







DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 1.07.24

"OPTOGENETICS USING ALGORITHMS"

Scientists have identified an automatic behavior in flies that helps them assess wind conditions, its presence and direction ,before deploying a strategy to follow a scent to its source. The fact that they can do this is surprising ,can you tell if there's a gentle breeze if you stick your head out of a moving car? Flies aren't just reacting to an odour with a preprogrammed response: they are responding in context-appropriate manner. This knowledge potentially could be applied to train more sophisticated algorithms for scent-detecting drones to find the source of chemical leaks. To address this challenge, van Breugel and Stupski used a new approach that makes it possible to remotely control neurons ,specifically the "smell" neurons on the antennae of flying fruit flies by genetically introducing light-sensitive proteins, an approach called optogenetics. These experiments, part of a \$450,000 project funded through the Air Force Office of Scientific Research, made it possible to give flies identical virtual smell experiences in different wind conditions.











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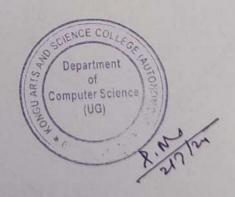
NEWS CORNER

Date: 2 - 07 24

"NEW COMPUTATIONAL MICROSCOPY"

A new computational microscopy technique solves for true high-resolution images without the guesswork that has limited the precision of other techniques. a team of Caltech engineers introduced a microscopy technique called FPM (for Fourier ptychographic microscopy). This technology marked the advent of computational microscopy, the use of techniques that wed the sensing of conventional microscopes with computer algorithms that process detected information in new ways to create deeper, sharper images covering larger areas. Now the same lab has developed a new method that can outperform FPM to obtain images free of blurriness or distortion, even while taking fewer measurements. The new technique, described in a paper that appeared in the journal Nature Communications, could lead to advances in such areas as biomedical imaging, digital pathology, and drug screening.

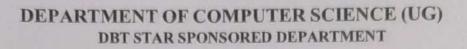
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NEWS CORNER

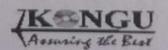
Date: 3 . 7 . 24

CROUDSTROKE PROBLEM HAD RESTORED

The US cybersecurity company has successfully restored 97% of its Windows sensors following a global outage caused by a faulty software update. The issue, which began nearly a week ago, affected 8.5 million devices running Microsoft's Windows operating system, leading to significant disruptions in services, including flights, healthcare, and banking. The outage was triggered by a fault in CrowdStrike's Falcon platform sensor, a security agent designed to protect devices from threats. The fault caused computers to crash and display the notorious blue screen of death. In response, CrowdStrike deployed a fix and mobilized all resources to support customers, enhancing recovery efforts with automatic recovery techniques. The recovery comes amidst scrutiny over the cybersecurity firm's quality control measures. Despite the challenges, CrowdStrike's swift response has helped mitigate further impact and restore critical services globally.

STAFF INCHARGE









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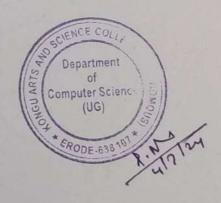


NEWS CORNER

Date: 4.7.24

NASA'S DATABREACH

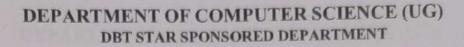
Hackers from North Korea, identified as Anadriel or APT45, have conducted a global cyber espionage campaign to steal classified military secrets, supporting Pyongyang's banned nuclear weapons programme. The joint advisory came from the United States, Britain, and South Korea. The hackers are believed to be part of North Korea's Reconnaissance General Bureau, which has been under US sanctions since 2015. These cyber units have targeted a wide range of defence and engineering firms, including those manufacturing tanks, submarines, naval vessels, fighter aircraft, and missile and radar systems. Notable breaches occurred at NASA and US Air Force bases, with significant data extraction. In one 2022 incident, hackers infiltrated NASA's computer system for three months, extracting over 17 gigabytes of data.











