CYBER STELLAR

There's a bit of cyberspace in all of us. Discover it…

WHAT IS CYBERSTELLAR?

It is a new word for next generation. Cyber stellar is a project of a non-governmental organization "Internet Development Initiative" (IDI).
This project provides to produce an online newspaper which goal is to raise awareness in internet technologies, cyberspace and important events in these fields.

WHAT IS THE MAIN FIELD?

The main directions of this newspaper are: internet, internet technologies, internet security and stability, cybersecurity, artificial intelligence, GDPR, IoT, IPv4/IPv6, DNS, DNSSEC, online intellectual property, media law, media literacy, blockchain, ongoing and upcoming events and etc.

IDI
INTERNET DEVELOPMENT INITIATIVE

ISRAEL - GEORGIA SCHOOL OF DIGITAL CULTURE

THERE IS A BIT OF CYBERSPACE IN ALL OF US...

DISCOVER IS WITH ISRAEL - GEORGIA SCHOOL OF DIGITAL CULTURE

The School of Digital Culture is a comprehensive project with the authentic potential to become the initial school on that platform in the regional scale. With its sophisticated dimensions and contextual idea, it will have precedential character.

In the era of rapidly progressing technologies, it is becoming vital to extend young generation's consciousness regarding a concept that describes how technology and the internet are shaping the way that we interact as individuals. It is influential not to backward current processes taking place in the digital space because the measure of youth consciousness in this direction will be directly proportional to the progress of their professional qualities.

In the scopes of the School of Digital Culture students will receive highest possible information connected to the digital world and internet technologies (Personal Data Protection / GDPR, Cybersecurity, Cybercrime and legal aspects of cyberspace, Artificial Intelligence and Machine Learning, E-Governance and its importance, Hybrid Challenges, Digital transformation/DevOps, Digital Literacy). The school is applicable to multiple topics but it comes down to one overarching theme; the relationship between individuals and technology. The aim of the School of Digital Culture is to provide students with the highest possible information and raise their awareness of the global digital processes and the main directions connected to that platform which creates a unified architecture of the digital world. The School of Digital Culture will empower talents to be at their best, to create and collaborate together, to do great work and to grow in their cutting-edge roles.

In order to develop better innovations and promote young Georgian though leaders, it is our interest to nurture the process of digitalization with implementing the School of Digital Culture. Upon successful completion of the School of Digital Culture, students will deepen their consciousness regarding to digital space and the processes taking place in it. They will also make the right decisions about the digital world, choose a specific direction in future and deepen their professional awareness. The main modules of the School are: Personal Data Protection / GDPR, Cybersecurity, Cybercrime and legal aspects of cyberspace, E-Governance and its importance, Hybrid Challenges, Misinformation, propaganda, Artificial Intelligence and Machine Learning, Digital Literacy, Digital transformation.

The school is organized by Internet Development Initiative – IDI. Co-organizer of the project is Business and Technology University. General partner and sponsor of the project is the Embassy of Israel to Georgia. The merit of the Embassy of Israel to Georgia in the implementation of the project is immeasurable. With its Sustainable development knowledge, Israel is a global technological and entrepreneurial powerhouse. Internet Development Initiative and Business and Technology University are proud of this noble opportunity to collaborate with the Embassy of Israel to Georgia.

Embassy of Israel to Georgia

# CYBER SECURITY

THE INTERNATIONAL WINTER CYBER CAMP "ETHICAL HACKER" IN GEORGIA

The Scientific Cyber Security Association (Georgia) in the cooperation with Vladimer Svanadze and Chamber of Commerce and Industry of Uzbekistan has successfully conducted the International Winter Cyber Camp "Ethical Hacker" for students of Inha University in Tashkent (hereinafter IUT) in Bakuriani (Georgia). The students of "Inha" were taught Python programming, Ethichal Hacking and Cryptography. It must be mentioned that "Inha" is one of leading technical Universities in Uzbekistan. The best students were selected from this University. Cyber security experts, Dr. Lado Svanadze, Dr. Giorgi Iashvili and Irakli Pirtskhalava had a great role in the organization and teaching process.
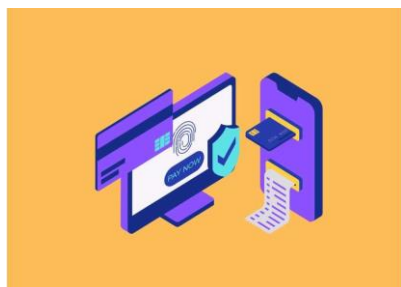
VIRGINIA STILL WORKING TO FIX ISSUES AFTER RANSOMWARE ATTACK

The information technology agency that serves Virginia's legislature is still working to fix problems caused by a ransomware attack earlier this month, a state official said Tuesday.

The attack substantially affected operations and occurred during preparations for a legislative session that is set to start Jan. 12. Dave Burhop, executive director of Virginia's Division of Legislative Automated Systems, told The Associated Press in an email that the agency's "goal is to have the General Assembly session operational to the greatest extent possible."

