

Air Bar

-Ms. Mansi Chalkikar (TY-IF)

"Transforming Laptop to Touch Screen Device"

Are You Bored With Your Old Laptops And Want A New Touch Screen Laptop? Get ready to pinch, swipe, zoom, and scroll without a touch screen. The Air Bar sensor works with your PC, and if you like to touch it, this is it.

Air bar is developed in Dec 2015 by Neonode, a Swedish company patented in optical touch technology. A device that enables touch functionality on non-touch PCs running Windows or Chrome OS operating system Transforming non-touchscreen Laptops into Touch Interactive Devices. This is a sensor working with your PC. You can unplug it when you want to. Very simple, just plug and touch. It is Familiar touch actions like swiping, pinching, zooming, and scrolling. Works whether you're using your bare finger, gloves, or any other object.

Air Bar covers your dumb display with a blanket of invisible light that allows you to interact with the screen through touch.



The Blue Eyes Technology

-Ms. Akanksha Mali (SY-IF)

Imagine yourself in a world where humans interact with computers. You are sitting in front of your personal computer that can listen, talk, or even scream aloud. It has the ability to gather information about you and interact with you through special techniques like facial recognition, speech recognition, etc. It can even understand your emotions at the touch of the mouse. It verifies your identity, feels your presence, and starts interacting with you. You ask the computer to dial to your friend at his office. It real-

izes the urgency of the situation through the mouse, dials your friend at his office, and establishes a connection. Blue Eyes system consists



of a mobile measuring device called Data Acquisition Unit (DAU) and a central analytical system called Central System Unit (CSU) interconnected by Bluetooth. DAU collects

information from the sensor and sends it over the Bluetooth and delivers the messages sent from CSU to the operator. CSU buffers incoming sensor data and provides visualization interface. The basic idea behind Blue Eyes Technology is to give computer the human power i.e. It uses non-obtrusive sensing method, employing most modern video cameras and microphones to identify the user's actions through the use of imparted sensory abilities.

Robotic Process Automation

-Mr. Harsh Wangikar (TY-IF)

Robotic process automation (or RPA) is a form of business process automation technology based on metaphorical software robots (bots) or on artificial intelligence (AI) / digital workers. It is sometimes referred to as *software robotics* (not to be confused with robot software).

In traditional workflow automation tools, a software developer produces a list of actions to automate a task and interface to the back-end system using internal application programming interfaces (APIs) or dedicated scripting language. In contrast, RPA

systems develop the action list by watching the user perform that task in the application's graphical user interface (GUI), and then perform the automation by repeating those tasks directly in the GUI. This can lower the barrier to use of automation in products that might not otherwise feature APIs for this purpose.



RPA tools have strong technical similarities to graphical user interface testing tools. These tools also automate interactions with the GUI, and often do so by repeating a set of actions performed by a user. RPA tools differ from such systems in that they allow data to be handled in and between multiple applications, for instance, receiving email containing an invoice, extracting the data, and then typing that into a bookkeeping system.

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Message From HOD

It's our pleasure to present second issue of news letter "TANTRA" of our department to all student's. This news letter is one of the ways in which we can disseminate the information about department. It covers various technological articles, departmental activities, achievements of students and staff members.

I wish you all Happy Republic Day..!

-Mr. A. S. Bhise

Tweaking AI software to function like a human brain improves computer's learning ability

-Ms. Gund C.N. (Lecturer)

Laptop primarily based artificial intelligence can characteristic greater like human intelligence when programmed to use a far faster approach for mastering new objects, say two neuroscientists who designed such a model that became designed to reflect human visual mastering. inside the magazine Frontiers in Computational Neuroscience, Maximilian Riesenhuber, PhD, professor of neuroscience, at Georgetown college scientific middle, and Joshua Rule, PhD, a postdoctoral



Riesenhuber. "we will get

pupil at UC Berkeley, provide an explanation for how the new method hugely improves the capability of a model designed to reflect human visual mastering. inside the magazine Frontiers in Computational Neuroscience, Maximilian Riesenhuber, PhD, professor of neuroscience, at Georgetown college scientific middle, and Joshua Rule, PhD, a postdoctoral pupil at UC Berkeley, provide an explanation for how the new method hugely improves the capability of a model designed to reflect human visual mastering. inside the magazine Frontiers in Computational Neuroscience, Maximilian Riesenhuber, PhD, professor of neuroscience, at Georgetown college scientific middle, and Joshua Rule, PhD, a postdoctoral computers to study tons better from few examples by means of leveraging prior gaining knowledge of in a manner that we suppose mirrors what the brain is doing." The massive exchange needed become in designing software program to identify relationships between whole visual categories, in place of trying the more widespread approach of figuring out an item the use of handiest low-stage neural networks to learn new and intermediate records, which include shape and shade, Riesenhuber says.

Hyperloop

-Mr. Shankar Karande (TY-IF)

The Hyperloop is a proposed mode of passenger and freight transportation, first used to describe an open source Victorian design released by a joint team from Tesla and Space X, although the Victorian concept was first proposed by Robert H. Goddard in 1904. Hyperloop is described as a sealed tube or system of tubes with low

air pressure through which a pod may travel substantially free of air resistance or friction. The Hyperloop could potentially convey people or objects at airline or hyper-sonic speeds while being energy efficient compared with existing high speed rail systems. This, if implemented, may reduce travel times compared to train and airplane trav-



Recent Trends In IT

Hacking -Ms. Bhakti Jadhav (SY-IF)

An unprotected computer is like an open door for computer hackers and predators. To take it a step further, protect your computers from hackers by using a spam filter or gateway to scan inbound email or messages. Product like Webroot Antivirus and Webroot Internet Security Complete thwart dangerous malware before it can enter your PC, stand guard every possible entrance of your computer and fend off any spyware or viruses that try to enter, even the most damaging and dev-

