Personality trait puts you at risk

Impulse online shopping, downloading music and compulsive email use are all signs of a certain personality trait that make you a target for malware attacks. New research from Michigan State University examines the behaviours - both obvious and subtle - that lead someone to fall victim to cybercrime involving Trojans, viruses, and malware.

"People who show signs of low self-control are the ones we found more susceptible to malware attacks," said Tomas Holt, professor of criminal justice and lead author of the research. "An individual's characteristics are critical in studying how cybercrime perseveres, particularly the person's impulsiveness and the activities that they engage in while online that have the greatest impact on their risk."

Low self-control, Holt explained, comes in many forms. This type of person shows signs of short-sightedness, negligence, physical versus verbal behaviour and an inability to delay gratification.

"Self-control is an idea that's been looked at heavily in criminology in terms of its connection to committing crimes," Holt said. "But we find a correlation between low self-control and victimisation; people with this trait put themselves in situations where they are near others who are motivated to break the law."

The research, published recently, assessed the self-control of nearly 6,000 survey participants, as well as their computers' behaviour that could indicate malware and infection. To measure victimisation, Holt and his team asked participants a series of questions about how they might react in certain situations. For computer behaviour, they asked about their computer having slower processing, crashing, unexpected pop-ups and the homepage changing on their web browser.

"The internet has omnipresent risks. In an online space, there is constant opportunity for people with low self-control to get what they want, whether that is pirated movies or deals on consumer goods," Holt said.

As Holt explained, hackers and cybercriminals know that people with low self-control are the ones who will be scouring the internet for what they want - or think they want - which is how they know what sites, files or methods to attack.

Understanding the psychological side of self-control and the types of people whose computers become infected with malware - and who likely spread it to others - is critical in fighting cybercrime, Holt said. What people do online matters, and the behavioural factors at play are entirely related to risks.

Computer scientists, Holt said, approach malware prevention and education from a technical standpoint; they look for new software solutions to block infections or messaging about the infections themselves. This is important, but it is also essential to address the psychological side of messaging to those with low self-control and impulsive behaviours. "There are human aspects of cybercrime that we don't touch because we focus on the technical side to fix it. But if we can understand the human side, we might find solutions that are more effective for policy and intervention," he said.

Looking ahead, Holt hopes to help break the silos between computer and social sciences to think holistically about fighting cybercrime.

"If we can identify risk factors, we can work in tandem with technical fields to develop strategies that then reduce the risk factors for infection. It's a pernicious issue we're facing, so if we can attack from both fronts, we can pinpoint the risk factors and technical strategies to find solutions that improve protection for everyone," Holt said.

Human pain in robot brain

A team of scientists from Cornell University recently published research indicating they'd successfully replicated proprioception in a soft robot.

The researchers accomplished this by replicating an organic nervous system using a network of fiber optics cables. In theory, this is an approach that could eventually be applied to humanoid robots – perhaps connecting external sensors to the fiber network and transmitting sensation to the machine's processor – but it's not quite there yet.

According to the team's white paper they "combined this platform of DWS with ML to create a soft robotic sensor that can sense whether it is being bent, twisted, or both and to what degree," but the design "has not been applied to robotics."

Just to be clear: the Cornell team isn't trying to make robots that can feel pain. Their work has incredible potential and could be instrumental in developing autonomous safety systems, but it's not really about pain or pain-mapping.

Their work is interesting in the context of making robots suffer, however, because it proposes a method to emulate natural proprioception. And that's a crucial step on the path to robots that can feel physical sensation.

In a more direct sense, a couple of years ago a pair of researchers from Lisbon University did develop a system specifically to make robots feel pain, but it doesn't really replicate the organic pain experience.

Researchers Johannes Kuehn and Sami Haddadin's "An Artificial Robot Nervous System To Teach Robots How To Feel Pain And Reflexively React To Potentially Damaging" paper explains how the perception of pain can be exploited as a catalyst for a physical response.

In the abstract of the paper, the researchers state:

We focus on the formalization of robot pain, based on insights from human pain research, as an interpretation of a tactile sensation. Specifically, pain signals are used to adapt the equilibrium position, stiffness, and feedforward torque of a pain-based impedance controller.

Basically, the team wanted to come up with a new way of teaching robots how to move around in space, without crashing into everything, by making it "hurt" to damage itself.

And if you think about it, that's exactly why organic creatures feel pain. Humans suffering from a condition called congenital insensitivity to pain with anhidrosis, who can't feel pain, are at never-ending risk for personal injury. Pain is our body's alarm system.

The Lisbon team's study set out to develop a multi-tiered pain feedback system:

And that sounds pretty creepy, but ultimately it's not an end-to-end solution for replicating the organic pain experience in its entirety. Most humans would probably like it if "pain" were handled via an internal module that didn't also include the entire conscious perception of what the emotional response to trauma feels like.

Which begs another question: does it matter if robots can replicate the human response to pain 1-to-1 if they don't have an emotional trauma center to process the "avoidance" message? Feel free to email if you think you've got an answer.

Robots, however, may develop a trauma response as a side effect of pain. At least, it would follow as a logical parallel to the increasingly popular opinion posited by some of today's leading AI researchers that "common sense" will arrive in AI not entirely by design, but as a result of interconnected deep learning systems.

Computer hardware designed for 3D games replicate human brain

Researchers at the University of Sussex have created the fastest and most energy efficient simulation of part of a rat brain using off-the-shelf computer hardware.

Dr. James Knight and Prof Thomas Nowotny from the University of Sussex's School of Engineering and Informatics have beaten a top 50 supercomputer by running brain simulations using their own GeNN software and Graphics Processing Units (GPUs).

By developing faster and more efficient simulators, the academics hope to increase the level of understanding into brain function and, in particular, identify how damage to particular structures in neurons can lead to deficits in brain function. Faster, more advanced simulators could help improve understanding of neurological disorders by pinpointing the areas of the brain that cause epileptic seizures.