FACEBOOK BANS SPY FOR HIRE FIRMS FOR TARGETING 50K PEOPLE

Meta, Facebook's parent company, said that the seven banned actors run fake accounts on its platforms to deceive users and plant malware on targets' phones. Meta, Facebook's parent company, has kicked six alleged spy-for-hire "cyber-mercenaries" to the curb, along with a mysterious Chinese law-enforcement supplier. It accused the entities of collectively targeting about 50,000 people for surveillance. In a report (PDF) entitled "Threat Report on the Surveillance-for-Hire Industry" released on Thursday, Meta said that following a months-long investigation, it removed 1,500 fake accounts linked to the spying entities' reconnaissance of, engagement with, and/or exploitation of the alleged victims.

IIT GUWAHATI AND TPL JOINTLY LAUNCH TWO POST GRADUATE CERTIFICATE PROGRAMMES IN CYBERSECURITY AND ARTIFICIAL INTELLIGENCE & DEEP LEARNING

"Designed for working professionals, programme aims to upskill & reskill candidates for fast-moving careers in cybersecurity as well as Artificial Intelligence & Deep Learning"

Indian Institute of Technology Guwahati (IITG) and Times Professional Learning (TPL), under its brand The Second Wind (TimesTSW), have launched the Post Graduate Certificate Programme in Cybersecurity and Post Graduate Certificate Programme in Artificial Intelligence & Deep Learning during its announcement of a strategic collaboration with each other.

The Post Graduate Certificate Programme in Cybersecurity (8 month's course) will enable candidates to gain a foothold in fast-moving job roles like network security specialist, cyber security analyst, cybersecurity architects, cyber security manager, leading up to C-suite positions such as Chief Information Security Officer. The demand for cybersecurity domain experts has doubled in the last year amidst rising global concerns of security breaches and rapid digitalisation across organisations and.

READ THE FULL ARTICLE

BEWARE OF FAKE TELEGAM MESSENGER App HACKING PCS WITH PURPLE FOX MALWARE

Trojanized installers of the Telegram messaging application are being used to distribute the Windows-based Purple Fox backdoor on compromised systems.

That's according to new research published by Minerva Labs, describing the attack as different from intrusions that typically take advantage of legitimate software for dropping malicious payloads. "This threat actor was able to leave most parts of the attack under the radar by separating the attack into several small files, most of which had very low detection rates by [antivirus] engines, with the final stage leading to Purple Fox rootkit infection," researcher Natalie Zargarov said.

## NORTH KOREAN HACKERS START NEW YEAR WITH ATTACKS ON RUSSIAN FOREIGN MINISTRY

A North Korean cyberespionage group named Konni has been linked to a series of targeted attacks aimed at the Russian Federation's Ministry of Foreign Affairs (MID) with New Year lures to compromise Windows systems with malware. "This activity cluster demonstrates the patient and persistent nature of advanced actors in waging multi-phased campaigns against perceived high-value networks," researchers from Lumen Technologies' Black Lotus Labs said in an analysis shared with The Hacker News.

IT-OT CULTURAL DIVIDES CREATING MAJOR BARRIER TO EFFECTIVE INDUSTRIAL CYBERSECURITY

Meta Platforms, the company formerly known as Facebook, on Friday announced the launch of a centralized Privacy Center that aims to "educate people" about its approach with regards to how it collects and processes personal information across its family of social media apps. "Privacy Center provides helpful information about five common privacy topics: sharing, security, data collection, data use and ads," the social technology firm said in a press release. The first module, Security, will offer easy access to common tools such as account security settings and two-factor authentication. Sharing will provide specifics about post visibility and settings to archive or trash old posts.
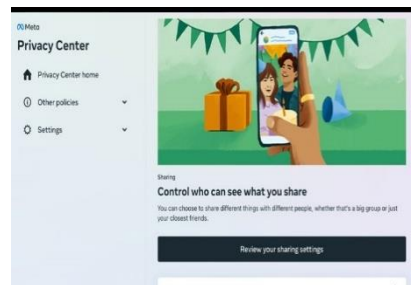
WILL THE METAVERSE PROTECT OUR PRIVACY, OR WILL IT EXPLOIT US MORE THAN EVER?

by Ian Thomsen, Northeastern

The metaverse is more than the latest obsession of Facebook founder Mark Zuckerberg. It's a three-dimensional world of virtual and augmented reality that we will be exploring via our digital avatars over the next decade.

Amid the unlimited possibilities of what may be coming, consider this reality. If our privacy is already under siege in the two-dimensional internet, imagine how vulnerable we may be in 3D?

"It's going to aggravate the preexisting privacy issues that we're not currently dealing with very well," says Caglar Yildirim, an assistant teaching professor and director of the Mixed Reality research group at Northeastern. "And then we'll have to deal with the more dire consequences of not paying enough attention to those issues."

It's bad enough that cookies track our online movements today; in the future, our personal health data may be chronicled by virtual reality headsets. How will financial transactions be managed? If we're purchasing virtual real estate, how can we avoid being suckered into buying a digital version of the Brooklyn Bridge?