Ethical Hacking -Mr. Om Harwalkar (SY-IF)

Ethical hacking is the reason hackers are not showing that easy it is to way to find out the weak- having very good reputa- invade into the system or nesses and vulnerabilities tion. To avoid such condi- network for insiders. I in the system or computer tions many organisation have tried to explore the network. It is a way to de- have hired many ethical ethics behind the ethical scribe the procedure of hackers to keep a track on hacking and the problems hacking in an ethical way their system and computer lie with this particular for any network. The ethi- network. Ethical hackers field of information tech- cal hacker has the good are supposing to test and nology where security is purpose to do it. Actually check vulnerabilities and concerned. Though ethical it has become the general weaknesses in the present hacking has become a perception in our mind for system. There is one an- very upcoming technolog- hacker that he will be bad, other face of the coin- ical subject from the last fanatic, criminal and un- which tells that without few years, now the doubt ethical. Basically some of hackers the vulnerabilities remains the true intentions the hacker has even done and holes of software of the hacker. Hackers in very badly with some or- would remain undiscover- this context have had a ganisations like they have ed . In this paper I have very measurable impact stolen very important in- tried to explain the good on society. There are sev- formation of their custom- and bad face of hacker eral fields in computing ers. In some of the gov- and even of ethical hack- where hackers made ernment organisations ers also and what re the measurable impact on so- they have damaged very different impact on the ciety. confidential information different areas of our soci- like social security num- ety. A study shows that bers and other sensitive almost 90% attacks hap- information. That is the pen on the inside which

Departmental Achievement

- All Faculty members has Completed at least four Online Courses from Coursera
- Each Faculty has Attended at least 04 Online Trainings in the Lock-Down Period
- Department Has organized 03 Online Training Programs
- 100% Students of 2nd Year has gone for Online Training By Intershala.
- Department has got Center for Microsoft Technology Associates (MTA)
- Nodal Center of Virtual Lab (VLab) from College of Engineering Pune



MSBTE Summer 2020 Examination: Our Ranker's

Sr. No.	Name of Students	Class	Percentage	Rank
1	Ms. Mali Akanksha Rajendra	F.Y.	95.49%	First
2	Ms. Ghadage Priya Sambhaji	F.Y.	94.17%	Second
3	Ms. Bhosale Rajnandini Nandu	F.Y.	93.46%	Third
4	Mr.Khiste Makarand Satish	S.Y.	96.5%	First
5	Ms.Ghadage Punam Rajaram	S.Y.	96%	Second
6	Mr. Hivarekar Mayuresh C.	S.Y.	95.38%	Third
7	Ms. Sayyad Gausiya Ayub	T.Y.	99.73	First
8	Mr. Bahirat Ajinkya Atul	T.Y.	98.53	Second
9	Mr. Koli Ashutosh Shankar	T.Y.	98.13	Third

EDITORIAL

It gives us great pleasure to present the second issue of our Departmental newsletter "TANTRA"2021, which gives us the opportunity to focus the achievements in our department and new trends in Computer Engineering field.

We are thankful to all the students and faculties who have contributed during the preparation of this newsletter. We have tried our best and given positive efforts, expecting creative responses from everyone to continue the flow of knowledge through this quarterly newsletter.

Editor -
Mr. S. A. Zambare (Faculty)

Papers Presented

- Mr. Ajinkya Bahirat Student of Third Year IT Presented Paper on Modern Education using Augmented Reality
- Mr. S. A. Zambare presented Paper on Bando-bast Allocation and Attendance System.
- Mr. L. B. Deth, Ms. G.J. Khare presented paper on Efficient and Interactive Fuzzy type ahead Search in xml Data
- Ms. G.J. Khare & Mr. A.S. Bhise presented paper on IoT based interactive motion detection security system using Raspberry Pi

Our Vision

To be recognized one among the premier Information Technology Department in Maharashtra to empower the capabilities of students in education with professional ethics enabling students to reach higher goals in the field

Our Mission

- To impart value based technical education in Information Technology
- To support the students for technical knowledge in the field of Information Technology
- To make students efficient in various skill sets in Information Technology
- To encourage students for lifelong learning

Quantum Computing -Mr. Rohit Koli (SY-IF)

Quantum computing is an area of computing focused on developing computer technology based on the principles of quantum theory, which explains the behavior of energy and material on the atomic and subatomic levels. Every day we create volumes of data. In order to adequately process it all to extract meaning from it, we require much more computing power. That's where quantum computers step in to save the day. Since the early 20th century when the atom was first studied, quantum physics has been defying logic, as atoms don't follow the traditional rules of physics we are used to. Capable of moving both backwards and forwards in time, quantum particles can exist in two places at the same time and even 'teleport'. Quantum computers are aiming to utilize these capabilities to become highly-efficient, as they use quantum bits or qubits instead of the simple manipulation of ones and zeros. Qubits, or quantum bits, are a unit of quantum information and a two-state quantum-mechanical system. The simplest form of entanglement can be represented by the Bell State, as it explains how quits have a perfect correlation that doesn't fit in with quantum mechanics' laws.

Artificial Intelligence -Ms. Priya Ghadage SY-IF)

Artificial intelligence (AI) have no memories. They responses. This makes can play games like chess, them great for automated but they won't recall what customer service. The next level up has limited memory, and the third can develop an understanding of the world around it. Social media bots can fall into this category. IT professionals can use these two levels of AI to perform functions within the workplace, such as risk management and cyber security. their last move on the board was. They simply analyse the situation in the moment and respond with a well of pre-programmed