Improved simulators could also accelerate progress within the development of AI -- the GeNN software is already being used at the University of Sussex to build autonomous robots including flying drones which can be controlled through simulated insect brains.

Prof Nowotny, Professor of Informatics at the University of Sussex, said: "Over the last three decades, computers have become drastically more powerful, largely due to our ability to fabricate computer chips with smaller and smaller components which, in turn, allows them to operate faster. This process has hit a wall and it has become much harder to build faster

computers without employing radically different architectures. GPUs are one such architecture and our work shows that, in the near term, they are a competitive design for high performance computing and have the potential to make advances far beyond where CPUs have brought us to so far."

The research involved using the team's own GeNN software to implement and test two established computational neuroscience models; one of a cortical microcircuit consisting of eight populations of neurons and a balanced random network with spike-timing dependent plasticity - a process which has been shown to be fundamental to biological learning.

A single GPU was able to achieve processing speeds up to 10 percent faster than is currently possible using either a supercomputer or the SpiNNaker neuromorphic system, a custom-built machine developed as a part of the Euro 1bn European Human Brain Project (HBP).

The University of Sussex team were also able to achieve energy savings of 10 times compared to either the SpiNNaker or supercomputer simulations.

Moving forward, the academics believe that the flexibility and power of GPUs means that they could play a key role in creating simulators capable of running models that begin to approach the complexity of the human brain.

Dr. Knight, Research Fellow in Computer Science at the University of Sussex, said: "Although we're a long way from having the understanding necessary to build models of the entire human brain, we're approaching the point where the latest exascale supercomputers have the raw computing power that would be required to simulate them. Many of these systems rely on GPUs so we're delighted with these latest results which show how well-suited GPUs are to brain simulations. Over the next year we are hoping to extend our work to a model 50 times larger of a monkey visual systems by using multiple, interconnected GPUs."

Chris Emerson, head of Higher-Education and Research Sales in UK and Ireland at NVIDIA, said: "We are very impressed by the use of the NVIDIA AI compute platform for brain simulations spear-headed at the University of Sussex and are glad we are able to support research at the leading edge of computational neuroscience as well as AI."

Ingestible capsule with bluetooth to monitor health

Boston:

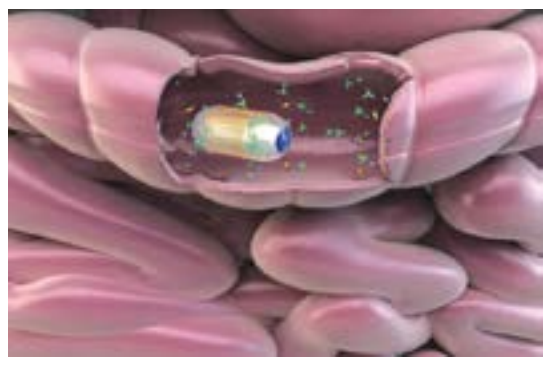
Scientists have developed an ingestible, capsule controlled using Bluetooth wireless technology, which can be customised to deliver drugs or monitor health over long periods of time. The capsule can reside in the stomach for at least a month, transmitting information and responding to instructions from a user's smartphone.

Manufactured using 3D-printing technology, the capsules could be deployed to deliver drugs to treat a variety of diseases, particularly in cases where drugs must be taken over a long period of time.

They could also be designed to sense infections, allergic reactions, or other events, and then release a drug in response.

These devices could also be used to communicate with other wearable and implantable medical devices, which could pool information to be communicated to the patient's or doctor's smartphone. The device unfolds into a Y-shape after being swallowed. This enables the device to remain the stomach for about a month, before it breaks into smaller pieces and passes through the digestive tract.

One of these arms includes four small compartments that can be loaded with a variety of drugs. These drugs can be packaged within polymers that allow them to be released gradually over several days.



The researchers also anticipate that they could design the compartments to be opened remotely through wireless Bluetooth communication.

The device can also carry sensors that monitor the gastric environment and relay information via a wireless signal. In previous work, the researchers designed sensors that can detect vital signs such as heart rate and breathing rate.

Researchers showed that the capsule could be used to monitor temperature and relay that information directly to a smartphone within arm's length. To enable the manufacturing of all of these complex elements, the researchers decided to 3D print the capsules.

This approach allowed them to easily incorporate all of the various components carried by the capsules, and to build the capsule from alternating layers of stiff and flexible polymers, which helps it to withstand the acidic environment of the stomach.

The researchers envision that this type of sensor could be used to diagnose early signs of disease and then respond with the appropriate medication. For example, it could be used to monitor certain people at high risk for infection, such as patients who are receiving chemotherapy or immunosuppressive drugs.

If infection is detected, the capsule could begin releasing antibiotics. Or, the device could be designed to release antihistamines when it detects an allergic reaction.

