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B-SMART

We Explore We Exhibit



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B-SMART

(**B**VRITian **S**tudent **M**agazine on **A**dvanced
Research & **T**echnologies)



VISION

To emerge as the best among the institutes of technology and research in the country dedicated to the cause of promoting quality technical education.

MISSION

At BVRITH, we strive to

- Achieve academic excellence through innovative learning practices.
- Enhance intellectual ability and technical competency for a successful career.
- Encourage research and innovation.
- Nurture students towards holistic development with emphasis on leadership skills, life skills and human values.

B-SMART is here to keep the students and the faculty members informed with the latest development in the area of science, engineering & technology. It also inculcates the habit of reading among students about new trends in technology and emerging areas and to provide a platform to the student for sharing knowledge.

Principal's Message



Happiness lies in the joy of achievement and the thrill of creative effort.

Franklin D. Roosevelt

**Dr. K. V. N. Sunitha,
Principal, BVRITH**

BVRIT HYDERABAD College of Engineering for Women is happy on its achievements through its creative efforts. We feel proud to apprise that, this year, our institute is conferred Autonomous Status by UGC for a period of 10 years. This time, we are positioned in the band 151-300 by NIRF in Innovation Category for 2023. Additional feathers are, we are ranked 165 in Week Hansa Survey Best Colleges of India 2023 and ranked 132 in India Today College Rankings 2023. NDLI club, which is an initiative of IIT Kharagpur is very active in BVRIT HYDERABAD. Our activities were recognized and our NDLI club is rated as one of the top 10 and secured 3rd position in the country. The Institution's Innovation Council (IIC), BVRITH obtained a star rating of 3.5 out of 5, by the Ministry of Education. And also, we are very happy to inform that the First Student-Faculty Start Up, 'INVIU Systems' was inaugurated and incubated in the campus. And the latest feather in our cap is that, our college has been adjudged as a recipient of the IEI Engineering Education Excellence (Gold) Award 2023, in the category Best Women Engineering Institution / College.

We are grateful and feel humble with each achievement and are fully aware of our responsibility towards the society and nature, as we grow each step. Our dedication was acknowledged with the Green Institution Award in Nizampet Division, in June 2023.

Our Technical Magazine 'BSMART' is a mirror to our technical achievements and technical awareness. This is Volume 8, Issue 2 of BSMART. Let me announce the prize winner for the previous edition. 'P. Sridevi' of CSE, for her contribution 'Flight with Robotics', has won the prize in the last issue.

I congratulate the contributors of the articles and the dedicated faculty and student coordinators for their sincere efforts in bringing forth this edition of the magazine.

With Best Wishes

Dr. K.V.N. Sunitha

As You Turn the pages....

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Name to Fame

BVRIT HYDERABAD proudly introduces its star of the time and wishes her 'The Best in Life'



I am Jyothi Vummadi from the pioneer batch of CSE(AIML), 2020 – 2024. Before I share the milestones of my journey so far, I would like to take this opportunity to thank everybody from our college who have supported me directly or indirectly in any possible way. I believe each and every one of them are responsible for where I stand today. 2020 without a doubt has to be one of the most bizarre ways to begin a decade. People belonging to several different phases and facets of life have all been affected in an arguably disastrous way. I was one among those millions, who was looking forward to having a great college life before being hit by the pandemic. Thus, while typically college begins with a fresher's; ours began by downloading zoom and google meet. While it wasn't the ideal way, we navigated it swiftly to find our footing. One of the several different things that was introduced to us was the WISE (Women in

Software Engineering) program by TalentSprint and our college. Prior to this, I had no knowledge on any fundamentals of programming. I only had a mild idea about DBMS thanks to the Informatics Practices subject in 12th. WISE played a very crucial role in establishing a foundation in python. Soon after, I got to know about the WE (Women Engineers) program also by Talent Sprint. Due to the basic knowledge I had already acquired on python, I gave the test to get into the WE program and got selected with a 100% scholarship.

Stepping into WE opened up horizons in multiple dimensions. Through their industrial level scrutiny, the mentors disciplined me, encouraged me to multitask and manage between college and WE, polished my coding skills through continuous evaluation tests and leetcode competitions, pushed me to stay competitive. WE also played a humongous role in refining my

communication skills, forming connections, providing opportunities. Armed with these new skills, I began applying for different internship opportunities in my 2nd year. One of the notable ones was the STEP Internship for which I was rejected after 2 interviews in 2-1. In the beginning stages of my 2-2 I got to know about the Microsoft Engage program. It involved resume screening, two online assessments after which I was mentored by a Microsoft employee for a month. In that one month I finished a project on Face Detection. After submitting that, I had two more interviews before I got an opportunity to intern at Microsoft.

Before my internship started at Microsoft, I also attended the Smart Interviews sessions conducted by our Training and Placement Department which helped me to brush up a few concepts and learn couple more concepts. During my internship I worked in the ODSP department and the main topic of focus was Computer Networks. At the end of my internship, I gave a presentation that summarized my work during my tenure there. Nearly 2 months later, I was offered an FTE role which was beyond a dream come true, because if someone told me I would

be here when I initially joined, I would have called it a bluff !!!