PROTECTING EV CHARGING STATIONS FROM CYBERATTACKS

As the number of electric cars on the road grows, so does the need for their electric vehicle (EV) charging stations and the Internet-based managing systems within those stations. However, these managing systems face their

own issues: cybersecurity attacks. Elias Bou-Harb, director of the UTSA Cyber Center for Security and Analytics, and his colleagues Claud Fachkha of the University of Dubai and Tony Nasr, Sadegh Torabi and Chadi Assim of Concordia University in Montreal are shedding light on the vulnerabilities of these cyber systems. The researchers are also recommending measures that would protect them from harm.

FRANCE FINES GOOGLE, FACEBOOK €210 MILLION OVER PRIVACY VIOLATING TRACKING COOKIES

The Commission nationale de l'informatique et des libertés (CNIL), France's data protection watchdog, has slapped Facebook (now Meta Platforms) and Google with fines of €150

million ($170 million) and €60 million ($68 million) for violating E.U. privacy rules by failing to provide users with an easy option to reject cookie tracking technology. "The websites facebook.com, google.fr and youtube.com offer a button allowing the user to immediately accept cookies," the authority said. "However, they do not provide an equivalent solution (button or other) enabling the Internet user to easily refuse the deposit of these cookies."
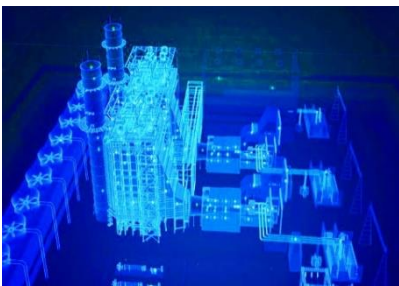
FBI, NSA AND CISA WARNS OF RUSSIAN HACKERS TARGETING CRITICAL INFRASTRUCTURE

Amid renewed tensions between the U.S. and Russia over Ukraine and Kazakhstan, American cybersecurity and intelligence agencies on Tuesday released a joint advisory on how to

detect, respond to, and mitigate cyberattacks orchestrated by Russian state-sponsored actors. To that end, the Cybersecurity and Infrastructure Security Agency (CISA), Federal Bureau of Investigation (FBI), and National Security Agency (NSA) have laid bare the tactics, techniques, and procedures (TTPs) adopted by the adversaries, including spear-phishing, brute-force, and exploiting known vulnerabilities to gain initial access to target networks.

COUNCIL OF EUROPE ONLINE COURSES

DATA PROTECTION AND PRIVACY RIGHTS

The Council of Europe HELP course offers a comprehensive curriculum which covers in an interactive way the key concepts, the legal framework of the Council of Europe and the EU as well as the case law of the European Court of Human Rights and the Court of Justice of the European Union.

HATE CRIME AND HATE SPEECH

The course aims to assist legal professionals throughout Europe in understanding hate crime and hate speech. Topics are explored in a practical way, by using presentations, interactive screens, knowledge tests and reflective exercises to gain and apply knowledge and skills.

FREEDOM OF EXPRESSION

In the context of an effective democracy and respect for human rights mentioned in the Preamble to the European Convention on Human Rights, freedom of expression is of utmost importance. Freedom of expression "constitutes one of the essential foundations of a democratic society and one of the basic conditions for its progress and for each individual's self-fulfillment".

RIGHT TO LIBERTY AND SECURITY

The right to liberty and security is of the highest importance in a democratic society and is a fundamental human right. Article 5 of the European Convention on Human Rights guarantees that all individuals should be free from arbitrary or unjustified deprivations of liberty.

THE FIRST INTERNATIONAL CYBERSECURITY CAMP IM GEORGIA HAS SUCCESSFULLY LAUNCHED

The international cyber security camp in the field of ethical hacking was accomplished. The authors, initiators and organizers of the idea of creating the camp are Internet Development Initiative, Vladimer Svanadze and Scientific Cyber Security Association, Maksim Iavich.

The participants of the camp were students from Tashkent, Inha University. They were provided with the practical activities and general information regarding the following areas: user safety; network security; cryptography; web security; secure programming. At the end of the camp a hackathon was held. It lasted about six hours and three teams of four participants competed against each other. At the end of the camp, a memorandum of cooperation was signed between the Scientific Cyber Security Association and Inha University.

"This is the initial cyber security camp in Georgia, which brought together both foreign and local youth and give them specific knowledge in terms of ethical hacking" noted Vladimer Svanadze, Chairman of the Board of Internet Development Initiative (IDI).

"Inha University in Tashkent (hereinafter IUT) educates and prepares highly qualified specialists in the field of information and communication technologies at the level of international standards. The university in cooperation with Scientific Cyber Security Association (Georgia) realized its first educational winter camp for students in Bakuriani (Georgia) specialized in Cyber Security. I need to mention that professional approach of Maksim Iavich and Vladimir Svanadze opened phenomenal doors for our students as IUT students eager to gain more knowledge. The knowledge given by above mentioned professors was not only theoretical but also practical which really impressed students and me. At the last day Hackathon was conducted by our partners to the IUT students. This was a wonderful practical experience. Despite the fact that IUT students had background knowledge in Ethical Hacking, they learned a lot of new things and will definitely use in our country. I can say that our cooperation has just started and It is only the beginning, we will try to enhance our cooperation not only for our students but our partners as well" - said rector of IUT - Muzaffar Djalalov.