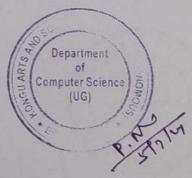


NEWS CORNER

Date: 5 - 7 - 24

GOOGLE'S ALPHA PROOF AI

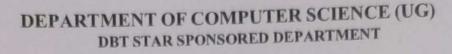
Alphabet's Google has revealed two innovative AI systems, AlphaProof and AlphaGeometry 2, which demonstrate significant advancements in solving complex mathematical problems. These systems tackled abstract math more effectively than previous AI models, showcasing enhanced reasoning capabilities. DeepMind, Google's AI unit, reported that these models managed to solve four out of six questions at the 2024 International Math Olympiad. AlphaProof, which integrates the Gemini language model with the AlphaZero system, solved three problems, including the most challenging one, while AlphaGeometry 2 solved another. These achievements mark the best performance by an AI system in the competition to date, with some problems solved in minutes and others taking up to three days. Meanwhile, Microsoft-backed OpenAI is developing a similar project known as 'Strawberry,' raising concerns among its staff about its potential impact on humanity.













NEWS CORNER

Date: 6 - 7 - 24

NVIDIA (SMC) EXPANDS GLOBALLY

Singapore-headquartered AI cloud provider Sustainable Metal Cloud (SMC) is set to expand globally, driven by fast-growing demand for its energy-saving technology. CEO and co-founder Tim Rosenfield announced plans to extend operations to EMEA (Europe, Middle East, and Africa) and North America in response to client demand. Currently, SMC operates "sustainable AI factories" in Australia and Singapore, with new launches planned in India and Thailand. Partnering with AI chip giant Nvidia, SMC uses over 1,200 of Nvidia's high-end H100 AI chips in Singapore to run open-source models like Meta's Llama 2. Unlike most data centres that rely on air cooling technology, SMC employs immersion cooling, submerging Dell servers fitted with Nvidia GPUs in a synthetic oil called polyalphaolefin. The following method reduces energy consumption by up to 50% compared to traditional air cooling.

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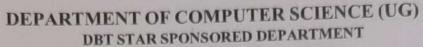












NEWS CORNER

Date: 8.7. 24

GOOGLE IS WORKING ON ATTAINING (AGI)

Researchers at Georgia Tech are training neural networks to make decisions more like humans, a significant step forward in AI. Traditional neural networks make the same decision every time, unlike humans who can vary their decisions based on context. The human-like decision-making is being integrated into AI to improve its reliability and accuracy. In a study published in Nature Human Behaviour, Georgia Tech's team introduced a neural network that mimics human perceptual decision-making. Using a Bayesian neural network (BNN) and an evidence accumulation process, the model produces responses with slight variations, much like human decisions. When tested on the MNIST dataset of handwritten digits, the model's accuracy, response time, and confidence levels closely matched those of human participants.











DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 9-7-24

"ADAPTIVE LEARNING"

Adaptive learning is a technique to use data-driven instruction to adjust and tailor learning experiences to meet the individual needs of each student. Adaptive learning systems can track data such as student progress, engagement, and performance, and use the data to provide personalized learning experiences. While equal education opportunity affords individuals equal access to resources, equitable education recognizes and addresses the differences between learners by providing the fitting material aligned with each to reach their academic endeavor. Adaptive learning along with adaptive teaching and assessment strives to provide equity in education to all learners.

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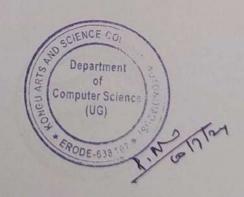
DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

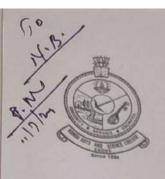
Date: 10-7-24

"VIRTUAL REALITY"

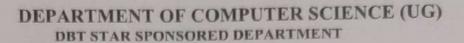
Virtual Reality (VR) is a computer-generated environment with scenes and objects that appear to be real, making the user feel they are immersed in their surroundings. This environment is perceived through a device known as a Virtual Reality headset or helmet. VR allows us to immerse ourselves in video games as if we were one of the characters, learn how to perform heart surgery or improve the quality of sports training to maximise performance. Although this may seem extremely futuristic, its origins are not as recent as we might think. The invention dates back as far as the mid-1950s. Subsequent technological and software developments over the following years brought with them a progressive evolution both in devices and in interface design.













NEWS CORNER

Date: 11.07.2024.

New AI Advances in Language Skills.