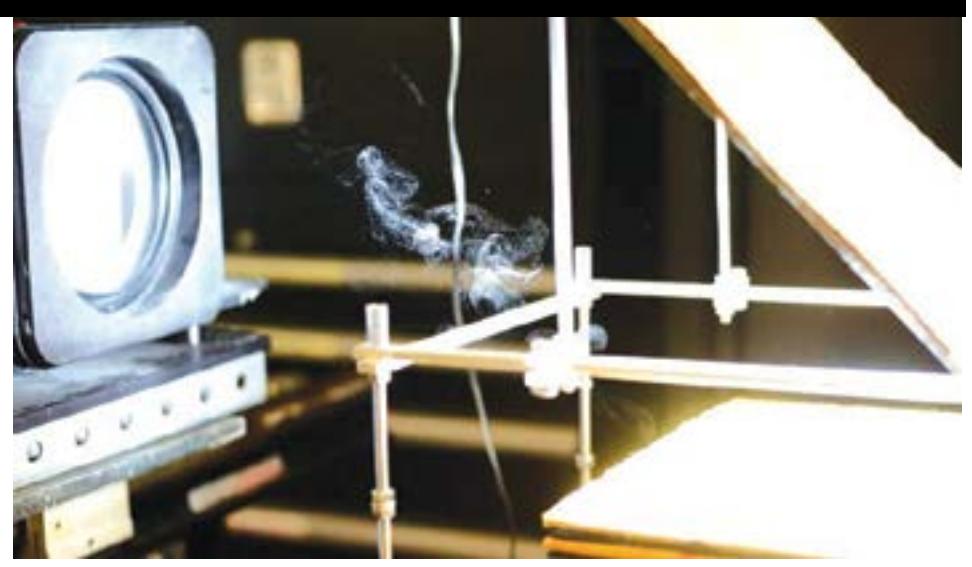
Shape shifting drones

Researchers at the University of Zurich and EPFL have created a robot that shrinks to fit through gaps, a feature that could make it perfect for search and rescue missions. The researchers initially created a drone that could assess man-made gaps and squeeze through in seconds using only one camera. This extra feature - a scissor-like system to shrink the drone in flight makes it even more versatile and allows these drones to react to larger or smaller gaps in nature.

"The idea came up after we worked on quadrotor flight through narrow gaps," said PhD candidate Davide Falanga. "The goal of our lab is to develop drones which can be in the future used in the aftermath of a disaster, as for example an earthquake, in order to enter building through small cracks or apertures in a collapsed building to look for survivors. Our previous approach required a very aggressive maneuver, therefore we looked into alternative solutions to accomplish a task as passing through a very narrow gap without having to fly at high speed. The solution we came up with is the foldable drone, a quadrotor which can change its shape to adapt to the task."

The system measures the gap and changes its shape without outside processing, a feat that is quite exciting. All of the processing is done on board and it could be turned into an autonomous system if necessary. The team built the drone with off the shelf and 3D-printed parts.

"The main difference between conventional drones and our foldable drone is in the way the arms are connected to the body: each arm is connected through a servo motor, which can change the relative position between the main body and the arm. This allows the robot to literally fold the arms around the body, which means that potentially any morphology can be obtained. An adaptive controller is aware of the drone's morphology and adapts to it in order to guarantee stable flight at all times, independently of the configuration," said Falanga.



Sun soaking device turns water into superheated steam

Boston

Scientists at MIT have developed a device which they say soaks up enough heat from the sun to boil water and produce steam hotter than 100 degrees Celsius, without any expensive optics.

The device is designed to be suspended over the water, to avoid any possible contamination, according to the study published in Nature Communications.

The suspended device is about the size and thickness of a small digital tablet and is structured like a sandwich, said researchers at Massachusetts Institute of Technology (MIT) in the US.The top layer is made from a material that efficiently absorbs the sun's heat, while the bottom layer efficiently emits that heat to the water below.

Once the water reaches the boiling point 100 degrees Celsius, it releases steam that rises back up into the device, where it is funneled through the middle layer.

The foam-like material further heats the steam above the boiling point, before it's pumped out through a single tube.The device is structured to absorb short-wavelength solar energy, which in turn heats up the device, causing it to reradiate this heat, in the form of longer-wavelength infrared radiation, to the water below.

The researchers note that infrared wavelengths are more readily absorbed by water, versus solar wavelengths, which would simply pass right through.For the device's top layer, they chose a metal ceramic composite that is a highly efficient solar absorber.

They coated the structure's bottom layer with a material that easily and efficiently emits infared heat.Between these two materials, they sandwiched a layer of reticulated carbon foam, which retains the sun's incoming heat and can further heat up the steam rising back up through the foam.

The researchers also attached a small outlet tube to one end of the foam, through which all the steam can exit and be easily collected.Finally, they placed the device over a basin of water and surrounded the entire setup with a polymer enclosure to prevent heat from escaping.

Google+ to shutdown

After another data leak, its second such leak in a year, Google announced it was shutting down its beleaguered social media platform, Google+. API access will shut down even sooner.

The newest vulnerability affected 52.5 million users, according to Google. Profile information, including names, email addresses, age, and occupation were all exposed. Worse, accounts set to private were still affected. Apps may have also stolen data stolen with specific Google+ users, but not publicly.

"With the discovery of this new bug, we have decided to expedite the shut-down of all Google+ APIs; this will occur soon," says David Thacker, VP of project management at Google, in a blog post. "In addition, we have also decided to accelerate the sunsetting of consumer Google+ from August 2019 to April 2019."

Thacker says Google discovered the bug as part of its standard testing procedure, stating that there is "no evidence" that developers who had access to this data were aware of it, or had misused it.

Google has already begun notifying users affected by the bug.

In October, a similar Google+ vulnerability may have exposed data to app developers for as long as three years. The bug was discovered in March, but not publicly disclosed until October.

This leak, Thacker says, was discovered on its own, and live for just six days.

Smallest wearable battery

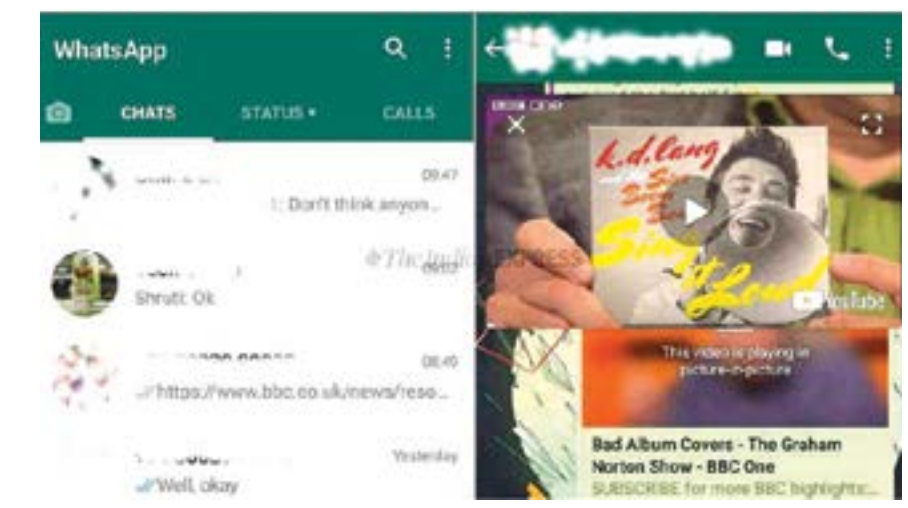
Scientists have developed the world's smallest wearable, battery-free device that can measure exposure to light across multiple wavelengths, from the ultraviolet (UV) to visible and even infrared parts of the solar spectrum. When the solar-powered, virtually indestructible device was mounted on human participants, it recorded multiple forms of light exposure during outdoor activities, even in the water, said researchers from the Northwestern University in the US.