According to Maksim Iavich, During the hackathon, the students had to break the CTF lab, prepared by SCSA. They also had to break the crypto cypher, which had some vulnerabilities during an encryption phase. Finally, the students had the Q/A session for the purpose to identify the winner.

International Winter Cyber Camp "Ethical Hacker is the unique project oriented on gaining the knowledge in cybersecurity and programming in the small period of time, it is also a great opportunity to discover Georgian and have fun during entertainment sessions. Cyber security camp in Georgia plans to receive participants both in winter and summer, and implement various activities, which will have a positive impact on the proper and purposeful development of the cyber security sector.

TECH NEWS
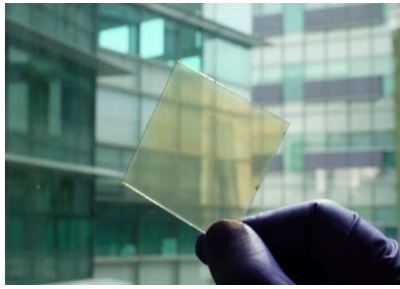
SCIENTISTS INVEST ENERGY-SAVING GLASS THAT 'SELF-ADAPTS' TO HEATING AND COOLING DEMAND

An international research team led by scientists from Nanyang Technological University, Singapore (NTU Singapore) has developed a material that when coated on a glass window

Panel can effectively self-adapt to heat or cool rooms across different climate zones in the world, helping to cut energy usage. Developed by NTU researchers and reported in the journal Science, the first-of-its-kind glass automatically responds to changing temperatures by switching between heating and cooling. The self-adaptive glass is developed using layers of vanadium dioxide nanoparticles composite, poly (methyl methacrylate) (PMMA), and low-emissivity coating to form a unique structure which could modulate heating and cooling simultaneously.

ELON MUSK WANTS SPACEX TO REACH MARS USING CARBON CAPTURE. HERE'S HOW IT COULD WORK

Eventually, everyone has a chance to follow through on their promises. Coincidentally, Elon Musk says his plans for Mars can coincide with the global push to lower the concentration of

carbon dioxide in the atmosphere. "SpaceX is starting a program to take CO_2 out of [the] atmosphere & turn it into rocket fuel," tweeted the CEO and tech billionaire on Monday. "Please join if interested." It's unclear exactly how Musk plans to do this, but it's also hard to deny the appeal of such a capability. Imagine a world where all excess CO_2 generated by a nation or region is directly converted into rocket fuel and subsequently consumed during launches, leaving nothing harmful behind.
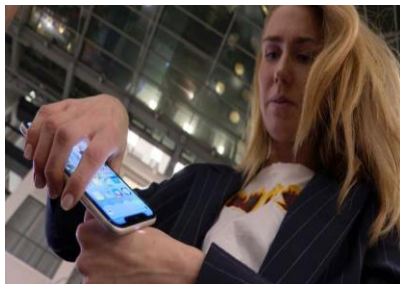
SWEDISH COMPANY OFFERS A COVID PASS THAT GETS UNDER THE SKIN

Dystopian nightmare or a simple convenience? A Swedish company implanting microchips under the skin has is promoting its devices for use as a COVID-19 health pass in a country with thousands of early adopters.

"I think it's very much part of my own integrity to have myself chipped and keep my personal data there with me, I actually feel that it's even more controlled on my end," Amanda Back, a Stockholm resident who has implanted the subcutaneous chip developed by DSruptive Subdermals, told AFP.

WHAT IS SMART CLOTHING TECHNOLOGY AND HOW DOES IT WOTK?

Modern fabric technology includes the intelligent modification of clothes to produce a determined effect. Clothes can be re-designed with the aid of technology to change colors, block sunlight, collect medical data, emit vibrations, or even display custom messages. Here are some of the most amazing advancements in fabric technology and smart fabrics.

CHAIN MAIL-BASED FABRIC FOR SMART EXOSKELETONS

Hauberks, or chain mail shirts, were used in the Middle Ages, but they've certainly gone out of style, right?

Wrong. They've only transformed into something else. In 2021, engineers at the California Institute of Technology (Caltech) and the Nanyang Technological University (NTU) in Singapore created a chain mail-like material that goes from soft to stiff on command, bearing a load of 50 times its own weight when rigid. To construct the fabric, the team layered together hollow plastic or 3D-printed aluminum particles which interlock, allowing them to change shape but retain their rigidity. Unlike similar fabrics, which are "tuned" with electromagnetic fields, to make them stiffen or relax, the chain mail uses jamming transition. This is the same principle that causes a

IN A NEUROPROSTHETIC FIRST, ALS PATIENT SENDS SOCIALMEDIA MESSAGE VIA BRAIN-COMPUTER INTERFACE

Philip O'Keefe, a 62-year-old amyotrophic lateral sclerosis (ALS) patient in Australia recently became the first person to post a message on social media using only his thoughts. On December 23, he posted an initial brief message, "Hello World," on Twitter. The technology that allowed O'Keefe to send his message was developed by brain computer interface company, Synchron the device is called the Stentrode Brain Computer Interface (SBCI); a type of endovascular brain implant. It was implanted into O'Keefe's brain without opening his skull instead, it was inserted through his jugular vein.

