JULY 2021 | ISSUE #27

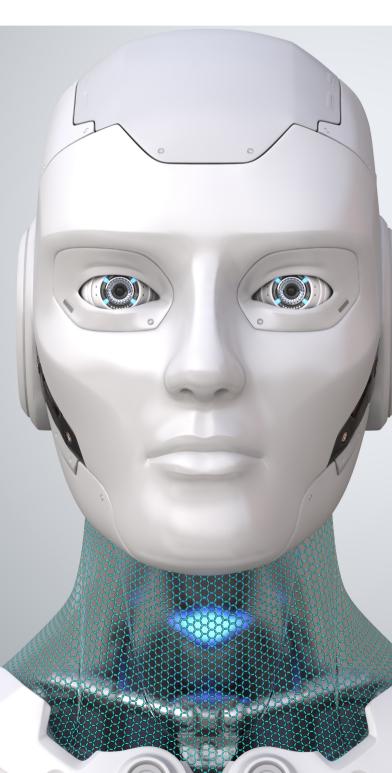
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WHAT'S HOT

WHAT WILL BECOME OF THOSE WITHOUT TECHNOLOGICAL SKILLS?

HEADLINE NEWS IN A FLASH

- Intelligent detection of hate speech in Arabic social network: A machine learning approach
- New institute uses artificial intelligence to develop next-gen food systems
- Fleet safety start-up gears to tailor solution for traffic in India
- How concentrated solar power could fuel the future
- Meet Alphadog: The smart robot dog of the future that doesn't chew the sofa

SECTOR FOCUS

THE PARADOX OF ARTIFICIAL INTELLIGENCE IN THE LEGAL INDUSTRY

WHAT WILL BECOME OF THOSE WITHOUT TECHNOLOGICAL SKILLS?

The Covid-19 pandemic deepened several of the trends that have been occurring in recent years. Among them, the digital and technological transformation of companies. Advances in robotization, artificial intelligence and virtuality mean that the private sector requires job profiles that are increasingly committed to this change. The problem is that a huge swath of the population is unprepared.

Last week, the consultancy ManpowerGroup showed the results of the Global Talent Shortage Survey, which in Argentina recorded a record level: 72 percent of employers have trouble getting people with the skills and competencies to fill certain positions. Two years ago, that indicator reached 50 percent.

What is happening in the labour market? Many of the traditional jobs, which were left empty because businesses closed or shrhrhed, remain deactivated. Graphics, automotive trade, supermarkets, gastronomy and hospitality are items that do not manage to take off, and therefore do not demand workers.

Meanwhile, other items that are active, whether in industry, commerce and services, require other job profiles. In an economy with an unemployment rate above 10 percent, there is no way to fill positions such as logistics operations, information technology and data, manufacturing and production, office assistants and sales.

A mental changeThe pandemic not only increased the demand for IT staff, but also changed the profile of non-technological jobs.

On the results of a study done at a global level by McKinsey & Company, the Cordoban consulting firm AxiaBiz defined what skills the labor market needs today. To that, it brought them together in four categories: cognitive skills, such as planning ability and mental flexibility; interpersonal skills, such as teamwork and relational work (empathy, trust, etc.); self-leadership skills, such as being an entrepreneur in a job in a relationship of dependency, and digital skills, which do not involve being a Systems Engineer, but understanding and fluently managing virtual technologies that are used in the workplace.



Daniel Scandizzo, head of AxiaBiz and graduate professor at the Catholic University of Cordoba (UCC), the National University of Cordoba (UNC) and the 21st Century, warns that the new world of work requires "a different mental model."

"Organizations are adopting increasingly decentralized structures, where self-discipline, self-motivation and selfmanagement are put into play. We don't all need to be programmers, but we do need to handle technology, teamwork, trust to resolve conflicts, inclusion and leadership," he adds.

The great challenge is to generate these skills in adolescents and young people who have not yet entered the labor system, as in those who already have a career and that, if they do not have them, the change will leave them out.

