, nor clear this nor less, than a software that using a mathematical algorithm is capable of predicting with a high degree of accuracy (in all cases above 99.5%) the results based on the results. collected parameters. Of course, it has one more critical characteristic, learn from. That is, as more data is entered, its degree of accuracy increases. The latter, we see it every day in internet search engines. We see it when the searches we each time provide us with more precise results to our wishes.

"Currently we do not find AI applied to tools that we use daily to a much greater extent than we could imagine"

Let's go to the example with which there would be this column. Formerly when the doctor when we did an X-ray had to find and then interpret a multitude of spots in different shades of gray.

That improves with later techniques, such as NMR, TAC, or Bone scintigraphy. But we still needed that basic interpretation.

If we previously incorporate hundreds of thousands of perfectly diagnostic images into a database and elaborate a mathematical something rhythm that is capable of interpreting those images, we will be able to have an automatic reading of all the new ones.

For example, an osteoarthritis between two vertebrae can be identified by a series of parameters found in the images and those affected areas can be colored. In this way, the specific training of the doctor who sees them can be more general because the image directs him directly to the problem. By this I do not mean that doctors will disappear, or even specialists, but that the speed and accuracy of the diagnosis will multiply exponentially and that in parts of the world where medical assistance is scarce, their doctors will be able to provide better assistance with less means and despite not having highly specific knowledge.

To me, and not so long ago, the emergency team of a large hospital suffered a fracture of two ribs and a vertebra, just because they could not distinguish a bone callus from a bone edema on an X-ray film. AI would have avoided it.

Another example, and this one closer. Based on a film x-ray of a COVID patient and a series of additional information, it is possible to predict with a fairly high degree of accuracy how the disease will develop in him, and therefore see if he is the ideal candidate for a treatment or other, with what this means not only for people's health, but also for the management of scarce health resources.

Who is the world leader in this technology? Well, curiously the same as it is in software developments based on blockchain technology, IBM. IBM continues to be the largest manufacturer of large computers in the world, in fact the computer with the highest computational capacity in the world, the Summit, is from IBM. This computer is capable of creating on the order of 8,000 daily simulations to examine how different variants of the COVID 19 virus react to different treatments.

"IBM is not only the world's largest developer of sw written with blockchain, but also sw for AI"

IBM is the one who is making the digital vaccination passport for the American government. This software is going to be the first mass distribution blockchain technology software.

It has been seen, and we could verify it if our border police had the means to be more rigorous, that many people who enter Spain show a false PCR, obtained simply and simply with a forgery of the QR code that is displayed on mobile phones. This problem is eradicated immediately if the certificate software is developed with blockchain technology.

Thus, IBM, which has always been called the example of a Blue Chip of the stock markets, and that with the democratization of computers, as their use spread through personal computers, it has been able to reconvert itself into a pioneer company in an emerging market and with one of the highest development rates today.

I always say that the best fundamental of all the data to be analyzed of a company is its product and its market position, both qualitative values, which we finance little, because they are imprecise, but which are the essence of any company.

IBM has the best position in this emerging market, due to its size and its position in the companies that will lead this technological change.
All large companies are going to be forced, or even already are, to a profound technological change in this direction and startups have neither means nor “depth” to provide this service.

IBM has the commercial penetration and the technical and economic resources to provide this service, and for years it has been able to reconvert itself to a market, that of software, that it originally despised. So much so that he "yielded" to a visionary employee, Ross Perot, famous not only for setting up EDS but for running for president of the United States when Clinton beat G. Bush