A 62-YEAR-OLD PARALYZED MAN SENT OUT HIS FIRST TWEET WITH BRAIN CHIP

A 62-year-old Australian man paralyzed following his diagnosis with amyotrophic lateral sclerosis (ALS) has become the first individual to send out a message on social media using a brain-computer interface, Brain-computer interfaces (BCI) are the next big thing in technology. While some people like Elon Musk want to use it to enhance human experiences as early as next year, others such as Synchron, whose interface helped Australian Philip O'Keefe send out his first tweet, want to develop it as a prosthesis for paralysis and treat other neurological diseases such as Parkinson's disease in the future, the company said in a press release.

BREAKTHROUGH IN SEPARATING PLASTIC WASTE: MACHINES CAN NOW DISTINGUISH 12 DIFFERENT TYPES OF PLASTIC

In contrast to common perceptions, plastic is in no way near one material. Rather, it is a combination of many materials (polymers) with different chemical compounds and additives such as pigments or fibers, depending on its use. It is very difficult to tell the difference between different types of plastics, and this is what makes it difficult to separate and recycle them. In collaboration with Vestforbrænding, Dansk Affaldsminimering Aps, and PLASTIX, researchers from the Department of Biological and Chemical Engineering at Aarhus University have now developed a new camera technology that can see the difference between 12 different types of plastics (PE, PP, PET, PS, PVC, PVDF, POM, PEEK, ABS, PMMA, PC and PA12). Together, these constitute the vast majority of household plastic types.

RESHAPING THE WORLD TO RESEARCH THROUGH REMOTE EXPERIMENTATION

by Brookhaven National Laboratory

We all remember the impact of stay-at-home-orders on our everyday lives in spring 2020. However, it was not only restaurants, salons, flower shops, and bookstores that had to close their doors. National user research facilities shut down most operations, closing the doors to thousands of visiting scientists, and bringing research on new batteries, pharmaceutical drugs, and many other materials to a grinding halt, at a time when the country needed these facilities more than ever. So, seven user research facilities decided to form a team of experts, the Remote Access Working Group (RAWG), to figure out how these facilities could keep the science going even when the researchers couldn't access them in person.

The solution is as simple as it is difficult. Research facilities that serve visiting researchers have to create an environment in which experiments can be run from afar—with nearly no human interaction. Scientists have dubbed this new way of doing research remote experimentation. While each facility started the unexpected journey to remote experimentation on their own, the RAWG has brought all the different ideas together to help each facility overcome the numerous challenges encountered along the way. Most challenges result from the nature of how these facilities operate.

READ THE FULL ARTICLE

A NOVEL 'ARTIFICIAL LEAF' CAPTURES 100 TIMES MORE CARBON THAN OTHERS

A team of engineers at the University of Illinois Chicago (UIC) has developed a relatively low-cost "artificial leaf" that can capture carbon dioxide at rates 100 times faster than existing systems, bringing us one step closer to the goal of engineering the process of photosynthesis by which plants convert sunlight, water, and carbon dioxide into energy. The best part? Unlike other carbon capture technologies that use pure carbon dioxide from pressurized tanks in laboratories, this artificial leaf can operate in the real world. It removes carbon dioxide from much more diluted sources like air and flue gas from coal-fired power plants, according to the researchers, and releases it for use as fuel and many other materials.
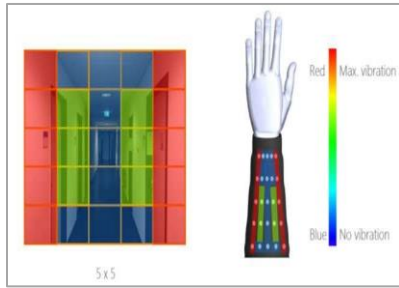
HAPTIC FEEDBACK SLEEVE AND GOGGLES ALLOW BLIND PEOPLE TO 'SEE' WITH THEIR ARM

Two researchers with the Center for Digital Technology and Management, Technical University of Munich, have developed a haptic feedback sleeve and goggle system that allows blind people to partially "see" with the skin on their arm. Manuel Zahn and Armaghan Ahmad Khan published a paper describing their sleeve and goggle system on the arXiv preprint server. As the researchers note, despite advances in technology aimed at assisting the blind, the best tool for helping to navigate in public is still the cane. In this new effort, the researchers built a system that they believe can help blind people and people with other vision problems to navigate more easily in public places.

A FLYING CAR WAS OFFICIALLY CLEARED TO FLY BY SLOVAKIA'S AUTHORITIES

Slovakian aviation firm Klein Vision's AirCar can fly at speeds of over 100 mph (160 km/h) and reach altitudes of 8,000 ft (2,500 m). And now, it has officially been cleared to fly by the Slovak Slovak Transport Authority. The flying car, which can switch from flight to driving mode in less than three minutes once on the ground, received a certificate of airworthiness following 70 hours of flight testing, a press statement from the company reveals. In an interview with Interesting Engineering, Klein Vision co-founder Anton Zajac told us "the certification has demonstrated we have the skills and ability to deliver a flying car that meets the EASA safety standards and is technologically solid."