"You have to start from high school, in any undergraduate career and even in graduate school. Generating new cognitive skills may take a while. We must teach how to learn and that the learning process never ends, and also incorporate the culture of data and data analysis. Otherwise, whoever does not reach this, will be excluded from the labor market, "summarizes the consultant.//

Source: Content Engine LLC

INTELLIGENT DETECTION OF HATE SPEECH IN **ARABIC SOCIAL NETWORK: A MACHINE** LEARNING APPROACH

Hate speech relates to using expressions or phrases that are violent, offensive or insulting for a person or a minority of people. This article aims to detect cyber hate speech based on Arabic context over Twitter platform, by applying Natural Language Processing (NLP) techniques, and machine learning methods. The article considers a set of tweets related to racism, journalism, sports orientation, terrorism and Islam. The processed dataset is experimented using Support Vector Machine (SVM), Naive Bayes (NB), Decision Tree (DT) and Random Forest (RF), in which RF with the feature set of Term Frequency-Inverse Document Frequency (TF-IDF) and profile-related features achieves the best results. Furthermore, a feature importance analysis is conducted based on RF classifier in order to quantify the predictive ability of features in regard to the hate class.//

Source: Journal of Information Science

NEW INSTITUTE USES ARTIFICIAL INTELLIGENCE TO DEVELOP NEXT-GEN FOOD **SYSTEMS**

A \$20 million grant has helped launch 16 new research projects in areas such as crop breeding, greenhouse technology and micronutrient research. The Artificial Intelligence Institute for Food Systems got the grant. The new institute is led by the University of California-Davis. Funded by the USDA and the National Science Foundation, the institute is a collaboration between UC-Davis, Cornell University and the University of Illinois, Urbana-Champaign. Current projects being explored include a focus on crop breeding, greenhouse technology and recognizing mineral and micronutrient content in food using AI and imagery. Some of these projects were already conceptualized so when AIFS put out a call for projects, it received a lot of proposals that aligned with its mission.//

Source: Capital Press



FLEET SAFETY START-UP GEARS TO TAILOR **SOLUTION FOR TRAFFIC IN INDIA**

California and Bengaluru-based start-up - Netradyne - last week received \$150 million from a clutch of investors including SoftBank wants to deploy its solution to help enterprise-class fleet owners in India, who transport goods for e-commerce companies, among others. Amazon in the US already has a tie-up with Netradyne for its delivery vehicles to monitor the behaviour of drivers as they deliver packages. The company's flagship product, Driveri is an Al-powered fleet safety system that can assess and alert drivers on factors such as speed, traffic sign compliance, and distracted driving, among other functions. //



HOW CONCENTRATED SOLAR POWER COULD FUEL THE FUTURE

What if we could not only harness the power of the sun, but actually use it to run the entire planet? Concentrated solar power (CSP) has the potential to do just that - using arrays of revolving mirrors called heliostats, light is reflected into a massive receiver. Thanks to recent advancements in technology, the cost to replicate these Sunlight Refineries[™] is dropping. Soon solar energy will be cleaner and cheaper than using fossil fuels, which could mean adoption on a global scale. Heliogen, a company founded by Bill Gross and backed by Bill Gates, wants to eliminate all uses of fossil fuels. Using cameras, AI, and machine learning, they are working to make these CSP systems smarter and much more efficient.//

Source: Big Think



MEET ALPHADOG: THE SMART ROBOT DOG OF THE FUTURE THAT DOESN'T CHEW THE SOFA

Chinese tech company Weilan have developed the AlphaDog with the aim to see one in every home and business in the future, TeamDogs reports. The robotic animal looks to be straight from a science fiction movie, using artificial intelligence to obey commands. Its powerful walking computer system can be assigned to safeguard people and properties, patrol parks and communities, guide blind people, deliver packages to your front door, inspect highly dangerous places including machinery and pipes and even undertake rescues. Like a loyal friend, the high-tech guadruped uses sensors and AI technology to see and hear its environment and try to accomplish commanded tasks autonomously. It can move, at a walk, trot, bound or gallop, at a typical human walking speed of three or four miles per hour and even walk up stairs. Like a real dog, it can only keep going for a few hours before running out of energy - then its battery needs recharging.//

Source: dailystar.co.uk



THE PARADOX OF ARTIFICIAL INTELLIGENCE IN THE LEGAL INDUSTRY

BOTH TREASURE TROVE AND TROJAN HORSE? – THE PERILS OF DEEPFAKES

Source: Arbitrationblog

The legal industry has benefited tremendously from recent technological advancements, leading to the expansion of Legal Tech as the driving force for progress in this field. More and more tools – more or less Artificial Intelligence ("AI") reliant – are developed to successfully simplify, automate, and expedite the work of legal professionals. However, until recently the legal industry was reluctant to fully embrace technology, despite growing interest. Notwithstanding the many setbacks and challenges posed, it was the current pandemic that acted as the accelerator for the largescale acceptance of technology in this field, though some are still skeptical.

66

At a slower pace and with outright unwillingness in some cases even the judicial system eventually employed largescale virtual video and/or audio hearings and adopted relevant rules.

Yet, despite the wide implementation of officially sanctioned remote means of communication, the danger posed by potentially unethical technological advancements, such as AI manipulated media, was largely disregarded.