Artificial intelligence continues to make significant strides, with companies like OpenAI and Google leading the charge in innovation. OpenAI's latest models, such as GPT-4, have shown remarkable improvements in language understanding and generation, enabling more sophisticated and nuanced interactions. These models are now capable of handling complex queries, generating detailed and coherent text, and even understanding context better than previous iterations. Google is also making waves with its advancements in AI, particularly with its language models like BERT and the more recent LaMDA, which focuses on dialogue-based applications. These developments are enhancing various applications, from virtual assistants and customer service bots to content creation and advanced research tools. As these AI technologies evolve, they are poised to revolutionize how we interact with machines, making them more intuitive and human-like in their responses, thereby opening new possibilities across multiple industries.

STAFF INCHARGE











DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 12-07-24

Quantum Computing Milestones: IBM and Google's Latest Advances and FutureProspects.

Quantum computing has seen significant advancements recently, particularly from companies like IBM and Google. IBM's progress includes the development of its 127-qubit "Eagle" processor and a detailed roadmap aiming for a 1,000-qubit "Condor" processor by 2023. IBM is also enhancing its quantum software ecosystem with tools like Qiskit. Google, on the other hand, achieved a milestone in 2019 by demonstrating quantum supremacy with its 54-qubit Sycamore processor, performing a task in 200 seconds that would take classical supercomputers thousands of years. Both companies are focused on improving qubit coherence times and error rates, as well as developing error-correcting techniques. Collaborative efforts with academic institutions and industry partners are accelerating research in quantum algorithms and applications, such as quantum machine learning and optimization problems. These developments indicate a promising future for quantum computing, with potential applications across various industries including finance, logistics, and pharmaceuticals.

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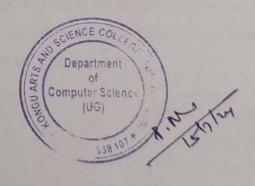
DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 15-7.24

"WIPRO IS HIRING BACK"

Wipro is back hiring, plans to add 10,000 - 12,000 employees in FY25 Wipro plans to hire 10,000 to 12,000 people, including on and off campus hires, for the financial year 2025, coming after the IT services major reported two consecutive full fiscal years of headcount decline. In the first quarter ended June 30, 2024, Wipro onboarded over 3,000 freshers and reported a net quarterly headcount addition of 337, following six straight quarters of headcount decline. The company also plans to add a similar number of hires in the range of 10,000-12,000 for the next fiscal year (FY26) as well. Wipro is back in the market to hire after a year, Chief HR Officer Saurabh Govil said on July 19, during the company's Q1 earnings conference. Govil added that Wipro will be completing onboarding of all of its backlog of offers made in FY25.











DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 16.07.24

"THE NEW DEPTH-SENSING TECHNOLOGY"

Portrait mode photography on smartphones might have 'biases' that result in lower quality images of subjects with darker skin tones, according to a study. The portrait mode effect on smartphones is digitally achieved by using depth-sensing technology to separate the subject from the background of the photo. However, Smartphone camera testing website DxOMark, published the results of a study conducted in mid 2023. The study aimed to measure user preferences on people's pictures taken using portrait photography modes on smartphones. The publication used flagship smartphones that were launched in late 2022 and early 2023. As part of the study, 405 scenes were captured using 83 regular consumers who modelled for the photos. The publication also developed a 'Satisfaction Index' to convert people's opinions into a score out of 100.











DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 18.07-24.

"AI RECOGNIZES ATHLETE'S EMOTIONS"

New emotion analysis model that can identify affective states with accuracy similar to that of humans using computer-assisted neural networks, Researchers at the Karlsruhe Institute of Technology (KIT) and the University of Duisburg-Essen have been able to accurately identify affective states from the body language of tennis players during games. For the first time, they trained a model based on artificial intelligence (AI) with data from actual games. Their study, published in the journal Knowledge-Based Systems, demonstrates that AI can assess body language and emotions with accuracy similar to that of humans. However, it also points to ethical concerns.













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NEWS CORNER

Date: 19-07-24

"GOOGLE's NEW ALU PROJECT"

GOOGLE will soon launch the Agricultural Landscape Understanding (ALU) Research API, a limited availability tool designed to make agricultural practices more data-driven and efficient. According to Google, the Agricultural Landscape Understanding API looks to address improving yields at farms, improving access to capital and providing market access to farm products. The use of ALU information is already being explored by select partners like Ninjacart, Skymet, Team-Up, IIT Bombay, and the Government of India. This tool will provide granular landscape insights at the farm field level. Google says that generating agricultural insights at an individual field level is critical to a change in the agricultural ecosystem. It refers to the challenges with the huge diversity of landscape and the crops leading to varied requirements for even fields in close proximity to each other.