THE FUTURE OF MEDICINE: 3D PRINTERS CAN ALREADY CREATE HUMAN BODY PARTS

DO YOU FEEL LIKE YOU ARE LIVING IN A SCI-FI VERSION OF THE FUTURE?

BECAUSE YOU PROBABLY SHOULD

In recent years, updates in 3D printing technologies have allowed medical researchers to print things that were not possible to make using the previous version of this technology, including food, medicine, and even body parts. In 2018, doctors from the Ontario Veterinary College 3D printed a custom titanium plate for a dog that had lost part of its skull after cancer surgery. "By performing these procedures in our animal patients, we can provide valuable information that can be used to show the value and safety of these implants for humans", said veterinary surgical oncologist Michelle Oblak at the time. "These implants are the next big leap in personalized medicine that allows for every element of an individual's medical care to be specifically tailored to their particular needs." And not just for animal patients.

WHAT IS 3D BIOPRINTING?

3D bioprinting is the utilization of 3D printing technologies to fabricate body parts. Bioprinters work in a similar way to 3D printers. However, instead of depositing materials such as plastic or ceramic, they deposit layers of biomaterial, including living cells, to build complex structures like blood vessels or skin tissue. In 2018, biomedical engineers from the University of Utah developed a method for 3D printing ligaments and tendons. The method involves first taking stem cells from the patient and printing them on a layer of hydrogel to form a tendon or ligament. This is allowed to grow in vitro in a culture before being implanted. However, the process was very complex, because connective tissue is made up of different cells in complex patterns. The team first needed to develop a special printer head that could lay down human cells in the highly controlled manner they require.

SKIN BIOPRINTING AND WOUND HEALING

3D bioprinting could also help us say goodbye to skin grafts in the near future, as doctors could be able to 3D print new skin for each patient. Skin grafting is the transplantation of healthy skin from an animal, a human donor, or the patient's own body to another part of his or her body where the skin is badly damaged. The procedure is commonly used to treat severe wounds, burns, ulcers, and infections, or after the removal of skin cancers.

ARTIFICIAL INTELLIGENCE

META CLAIMS ITS NEW AI SUPERCOMPUTER WILL SET RECORDS

Meta (formerly Facebook) has unveiled an AI supercomputer that it claims will be the world's fastest. The supercomputer is called the AI Research SuperCluster (RSC) and is yet to be fully complete. However, Meta's researchers have already begun using it for training large natural language processing (NLP) and computer vision models. RSC is set to be fully built in mid-2022. Meta says that it will be the fastest in the world once complete and the aim is for it to be capable of training models with trillions of parameters. Meta says that its previous AI research infrastructure only leveraged open source and other publicly-available datasets.
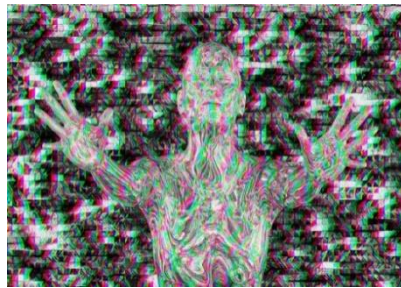
THE DANGER OF AI MICRO-TARGETING IN THE METAVERSE

If you ask most people to name the key technologies of the metaverse, they'll usually focus on the eyewear and graphics engines. If they're sophisticated, they'll also bring up 5G and blockchain. But those are the nuts and bolts of our immersive future. The technology that will pull the strings, creating and manipulating our experience, is AI. Artificial intelligence will soon become one of the most important, and likely most dangerous, aspects of the metaverse. I'm talking about agenda-driven artificial agents that look and act like any other users but are virtual simulations that will engage us in "conversational manipulation," targeting us on behalf of paying advertisers.
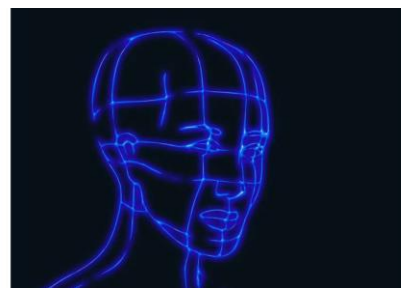
WHERE DID THAT SOUND COME FROM? COMPUTER MODEL CAN ANSWER THAT QUESTION AS WELL AS THE HUMAN BRAIN CAN

The human brain is finely tuned not only to recognize particular sounds, but also to determine which direction they came from. By comparing differences in sounds that reach the right and left ear, the brain can estimate the location of a barking dog, wailing fire engine, or approaching car. MIT neuroscientists have now developed a computer model that can also perform that complex task. The model, which consists of several convolutional neural networks, not only performs the task as well as humans do, it also struggles in the same ways that humans do. "We now have a model that can actually localize sounds in the real world," says Josh McDermott, an associate professor of brain and cognitive sciences and a member of MIT's McGovern Institute for Brain Research.