The device monitored therapeutic UV light in clinical phototherapy booths for psoriasis and atopic dermatitis as well as blue light phototherapy for newborns with jaundice in the neonatal intensive care unit. It also demonstrated the ability to measure white light exposure for seasonal affective disorder, according to the research published in the journal Science Translational Medicine.

The device enables precision phototherapy for these health conditions, and it can monitor, separately and accurately, UVB and UVA exposure for people at high risk for melanoma, a deadly form of skin cancer. For recreational users, the sensor can help warn of impending sunburn.

It weighs as much as a raindrop, has a diameter smaller than that of an M&M and the thickness of a credit card. You can mount it on your hat or glue it to your sunglasses or watch. It's also rugged, waterproof and doesn't need a battery. There are no switches or interfaces to wear out, and it is completely sealed in a thin layer of transparent plastic. It interacts wirelessly with your phone.

The new device will allow doctors to optimize the therapy by adjusting the position of the patient or the light source. Since the device operates in an "always on" mode, its measurements are more precise and accurate than any other light dosimeter now available, the scientists said.



Whatsapp adds PiP

WhatsApp has introduced the picture-in-picture mode with the latest version of its Android app. This feature will allow users to watch video content from third-party apps within WhatsApp, without the need to move outside a chat window. While this update has been available on iOS since early in the year, PiP mode was initially introduced in the platform's Android beta in October.

Through the latest Android version of WhatsApp, users will not be redirected to external pages, if they click on video links sent from YouTube, Facebook, Tumblr, and Instagram, among others. When a link from a third-party video link appears on WhatsApp, one can find the video card with a blurred version of the thumbnail image, as well as the platform logo.

On tapping the link, the PiP mode makes the video played over the top half of the chat window, which users can choose to convert to full-screen viewing, while users can also operate the video timeline bar below, to scroll to or past different segments.

While the Facebook-owned platform is expected to expand support across more platforms, major social media platforms have been included for PiP mode. Users can check for WhatsApp version 2.18.380 through the Google Play Store, or consider updating their app to use the same. This mode can be used for both individual chats and group chats, and is compatible across Android devices. WhatsApp has also been testing other new features for Android, such as an improved group calling interface. This will allow users to call up all members of a group call at the same time, instead of considering individually adding them to an existing call. This feature is already present on iOS, and could be rolled out soon.

Batteries that last for weeks

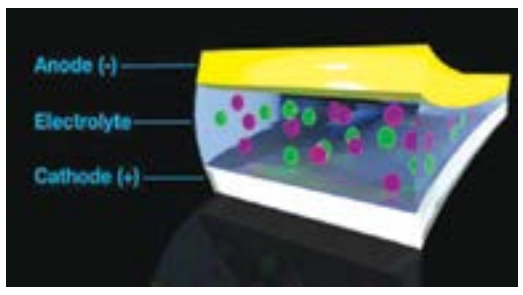
Los Angeles

Smartphones and laptops of the future may not need to be charged for weeks, thanks to fluoride-based batteries which can last up to eight times longer than those in use today.

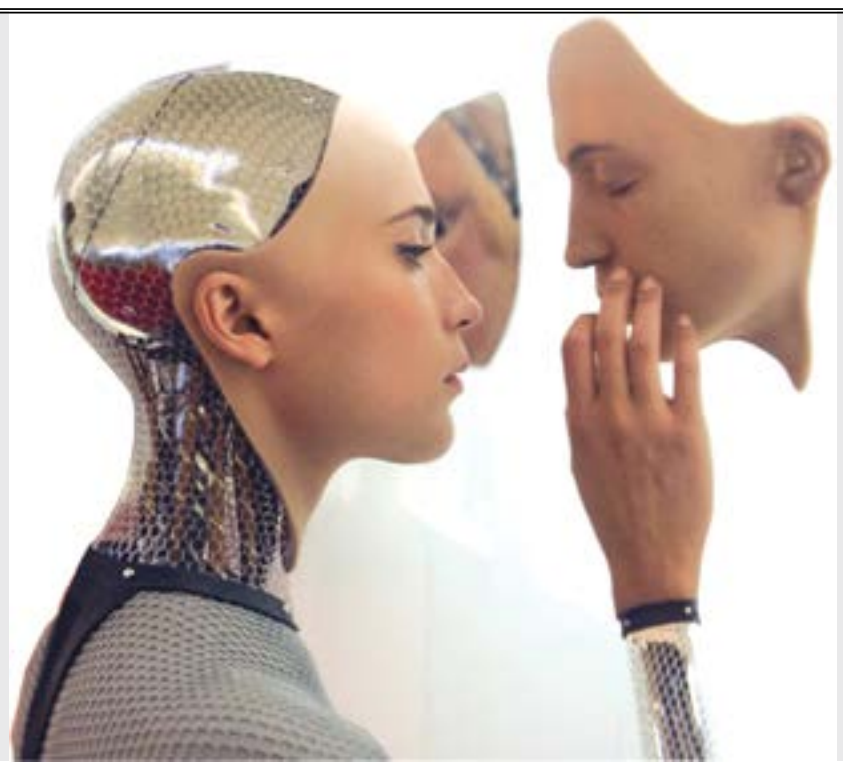
Researchers, including those from California Institute of Technology and NASA's Jet Propulsion Laboratory (JPL), found a new way of making rechargeable batteries based on fluoride, the negatively charged form of fluorine.

