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NEW HORIZON COLLEGE OF ENGINEERING

Department of Information Science & Engineering

Infotech Patrika

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Foreword

Dr. Jitendranath Mungara, Professor & Head - Information science and Engineering

Welcome. This is my first opportunity to speak with you through the departmental technical magazine InfoTech Patrika. It has been an interesting and busy semester for members of the Department. It gives me great opportunity to present this issue of Technical Magazine exclusively by Information Science & Engineering department.

This magazine is one of the ways in which we can disseminate current trends in technology, research & developments.

I would like to request for your active collaboration over the coming months in the development of a shared vision for the department.

I would like to thank all my colleagues for their tireless efforts to help the department progress at a very steady pace

Dr. Jitendranath Munaara

About the Department:

Information science and Engineering department focuses on current Information Technology trends, and Domain Specific Applications. The program facilitates the evolution of skills in students to help them attain a higher degree of knowledge, global competency and excellence, for the betterment of the society. The Department of Information science and Engineering at NHCE was established in the year of 2001 and offers graduate and PhD programs. The four year B.E degree equip the students to meet day- to- day Technological advancements of the ever dynamic IT field through adept training on various subjects of curriculum of Information Science and engineering and beyond. The department offers B.E program through autonomous scheme from the year 2015. The department has a total intake of over 380 students with a very good team of highly qualified and talented faculty members including Professors, Associate Professors and Assistant Professors.

Information Science and Engineering course at New Horizon College of Engineering is designed to meet industry standard and cope up with the emerging technology. There is a great emphasis on holistic learning to help the students to make significant contributions at all levels and to meet the expectations of stakeholders. The department is well known for its research excellence in various competitive areas of Information Science. Students are made to involve vigorously in research activities. The department provides industry collaborated courses for the students.

This EEG headset can tell what music your brain likes

This EEG headset from Belgian research center Imec can assess your mood based on signals from the front of your brain -- and, by playing the right music, change how you feel. If you've seen electroencephalogram (EEG) technology, it probably had something to do with scientists researching brain waves by wiring a bunch of electrodes to somebody's skull. Now European researchers have an easier approach they think will break the technology out of the lab.

Imec's EEG headset, combined with AI software, can gauge emotions reflected by your brain's activity.Imec got its start as a consortium to blaze trails in next-generation microprocessor manufacturing, and that's still a core activity at the center in Leuven, Belgium. It's diversified into other areas, though, including health technology.

- Ms. Blessy Thomas

In-display fingerprint Sensor

- Ms. Deekshita S

The world's first phone with a fingerprint scanner built into the display. There's no home button breaking up your screen space, and no fumbling for a reader on the phone's back. You can simply press your index finger on the phone screen in the place where the home button would be. The screen will register your digit, then spun up a spider web of blue light in a pattern that instantly brings computer circuits to mind.

In fact, the fingerprint sensor - made by sensor company Synaptics - lives beneath the 6-inch OLED display. That's the "screen" you're actually looking at beneath the cover glass. You can see it in our photos here.

When your fingertip hits the target, the sensor array turns on the display to light your finger, and only your finger. The image of your print makes its way to an optical image sensor beneath the display.

It's then run through an AI processor that's trained to recognize 300 different characteristics of your digit, like how close the ridges of your fingers are. It's a different kind of technology than what most readers use in today's phones.

CTX Virtual Keyboard

CTX Virtual Keyboard is a $150 portable virtual keyboard for your smart phones and tablets. It uses a revolutionary laser technology to project a virtual keyboard and advanced optics to track your fingers. It connects using Bluetooth technology, and has an inbuilt, rechargeable li-ion battery.

- Mr. Rakshith Sridharan

Drones capable of reading human heart rate

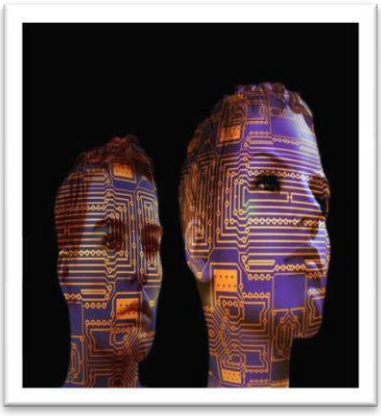
Australian researchers have developed a drone capable of measuring a person's breathing and heart rate from 60 metres away, an advance that may help during humanitarian crises.

The researchers led by Javaan Chahl from the University of South Australia (UniSA), showed that the drone was able to measure a subject's heart beat by using a camera to sense the top a person's head pulsing by approximately one millimetre with each beat, reports Xinhua news agency.

The drones were created in conjunction with the Australian Defence Force (ADF) to be deployed during humanitarian crises.

- Mr.Imad Ahmed M

AI system used to improve dialysis



Scientists have used an artificial intelligence (AI) system to design a device that may ultimately improve dialysis for patients by optimising blood flow in veins.

Researchers, including those from Imperial College London in the UK, used computer modelling techniques - normally employed to simulate how unsteady air pockets flow over a plane - to model how unsteady currents in blood flows in the veins of patients undergoing dialysis.

When the kidneys stop working properly, dialysis can be used to remove waste products and excess fluid from the blood by diverting it to a machine to be cleaned.

To connect this machine to the patient a special junction must be formed between an artery and a vein in the patient's wrist or upper arm. This junction is called an arterio-venous fistulae (AVF).

The AI then went ahead and optimised the shape of an AVF so that the unsteadiness in the blood flow could be suppressed.

- Mr.Kunal Narayan S

This algorithm can tell when you'll get bored of a smartphone game

Scientists have developed a new mathematical modelthat can predict how soon a user will get bored of a smartphone game, an advance that may help developers create more engaging apps.

Applied to videogames, the model called survival ensemble can predict what day and at what stage of the game a user will stop playing, and why they will do so.

The Silicon Studio platform adapts automatically to different games and data. According to the researcher, the system can predict who will leave the game very accurately.

The algorithm uses the so-called 'ensemble' method, "a model that is based on many learning algorithms instead of a single one, thereby improving the prediction accuracy by examining many more correlations and alternative models," .

- Mr. Niwas Acharya

The Mcor 3D Printer Builds Full Color Objects Out Of Paper

Mcor's claim to fame is using paper, it creates full-colour objects that are entirely recyclable.

This isn't Mcor's first paper printer, but this one is markedly cheaper and smaller than the company's flagship model, the Iris HD. The Arke costs only $5,995, and can sit on a table top weighing only 110 lbs, compared to the Iris HD which costs $36,400- $47,600 and weighs 330 lbs.

Since paper is the main material used, the cost of printing also drops. Mcor estimates that their paper costs only 10-20% of typical nylon or resin materials, and is completely recyclable. In fact, even the printed models can be recycled through traditional means.

- Nithya H P

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