THE ROLE OF ARTIFICIAL INTELLIGENCE WITHIN THE BANKING SECTOR

Fri, Feb 25, 2022

6:45 PM

ARTIFICIAL INTELLIGENCE IN HEALTHCARE: KEY HIGHLIGHTS IN 2022 - LIVE Q&A

Wed, February 2, 2022

8:00 PM – 9:00 PM

BIG DATA, DATA SCIENCE AND BUSINESS INTELLIGENCE

Thu, February 17, 2022

10:00 AM – 11:00 AM

WOMEN IN ARTIFICIAL INTELLIGENCE AWARDS NORTH AMERICA - KICK OFF

Wed, February 2, 2022

2:00 AM – 3:30 AM

IST AI SEMINAR - CAN AI ACTUALLY 'REMOVE' DISCRIMINATION IN RECRUIMENT?

Wed, 23 February 2022

20:00 – 21:00

STARTUPS: FUTURE OF MOBILITY AUTONOMOUS ENABLERS AND SMART TRANSPORTS

Wed, February 16, 2022

6:30 PM – 7:30 PM

MOORFIELDS EYE HOSPITAL GIVES WOMAN, 88, BIONIC EYE IMPLANT

An 88-year-old woman from east London has received a pioneering eye implant to help partially restore her deteriorating vision. The surgery at Moorfields Eye Hospital involved inserting a 2mm wide microchip under her retina by surgically creating a 'trapdoor' in which the chip rests. Special glasses, containing a camera connected to a small computer attached to a waistband, make seeing possible. "I am thrilled to be the first to have this implant," the recipient said. The patient suffers from the most common form of dry age-related macular degeneration (AMD) and the implant offers the hope of partially restored vision for those with geographic atrophy (GA).

INTRODUCING META'S NEXT-GEN AI SUPERCOMPUTER

Today we're introducing the AI Research SuperCluster (RSC), which we believe is among the fastest AI supercomputers running today and will be the fastest in the world once fully built out in mid-2022. AI can currently perform tasks perform tasks like translating text between languages and helping identify potentially harmful content, but developing the next generation of AI will require powerful supercomputers capable of quintillions of operations per second. RSC will help Meta's AI researchers build better AI models that can learn from trillions of examples; work across hundreds of different languages;
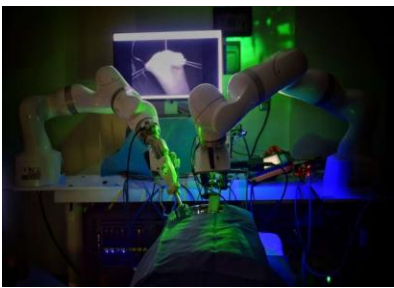
ROBOT PERFORMS FIRST LAPAROSCOPIC SURGERY WITHOUT HUMAN HELP

A robot has performed laparoscopic surgery on the soft tissue of a pig without the guiding hand of a human a significant step in robotics toward fully automated surgery on humans. Designed by a team of Johns Hopkins University researchers, the Smart Tissue Autonomous Robot (STAR) is described today in Science Robotics. "Our findings show that we can automate one of the most intricate and delicate tasks in surgery: the reconnection of two ends of an intestine. The STAR performed the procedure in four animals and it produced significantly better results than humans performing the same procedure," said senior author Axel Krieger, an assistant professor of mechanical engineering at Johns Hopkins' Whiting School of Engineering.

WHAT HAPPENS WHEN AN AI KNOWS HOW YOU FEEL?

Jeff Hancock, a professor of communication at Stanford University, defines AI-mediated communication as when "an intelligent agent operates on behalf of a communicator by modifying, augmenting, or generating messages to accomplish communication goals." This technology, he says, is already deployed at scale.

Beneath it all is a burgeoning belief that our relationships are just a nudge away from perfection. Since the start of the pandemic, more of our relationships depend on computer-mediated channels. Amid a churning ocean of online spats, toxic Slack messages, and infinite Zoom, could algorithms help us be nicer to each other? Can an app read our feelings better than we can? Or does outsourcing our communications to AI chip away at what makes a human relationship human?

Co-parenting apps might be able to help steer a problem relationship, but they can't solve it. Sometimes, they can make it worse. Karpf says some parents weaponize the app and send "bait" messages to wind up their spouse and goad them into sending a problem message: A jerk parent is always going to be a jerk parent".

READ THE FULL ARTICLE

WORLD WIDE WEB

by David Bradley, Inderscience

5G IS POISED TO CHANGE EVERYTHING, FROM FARMING TO SURGERY

CES 2022 is packed with tech that needs lightning-fast connection to the internet. That's one reason why so many people at the trade show in Las Vegas are laser-focused on 5G. A handful of industry leaders got together at the conference to discuss the opportunities and challenges of making tech that works with the new global wireless standard. J. David Grossman, VP Regulatory Affairs Consumer Technology Association, led the discussion. He was joined by John Godfrey, senior VP of Public Policy at Samsung Electronics, Inc; Asad Ramzanali, Legislative Director at the Office of Congresswoman Annna Eshoo; Emily Hebein, Legislative Assistant for Representative Bob Latta; and Deanna Kovar VP, Production & Precision Ag Production Systems at John Deere.