A study, appearing in the journal Science, looked into alternative batteries that go beyond the current lithium-ion versions popular today.

"Fluoride batteries can have a higher energy density, which means that they may last longer -- up to eight times longer than batteries in use today," said Robert Grubbs, a professor at Caltech. But fluoride can be corrosive and reactive.The new study figured out how to make the fluoride batteries work using liquid components -- and liquid batteries easily work at room temperature.



Batteries drive electrical currents by shuttling charged atoms or ions between a positive and negative electrode. This shuttling process proceeds more easily at room temperature when liquids are involved. While lithium ions are positive, the fluoride ions used in the new study bear a negative charge.



Robots sense human trust

Researchers have created new "classification models" that can sense how well humans trust intelligent machines they collaborate with.

The research aims at improving the quality of interactions and teamwork between people and their robotic counterparts and was led by assistant professor Neera Jain and associate professor Tahira Reid, in Purdue University's School of Mechanical Engineering.

The researchers have developed two types of "classifier-based empirical trust sensor models," in order to improve trust between humans and intelligent machines.

The models use two different techniques that provide data to 'measure' trust: electroencephalography (EEG) and galvanic skin response. The first records brainwave patterns, and the second monitors' changes in the electrical characteristics of the skin, providing psychophysiological "feature sets" correlated with trust.

The models were trialed on 45 human subjects, with a mean accuracy of 71.22 percent, and 78.55 percent, respectively.

It is the first time EEG measurements have been used to gauge trust in real time, or without delay.

"We are interested in using feedback-control principles to design machines that are capable of responding to changes in human trust level in real time to build and manage trust in the human-machine relationship," Jain said.

"In order to do this, we require a sensor for estimating human trust level, again in real-time. The results presented in this paper show that psychophysiological measurements could be used to do this."

The issue of human trust in machines is important for the efficient operation of "human-agent collectives", she added.

The models they developed are called classification algorithms.

"The idea is to be able to use these models to classify when someone is likely feeling trusting versus likely feeling distrusting," Raid said.

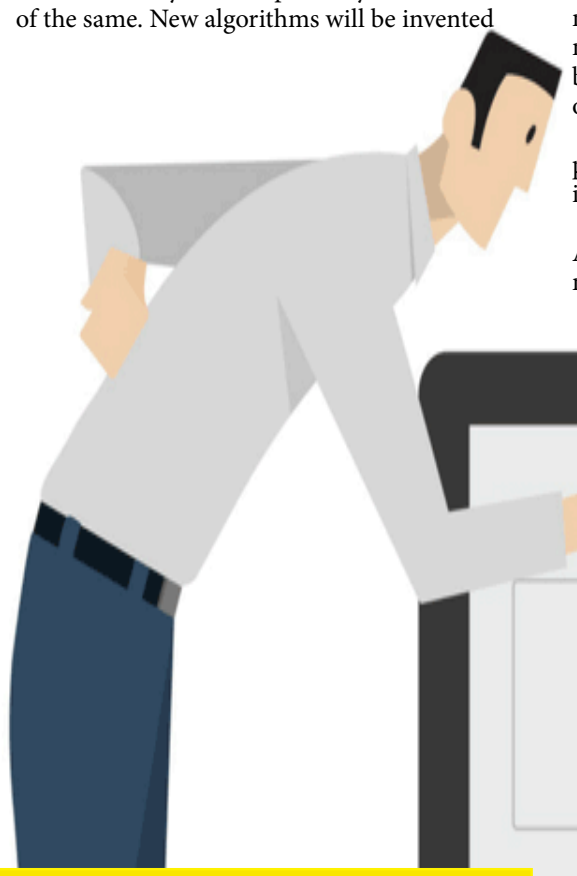
Jain and Reid have also investigated trust levels related to gender and cultural differences, as well as dynamic models able to predict how trust will change in the future based on the data.

AI an ally for future human rights?

Better healthcare:

AI has been nothing short of a revolution for the healthcare industry. Not since the discovery of antibiotics has the average physician's's ability to treat patients been so radically upgraded. Thanks to AI, doctors and emergency responders can see more patients, diagnose with greater accuracy, and save lives that otherwise would have been lost. It's a factual statement to say that there are people alive today who would be dead were it not for machine learning.

The next 10 years will probably see more of the same. New algorithms will be invented to further automate medical records and doctors will eventually diagnose in tandem with an AI. The first time a doctor misses a drug interaction at a clinic that has an AI-assistant that spotted it, we'll probably see a public outcry for all doctors to be AI-assisted. This is a good thing.



Fighting fake news:

AI can also help us track down hate groups or the source of politically motivated propaganda.

When hate spreads through social media, lies propagate through fake news campaigns, and politicians weaponize propaganda against, we can use machine learning and AI to find its root and expose the humans (and bots) responsible.

Today, researchers can retroactively unveil exactly how a particular fake news article spread and explain how bots were responsible. As scientists gain new and more powerful tools in the fight against bot-spread propaganda it'll become harder and harder for simple attacks to have the effect they've had over the past few years.

And even simple algorithms can help track down human hate groups. With publicly available data, it's currently possible to glean an incredible amount of information with machine learning.

In the very near future, something like the aforementioned "guardian angel" AI could include a warning system for indoctrination and propaganda, or at a minimum flag material of dubious quality in real time.