DEPARTMENT OF COMPUTER SCIENCE (UG)
DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 20/4/24

"GOVERNMENT BANS QUANTUM COMPUTERS"

Governments bans on quantum computer exports have no basis in science, Several nations around the world have placed arbitrary limits on the export of quantum computers, despite today's devices having little practical use. The restrictions are counterproductive and at odds with the scientific method, Imagine if governments around the world announced restrictions on the sale of rulers that are 34 centimetres long. You would be pretty confused, given there doesn't seem to be anything special about that length – and 34cm rulers don't exist. Multiple nations enact mysterious export controls on quantum computers. The restrictions – which limit the export of computers with 34 or more qubits, or quantum bits, and error rates below a certain threshold – are puzzling, as such devices have no practical use, according to all published research.

STAFF INCHARGE
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DEPARTMENT OF COMPUTER SCIENCE (UG)
DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 22.07-24

"SUDDEN GLOBAL TECH OUTAGE"

A global tech outage that was related to a software update by cybersecurity firm CrowdStrike affected nearly 8.5 million Microsoft devices, Microsoft said in a blog post on Saturday. They currently estimate that CrowdStrike's update affected 8.5 million Windows devices, or less than one percent of all Windows machines it said in the blog. A Software update by global cybersecurity firm CrowdStrike, one of the largest operators in the industry, forced broadcasters off air and left customers without access to services CrowdStrike has helped develop a solution that will help Microsoft's Azure infrastructure accelerate a fix, Microsoft said, adding that it was working with Amazon Web Services and Google Cloud Platform, sharing information about the effects Microsoft was seeing across the industry.











DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 23 . 07 - 24.

"THE NEW PRIVACY LENS"

A new camera could prevent companies from collecting embarrassing and identifiable photos and videos from devices like smart home cameras and robotic vacuums. It's called PrivacyLens and was made by University of Michigan engineers. PrivacyLens uses both a standard video camera and a heat-sensing camera to spot people in images from their body temperature. The person's likeness is then completely replaced by a generic stick figure, whose movements mirror those of the person it stands in for. The accurately animated stick figure allows a device relying on the camera to continue to function without revealing the identity of the person in view of the camera. Also this smart device that removes personally identifiable information before sensitive data is sent to private servers will be a far safer product. With this level of privacy protection, the engineering team is hoping to make patients more comfortable with using cameras to monitor chronic health conditions and fitness at home.







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KONGU ARTS AND SCIENCE COLLEGE (AUTONOMOUS)





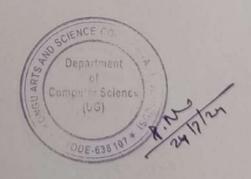
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NEWS CORNER

Date: 24.7.24

"MAHINDRA's Q1 RESULT"

Tech Mahindra Q1 Results: Net profit jumps 23% to Rs 851 crore, meets estimate Tech Mahindra on July 25 reported its Q1FY25 net profit jumped to Rs 851.5 crore, up 23 percent year-on-year and up 29 percent on sequential basis, on low base. Consolidated revenue for the April-June quarter rose 10 percent from the preceding quarter to Rs 13,005.5 crore. The IT services major's fiscal first quarter results met street expectations. A Moneycontrol poll of 10 brokerages pegged Tech Mahindra's Q1 net profit to swell to Rs 861 crore, mainly due to an exceptionally lower base in the previous quarter. Revenue was projected to rise to Rs 12,968 crore. The company's EBIT margin or operating margin came in at 8.5 percent, which is an improvement of 110 bps from the previous quarter's 7.4 percent. This was above Moneycontrol's estimate of 8 percent.











DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 25 7 24

"DIGITAL BABIES"

Researchers at University of Galway have created digital babies to better understand infants' health in their critical first 180 days of life. The team created 360 advanced computer models that simulate the unique metabolic processes of each baby. The digital babies are the first gender-specific computational whole-body models representing newborn and infant metabolism with 26 organs, six cell types, and more than 80,000 metabolic reactions. Real-life data from 10,000 newborns, including gender, birth weight and metabolite concentrations which can be personalised enabling scientists to investigate medicine applications. The team's research aims to advance precision medicine using computational modelling. They describe the computational modelling of babies as seminal, as it enhances metabolism and creates opportunities to improve the diagnosis and treatment of medical conditions during the early days of a baby's life, such as inherited metabolic diseases.









DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 26 - 7-24

"THE NEW SLICER 2 SOFTWARE"

Researchers at the Department of Energy's Oak Ridge National Laboratory have developed the first additive manufacturing slicing computer application to simultaneously speed and simplify digital conversion of accurate, large-format three-dimensional parts in a factory product. The technology, known as Slicer 2, can help widen the use of 3D printing for larger objects made from metallic and composite materials. Objects the size of a house and beyond are possible, such as land and aquatic vehicles and aerospace applications that include parts for reusable space vehicles on setting. Slicing software converts a computer-aided design, or CAD, digital model into a series of two-dimensional layers called slices. It calculates print parameters for each slice, such as printhead path and speed, and saves the information in numerically controlled computer language. The computer file contains instructions for a 3D printer to create a precise 3D version of the image











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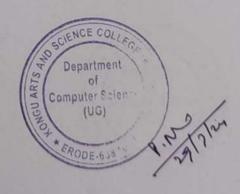
NEWS CORNER

Date: 29 - 7-24

"ADAPTIVE LEARNING"

Wearable technology is any kind of electronic device designed to be worn on the user's body. Such devices can take many different forms, including jewellery, accessories, medical devices, and clothing or elements of clothing. The term wearable computing implies processing or communications capabilities, but in reality, the sophistication among wearables can vary. The most sophisticated examples of wearable technology include artificial intelligence (AI) hearing aids, Google Glass and Microsoft's HoloLens, and a holographic computer in the form of a virtual reality (VR) headset. This VR headset can make a fantasy into real world and provide the same real world experiences from wearing it, and also people can communicate with each other like reality.

STAFF INCHARGE













DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 24-07-24

"NOW ALIS A FIREFIGHTER"

Researchers at USC have developed a new method to accurately predict wildfire spread. By combining satellite imagery and artificial intelligence, their model offers a potential breakthrough in wildfire management and emergency response. Detailed in an early study proof published in Artificial Intelligence for the Earth Systems, the USC model uses satellite data to track a wildfire's progression in real time, then feeds this information into a sophisticated computer algorithm that can accurately forecast the fire's likely path, intensity and growth rate. They then trained a generative Alpowered computer model known as a conditional Wasserstein Generative Adversarial Network, or cWGAN, to simulate how these factors influence how wildfires evolve over time. They taught the model to recognize patterns in the satellite images that match up with how wildfires spread in their model.











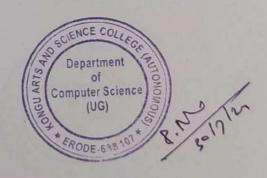
DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 30.7.24

"GAMIFIED LEARNING"

Gamification is the integration of game mechanics with conventional learning approaches. This enables teachers to incorporate more fun and interaction into the curriculum. However, to align the learner with particular objects and goals, serious games adhere to a standard game framework. To accomplish this, ed-tech businesses provide games using AR or VR and smartphones. As a result, students' motivation is increased, and their competitiveness is positively impacted by game-based learning. Furthermore, several firms create social games that help kids and teachers collaborate and develop their social skills.











DEPARTMENT OF COMPUTER SCIENCE (UG) DBT STAR SPONSORED DEPARTMENT

NEWS CORNER

Date: 31-07-24

"FY25 ANNUAL WAGE"

Mindtree pushes FY25 annual wage hike cycle IT services major LTI Mindtree will be rolling out annual salary increments in the October-December quarter or Q3 for the financial year 2025, CEO and MD Debashis Chatterjee said on July 17. This comes at a time when the IT sector is seeing a slowpaced recovery from the industry-wide demand slowdown. In FY24 too, LTI Mindtree had delayed its wage hike cycle, which typically begins in the month of April, to August. Last year, employees had received single digit increments in the range of 1-2 percent, while several of them also got zero percent hikes that had caused an outrage among people on internet forums. Chatterjee said, "We are seriously looking at the wage hike cycle in the later half, second part of the year...We are definitely considering Q3.".