THE PROBLEM WITH AI-GENERATED OR MANIPULATED MEDIA

Nowadays, anyone can pretend they're someone else in the online realm via a misrepresented photo, video or audio recording, and lately apparently even in live transmissions. This kind of manipulated media is colloquially called a Deepfake. It's a synthetic or altered media based on "deep learning", itself a subfield of machine learning inspired by the human brain and employing huge sets of data with the help of Al.

And this is just the beginning – Al can now generate fake people virtually indistinguishable from real ones, famous paintings are coming to life, hologram concerts have been employed for years, and soon enough we'll have multisensorial interactions with our long past ancestors. Analogous manipulation is possible beyond media presenting people – for example, it seems geography as we know it is in danger as well with deepfakes potentially becoming a security threat and posing challenges for geospatial agencies and the entire intelligence community. For that matter, for the legal community as well. So, even if there are many positive uses for deepfakes, the problem is that the technology has become so advanced that we're almost no longer able to rely on our own senses in distinguishing fake from real.

Granted, there's a trove of software that can be used to detect manipulated media through diverse methods like heartbeat detection, eye reflection mapping, or lip-sync analysis as most deepfakes are not (yet) very sophisticated. However, not only that are not infallible but fake detection counter-measures will always be one step behind as the technology progresses exponentially. For all intents and purposes, this is an "arms race". A digital one.

Thus, such technological advancements pose an excessive risk of unethical use and are potentially threatening the authenticity of the online identities of the participants to and of the evidence presented in (virtual) legal proceedings, with huge implications on the safety and security of the proceedings, on due process, and on the overall legal certainty of the outcome raising many challenges for the justice system as a whole.

Although arbitration seems especially vulnerable to the dangers of Deepfakes since it's more difficult to implement adequate fakedetection measures in private settings, the potential implications are too serious for the entire legal system for this not to be addressed by all important actors.

THE SOLUTION(S)

Generally, best suited to implement enforceable preventive measures are the governments. Some are already researching ways to counteract the dangers of deepfakes with enticing stratagems for scouting the best proposals, like prize competitions, but so far there are no coordinated global efforts and no cohesive policies, not even at the national level. Second in line are social media companies, in a position to enforce virtually any "behavior – modulating" terms of use throughout their platforms. But, for the most part, the range of restrictions employed by them is too narrow, thus inefficient. Additionally, other private and public actors are working on identifying potential solutions and coming up with diverse ideas, like insurance coverage or adding some type of graphic label to the manipulated media. Still, one would have to first identify the media as deepfake, which, as we've seen, is getting harder to do.

A solution more apt to resolve the problem from the "digitally inceptionist" perspective would be to create an origination label, i.e., embedding digital "fingerprints" in the relevant media, by capitalizing on the emergence of blockchain technology. Similar proposals are also being tested for legal purposes by governmental institutions.

However, no matter what solutions are ultimately adopted (even if sanctioned by legislative bodies) the justice system must scrutinize them first in order to be widely accepted at the societal level when it comes to legally bounding issues.

As for the legal status quo, things are debatable. Anything from harassment laws to copyright laws to privacy laws to consumer protection laws could apply, as appropriate. Nonetheless, there are inherent limitations in solving novel problems with old tools. For example, establishing causality to discern who would be liable for an incident caused by an Autonomous Vehicle – the manufacturer, the software developer, the user, or the AI? This last option has potentially controversial AI legal personhood implications but was suggested by some for the purpose of insurance coverage. In any case, existing norms may prove anachronistic.

So, an important part of any successful strategy would be to ensure the appropriate legal framework. On this front, no comprehensive steps have been taken yet but recent EU and US (proposed) legislation is promising. In conclusion, the best approach would be to involve all responsible factors from the beginning, with a multi-disciplinary approach. This would allow for quicker identifications of threats and improved decision making and implementation strategies, rendering the best results.

THE MORAL OF THE STORY?

The Moral of the Story? It's only fair to question AI even though it comes bearing gifts.

Although Tech innovations should be welcomed as agents of progress for the legal profession, to ensure the future integrity of the justice system, we have to prevent Al innovations with a high risk for unethical use, like Deepfakes, from becoming justice's nemesis.

So, while we're enjoying the obvious benefits of AI, let's not lose sight of the potential perils. The sooner we act, the easier it will be to implement the necessary checks and balances. To develop digital forensics as an interdisciplinary field to easily recognize and address such dangers. To include the necessary restraints in the core structures of AI. To envision and agree on legally relevant AI ethical principles and on implementing bias-free procedures.//



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06

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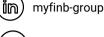


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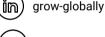




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