Empower the disabled:

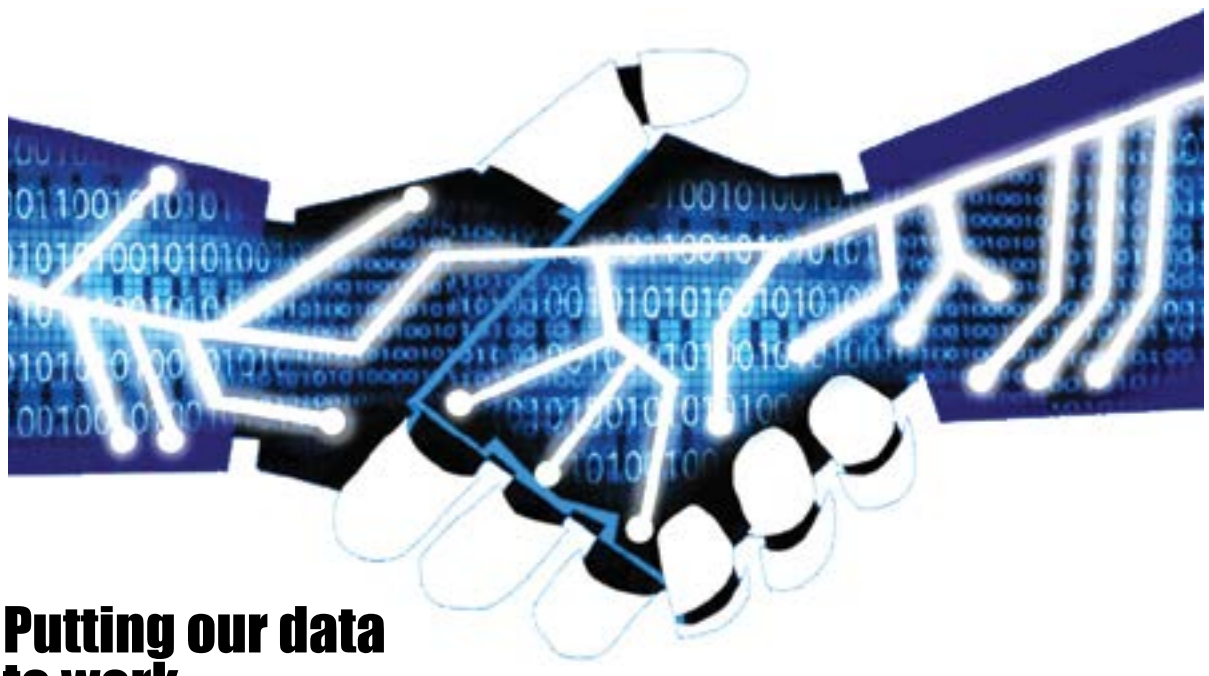
AI has changed people's lives in ways they could have never imagined. Take Tania Finlayson, who appeared on stage at Google's I/O event this year, for example. Were it not for current advances in machine learning she'd have no voice due to her illness. Thanks to a combination of machine learning and old-fashioned Morse code, she's able to communicate using a special device that relies on natural language processing AI.

Autonomous wheelchairs, AI for the blind, and a myriad of other machine learning-infused products have made an amazing difference in the lives of many already. But the future is even brighter.

Waymo just unveiled the private beta for its autonomous taxi service in Phoenix, Arizona. The world appears poised on the brink of the driverless car era and that could change everything for people who can't drive for reasons related to their health.

We might not quite reach perfect exoskeletons in the next decade, but AI is certain to bridge the gap between stationary prosthesis and bionics in that time.

No matter how well you get around, or where you're going, AI will help you get there in the near future.



Putting our data to work:

Eventually the big data bonanza will dry up as politicians and consumers get savvy, and companies like Facebook and Google are going to have to figure out a different way to print money.

Chances are someone will come along with a private lock we can put on the data, and a way we can sell the key to whomever we want.

We've said Facebook and Google should be paying us and we're wagering someone will come up with a way for people to monetize their own data within the next decade. It may not be worth much in its current form, but with AI handling the heavy-lifting, we could at least gain some much-needed control over our data.

Eventually enough people will get fed up with companies like Facebook making trillions of dollars by exploiting users for data and, just like folks got tired of paying extra for an attendant to pump their gas a few decades back, someone will figure out a way for us to self-serve our own data

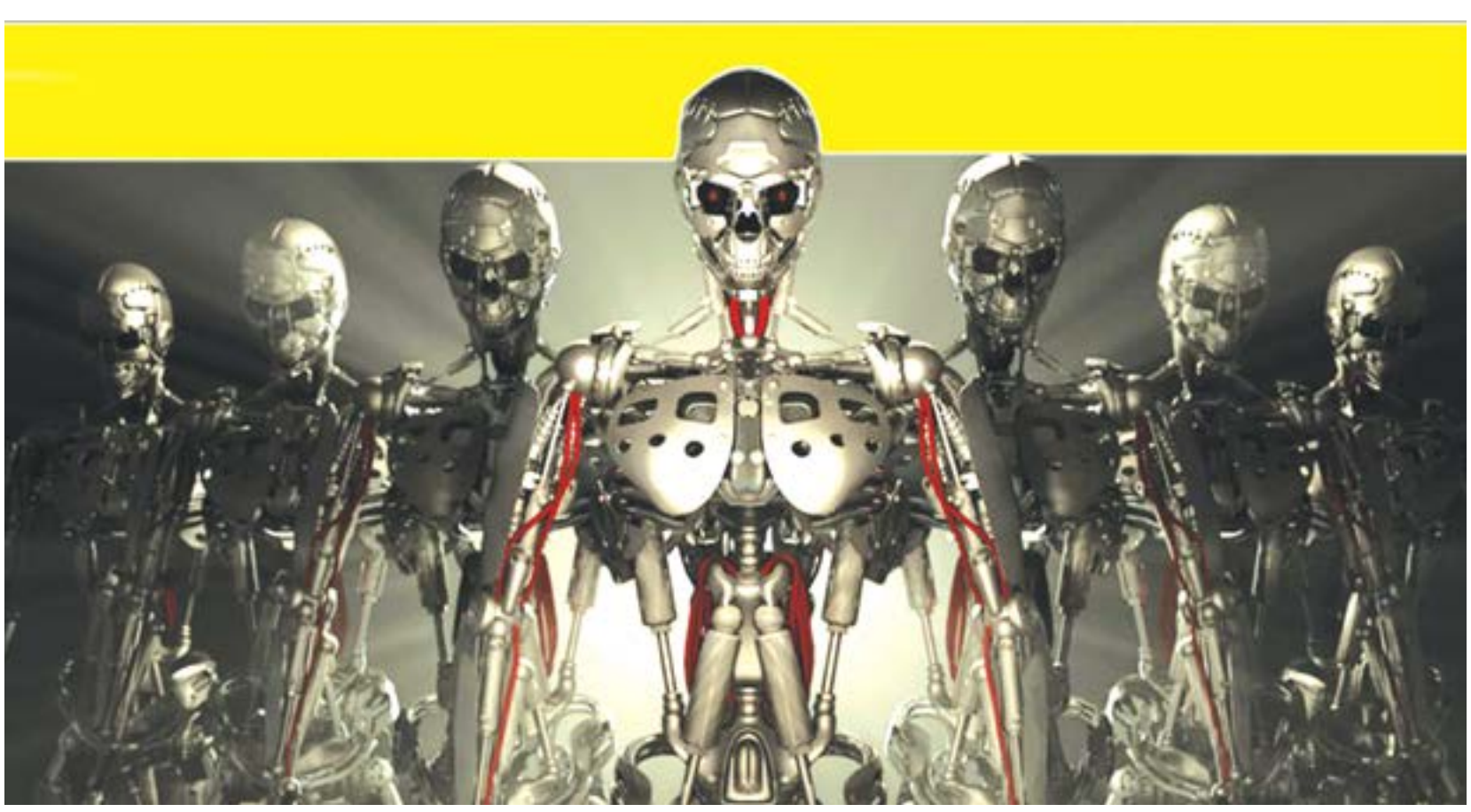
Better defense against predators:

The Nigerian Prince scam may seem laughable, but it's made billions of dollars. And it's going to keep making money because it preys on people who don't know any better. AI represents a new layer of security for everyone, especially those who aren't tech insiders.

Antivirus and anti-malware software have become a machine learning domain. And every major email client is infused with AI to handle spam and scam detection. Luckily, this protection is also starting to extend into messaging and social media. Eventually, everywhere we communicate, we'll have AI working in the background to – at a minimum – scan files.

But, it seems pretty clear that it wouldn't be beyond current technology to develop something that could offer more than just antivirus support for human interactions. And, there's probably a pretty good chance that Google Assistant or Apple's Siri will figure out a way to become more useful as we integrate our personalized virtual assistants further into our lives.

It's easy to imagine the emergence of a virtual "guardian angel," with access to monitor all of our accounts and interactions, constantly perusing our data in search of traps, scams, and potentially poor choices. For example, if you tried to PayPal money to certain addresses related to a scam, the AI could pop up a warning and explain what the problem is. This may sound like surveillance, but if the data were encrypted and anonymized it could be a mathematically sound idea.



Understanding the Project Management

Dr. Krishna Suresh M.D

Doctor of Alternative Medicine

NLP Practitioner/

Soft Skill Trainer/Faculty

softskillkrishna@gmail.com

According to Management expert, the definition to project is an activity to meet the formation of a unique product or service and thus activities that are started to complete regular activities cannot be considered as projects.

A project is not normal day to day activity undertaken by an organization rather it is specific, the non-routine activity of varying time frame and impact the viability of the business in the long run. A typical project has the following characteristics:

* Timeline: A project has a measurable starting and endpoint.
* Resources: A project has limited resource of capital and manpower.
* Tools: Special type of tools and techniques are used for project management.
* Team: Project management requires diverse team stretching across departments and function.

Project Management is the skill of dealing with every aspect of a project from commencement to conclusion utilizing a logical and organized technique. The term project might be utilized to characterize any undertaking that is impermanent in nature and with a start or an end. The project must make something one of a kind whether it is a product or administration it should be logically expounded. As the definition infers, a few out of every assignment can be viewed as a project. It is advantageous to remember this definition while examining their role and concentrate their job in the achievement of the organization.

The rational way to deal with the organization is engaging most of the manager in light of the comfort factor in such a methodology. It is common for managers to maintain a strategic distance from multifaceted nature and equivocalness in their workplace and consequently adopting a strategy that has been portrayed as intentional which empowers directors to progress in the direction as the favoured option.

A seasoned project manager realizes generally less demanding to deal with the subtleties of a project and make strides organized appropriately when you separate the project into stages. Isolating your project management endeavours into five stages can help give your endeavours structure and disentangle them into a progression of consistent and reasonable advances.

Project Initiation

Inception is the principal period of the project lifecycle. This is the place the project's esteem and possibility are estimated. Project managers normally utilize two assessment devices to choose whether or not to go after a project:

Business Case Document – This report legitimizes the requirement for the project, and it incorporates a gauge of potential funds related advantages.

Possibility Study – This is an assessment of the project's objectives, a course of events and expenses to decide whether the project ought to be executed. It adjusts the prerequisites of the project with accessible assets to check whether seeking after the project bodes well. In any case, projects that finish these two tests can be doled out to a project group or assigned project office.

Project Planning

When the project gets the approval, it needs a strong understanding to direct the group to keep them on time and on the spending plan. An elegantly composed project plan gives direction for getting assets, gaining financing and obtaining the required materials. The project plan provides the group guidance for delivering quality yields, taking care of risk, making acknowledgement, imparting advantages to partners and overseeing provinces they may experience through the span of the project, and causes them to comprehend the coders. The project plan also prepares the teams for unforeseen obstacles they might encounter over the course of the project and helps them understand the cost, scope and timeframe of the project.

Project Execution

This is the stage that is most normally connected with project management. Execution is tied in with building expectations that fulfil the client. Group pioneers get this going by designating assets and keeping colleagues concentrated on their relegated assignments. Execution depends intensely on the arranging stage. The work and endeavours of the group amid the execution stage are gotten from the project plan.

Project Monitoring and Control

Observing and control are some of the time joined with execution since they frequently happen in the meantime. As groups execute their project plan, they should continually screen their very own advancement.