Big data is big, as it were, and the buzz phrase is often accompanied by associated terms such as data mining, machine learning, computational intelligence, the semantic web, and social networks. Research published in the International Journal of Cloud Computing looks at big data in this context and asks how social big data might best be analyzed with state-of-the-art tools to allow us to extract new knowledge.

GOOGLE PUSHES NEW PLAN TO OVERHAUL WEB-TRACKING COOKIES

Google on Tuesday announced a new plan to stop using small files known as cookies to track people's web browsing habits, after its previous proposals were roundly criticized. US tech giants are under huge pressure to overhaul the way they collect data Google was fined 150 million euros ($169 million) by France earlier this month over its cookie policies. Privacy campaigners have pushed hard against the use of cookies, which transmit users' information often to dozens of companies each time they visit a website.

Social media and social networking represent a vast information resource with hundreds of millions of people using dozens of tools, such as Twitter, Instagram, and Facebook on a daily basis and posting billions of updates, images, videos, and much more. All of this information, much of it publicly accessible might well be mined for useful knowledge that could, in turn, be useful to a wide range of third parties in various types of business, not-for-profit organizations, law enforcement, those in commerce and marketing, researchers in socioeconomics, healthcare, and many other fields.

FRENCH COURT SAYS TWITTER MUST REVEAL MEASURES ON ONLINE HATE

A Paris court on Thursday ruled that Twitter must reveal its measures for fighting hate speech, in one of several cases thrashing out whether the French justice system has jurisdiction over the US social media giant.

Ireland-based Twitter International had appealed a July decision ordering it to share documents and details about its French moderation team and data on their activities against hate speech. That case had been brought by several anti-discrimination groups over what they said was the company's longstanding failure to properly moderate posts.

Brahim Lejdel of the University of El-Oued in El-Oued, Algeria, points out that the combination of big data technologies and traditional machine learning algorithms has already led to some new and interesting challenges for social media and social networking. Among the challenges are how best to process, store, represent, and visualize the vast repositories of information that big data represents.

A NEW BRAIN SENSOR MAPS THE HUMAN BRAIN WITH RECORD BREAKING ACCURACY

BY CHRIS YOUNG

A team of engineers and neurosurgeons developed a state-of-the-art brain sensor that could greatly enhance the treatment of cancer and epilepsy, according to a press statement from the University of California San Diego. The new apparatus can record electrical signals from the brain's surface in a never-before-seen resolution for such a device. The breakthrough opens up new possibilities for brain-computer interfaces, such as the ones being developed by Elon Musk's Neuralink. Not only will this help to improve diagnoses of deadly diseases, it also has the potential to transform our understanding of the human brain.

The new device is a type of electrocorticography (ECoG) sensor. These are typically used during open brain surgery to measure electrical signals from the human brain in order to pinpoint active tissue, helping surgeons to better locate brain tumors for removal. The technology in the new device, outlined in a paper in the journal Science Translational Medicine, was designed to improve the accuracy of ECoG sensors. While most ECoG devices today feature somewhere between 16 and 64 sensors, the UC San Diego team's new device uses up to 2,048.

The reason behind this is that the UC San Diego team was able to produce sensor grids with far greater density while avoiding the problematic interference that has hampered other designs. To achieve this, the team used platinum rods instead of the flat platinum sensors typically used today. This allows for a configuration of 100 sensors per unit area, which constitutes a hundred times more spatial resolution than the previous average. The resulting sensor grids, built by placing the rods on a biocompatible material called parylene, are roughly one-tenth the size of a human hair 100 times thinner than the ECoG sensors used today.

In demonstrations, the scientists behind the new device mapped key regions of the brain in four subjects while they performed motor tasks. They also mapped the cortical column of a rat brain for the first time without the use of a needle and electrical stimulation. The UC San Diego team believes its device can be utilized to improve current brain-computer interface technologies. Neuralink, a company co-founded by SpaceX and Tesla CEO Elon Musk, recently announced it is hiring a clinical trial director, meaning it will soon be one crucial step closer to implanting computer chips into people's brains. In a 2019 Neuralink keynote presentation, Musk announced that brain-computer interfaces could help to treat brain diseases, they will eventually allow users to browse the web using their mind, and they could even help us to mitigate the existential threat of artificial intelligence by "merging with AI".

"Internet Development Initiative IDI"

Non-entrepreneurial (Non-commercial) Legal Entity established in accordance with the Civil Code of Georgia.

The Objectives of the Organization Activities:

- Support the development of online media;
- Initiative of projects of information and communication technology. Search for new technologies, analysis and promotion for implementation;
- Initiative of projects with government and private sector in Information technology and innovation;
- Support for print and online publications;
- Organizing conferences, seminars, forums in ICT and cyber security.

- Support growth concentration of the internet;
- Promote the development of standards of cyber security, and support to improve skills in cyber security. Organize trainings and study courses;
- Study and analysis of threats in cyberspace. Write recommendations for government and private sector. Public awareness raising;
- Encourage the process of protection and advocacy for internet users' rights;

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