To ensure conveyance of what was guaranteed, groups must screen errands to forestall scope creep, ascertain key execution pointers and track varieties from apportioned expense and time. This steady cautiousness helps keep the project pushing forward easily

Project Closure

Teams close a project when they convey the completed project to the client, imparting consummation to partners and discharging assets to different projects. This indispensable advance in the project lifecycle enables the group to assess and record the project and proceed onward the following one, utilizing past project slip-ups and victories to construct more grounded procedures and increasingly fruitful groups.

In spite of the fact that project management may appear to be overpowering now and again, separating it into these five particular cycles can enable your group to oversee even the most intricate projects and use time and assets all the more carefully.

The basic Soft Skill expertise that the project manager must have is extraordinary communication capacities. Since project chiefs need to cooperate with the clients, the colleagues, and related partners, the person needs to get the point crosswise over without communication holes. There are numerous projects where the project chiefs on account of limited communication abilities regularly get themselves unfit to articulate the issues and the goals to the colleague. It is an aphorism in contemporary hierarchical conduct hypothesis and practice that the project directors must have astounding composed and communicated in English abilities as the person needs to convey in creating and in addition amid oral discourse about the project goals and the project targets.

Apart from communication skills, the project administrators must have Conflict Management aptitudes. Since the project director is entrusted with the obligation of guaranteeing magnificent collaboration and group holding, the person must give the initiative by model and administration by individuals' management from which the colleagues can draw motivation and perform at their maximum capacity. In some multinationals, the training the general population administrator is unique in relation to the project manager and that this division assumes some liability of the project director, even for this situation, the project director still has a general obligation regarding collaboration and group attachment and consequently, his or her relationship building abilities must be excellent.

The project plan must contain the time taken to finish the project end-end from necessities to implementation. A nitty-gritty examination of each stage and the time taken for the equivalent must be laid out forthright and achievements for each stage characterized.

Team Selection

Group determination is a procedure that includes mapping of abilities and qualities of every individual part with that of the job and the expected set of responsibilities for which they are being employed or taken into the group. The procedure should consider the impression of the colleague in regards to the job for the person in question and guarantee that it is in accordance with the desires from them. Just this would guarantee a right fit between the individual individuals and the job for which they are being taken.

Group choice ought not to be an impromptu procedure and ought to include responsibility and tolerance from the project group. The supervisor needs to give enough idea to the determination standard and how they should be connected to the choice of colleagues.

Team Building Strategies

Team building is an endless procedure through more consideration must be given to the assignment right off the bat in the project lifecycle. The successful group building techniques call for expanded co-task and comprehension between the colleagues. The target must cultivate a soul of common support in the undertakings that they perform and that which they achieve.

The verbal, and in addition the non-verbal correspondence, must be empowered and developed with a view to inspiring the group to bond together. Successful group constructing additionally requires the colleagues to confide in one another verifiably and expressly. This includes a procedure of building affinity and signalling from one another concerning doing the undertakings together and accomplish more noteworthy co-activity and construct generosity among the group.

Conflict diffusing in Diverse Teams

The accompanying can be taken as the potential source of contention inside a different group: Groups chipping away at the project may have distinctive objectives and desires. For this situation, the main concern desires for the project must be set down and the project director must guarantee that the colleagues adhere to the desires for the project and figure out how to subordinate individual objectives and yearnings to that of the group objectives. A few clashes mirror the way that the everyday work on projects is normally done by a wide range of units of the association, units that regularly vary in their targets and specialized decisions. The outcome is that these units have distinctive assumptions regarding the project, its expenses and rewards, its relative significance, and it's planning.

Project Management has turned out to be irreplaceable to the modern day and the managers shape the basis of a lot of what is accomplished over the span of a project. In this way, the possibility of a project being overseen expertly fits the ideas and procedures spread out for the professionals of the craft of Project Management.

Himalayan marmot genome offers clues to life at high altitudes

Washington:

Researchers have sequenced the first complete genome of the Himalayan marmot, which may help better explain how the mammals survive at altitudes of up to 5,000 metres.

Marmots are found in the Himalayan regions of India, Nepal, and Pakistan and on the Qinghai-Tibetan Plateau of China, where many of them face extreme cold, little oxygen, and few other resources.

The findings, which appear in the journal iScience, hint at the genetic mechanisms underlying high-altitude adaptation and hibernation, said researchers at the Xi'an Jiaotong University in China.

They also serve as a valuable resource for researchers studying marmot evolution, highland disease, and cold adaptation.

"As one of the highest-altitude-dwelling mammals, the Himalayan marmot is chronically exposed to cold temperature, hypoxia, and intense UV radiation," said Enqi Liu of Xi'an Jiaotong University Health Science Center.

"They also hibernate for more than six months during the wintertime," Liu said.

Those striking biological features led Liu and his team, including Liang Bai, to consider the Himalayan marmot as an ideal animal model for studying the molecular mechanisms of adaptation to extreme environments.

To begin, they sequenced and assembled a complete draft genome of a male Himalayan marmot. They also re-sequenced 20 other Himalayan marmots, including individuals living at high and low altitudes, and four other marmot species.

Additionally, RNA sequencing was done to compare gene-expression differences between marmots in a state of torpor and awake marmots.

The DNA data show that the Himalayan marmot diverged from the Mongolian marmot about 2 million years ago.

The researchers identified two genes, Slc25a14 and ?Aamp (a processed pseudogene), that have been selected in different directions in marmots living at low versus high altitudes, suggesting they are related to survival in high-altitude populations under conditions of extremely low oxygen.

They further suggest that Slc25a14 may have an important neuroprotective role.

The shift in ?Aamp affects the stability of RNA encoding the gene Aamp, which may be a protective strategy to prevent the excess growth of new blood vessels under extremely low-oxygen conditions.

The RNA sequencing data show that gene-expression changes occur in the liver and brain during hibernation. These include genes in the fatty acid metabolism pathway as well as blood clotting and stem cell differentiation.

A previous study suggested that because the hibernator's brain is exposed to near-freezing temperatures and has decreased blood flow, there is an increased risk of blood clots, the researchers said.

Their brain stem cells may also be better prepared to repair injuries as an adaptation needed to survive extreme environmental stresses.