If I had to summarize what lessons or realizations I had so far, it would be that failures are a consistent part of our life, irrespective of whether we like it or not. So, while we try our best to ace them it is wise to not take the rejections to heart. Doing so would just act as a hinderance to what all we could potentially achieve. Instead, we could always learn and enhance our capabilities from the newfound experience. I have also realized that often we think a lot before applying somewhere, wondering if we are even ready. But truly, we never are completely ready, it is wise to leave the choice of rejecting us to the company instead of we rejecting ourselves without even bothering to try. Like Bryant McGill once said, "Rejection is merely a redirection", which I find very relatable in the current phase of life. I would once again like to thank each and every one for their spoken and silent support that molded me into who I am today.

Jyothi Vummadi
CSE-AIML



COVER STORIES

COVER STORY – 1

**3rd PRIZE WINNERS AT AWS
HACKATHON WITH CASH
PRIZE OF RS.4000/-**



Team Members:

Ms. B V S Anjani Sukanya

Ms. M Apoorva

Ms. M Sree Akshitha

Ms. Sheri Vaishnavi Reddy

Ms. Bhavitha Sankranthi

In the thrilling realm of technology and innovation, our team of 3rd-year IT students from BVRIT Hyderabad College of Engineering for Women recently soared to new heights at the 24-Hour Hackathon on Amazon Web Services (AWS). Hosted by Brain O Vision Solutions at MLRIT Hyderabad on the 21st and 22nd of June, our relentless pursuit of excellence secured us a remarkable 3rd position in the competition. As we immersed ourselves in the dynamic world of AWS, our collective skills and passion for IT shone brightly. The hackathon proved to be a crucible of challenges, demanding not just technical prowess but also the ability to collaborate seamlessly under tight deadlines. In the given circumstances, our team showcased perceptive thinking and unwavering determination. As a result, we received recognition and appreciation for the innovative and creative solutions.

This experience, filled with intense coding sessions and collaborative problem-solving, not only enriched our understanding of cutting-edge technologies but also highlighted the significance of teamwork in overcoming hurdles. As we look back on this exhilarating journey, we anticipate that the lessons learned and the connections forged during the hackathon will propel us towards future successes in the ever-evolving landscape of technology.

"True freedom is impossible without a mind made free by discipline."

COVER STORY – 2

FIRST RUNNER-UP IN PALS- NEXTGEN 3D HACKATHON – 2022

Title:

SMART RESIDENTIAL LIGHTNING

Team Members:

Ms.CH. Preethi

Ms.B. Pragnya Angel

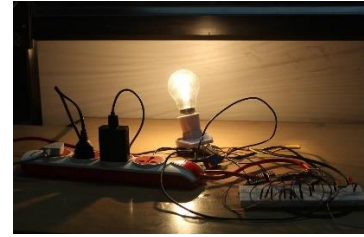
Ms. A. Pavani Reddy

Ms. G. Ramya Naidu

Mentor:

Mr. Ch. Santhosh Kumar

Assistant professor, EEE



In the realm of cutting-edge technology and innovation, our team embarked on a journey into the world of Smart Residential Lighting using Raspberry Pi, a venture that unfolded during the PALS NexGen 3D Hackathon conducted by PALS IITM & NexGen 3D Ltd. held from October 28th to November 6th, 2022, this hackathon provided a platform for exploration, collaboration, and pushing the boundaries of what's possible in the realm of smart home solutions.

Our quest started when we realized the Raspberry Pi, a credit card-sized computer with a wide range of uses, had the potential to change the world. Driven by our shared enthusiasm for technology and creativity, we conceived of a project that may revolutionize the way that home lighting is experienced by incorporating Raspberry Pi.

Our project focused on a smart home lighting system using Raspberry Pi, enabling remote control of LED strips and smart bulbs. Our adept coding in Python showcased technical skills, emphasizing Raspberry Pi's versatility as a smart device hub. The hackathon presented challenges with time constraints and rapid prototyping, pushing our team to collaborate effectively and think on our feet. Overcoming these hurdles not only strengthened our technical skills but also built camaraderie and resilience within the team.

Looking ahead, we are inspired to refine our project and address hackathon-identified limitations, our team is driven by a collective passion to explore technology's intersection with daily living, with Raspberry Pi as our beacon of innovation.

“Set your goals high and don’t stop till you get there.”

COVER STORY – 3

Got selected in NXP WOMEN IN TECH and also got selected as one of the Top 60 women engineering students in WIT Programme

MS. P. LAHARI
II EEE



I'm Lahari, of II EEE. I like challenges, which help me to unveil my potentials. NXP Semiconductors evaluation was such a challenge. I approached the task with seriousness and deployed all my efforts. There were three registration filtering stages in NXP's WIT (Women In Tech) programme. The first round of selection was based on the marks and the Resume. I was shortlisted for the Aptitude & Paragraph Writing Test. After a good practice, I could clear those rounds. The next round was a virtual interview which lasted thirty minutes. I was overwhelmed when I received a mail on October 30 2023 stating that I had been accepted into NXP's esteemed Women In Tech (WIT) programme. From application till the result, it was the college administration which stood as a rock pillar for me. I'm grateful to my institute for offering great support throughout the process and for having immense faith in my unwavering efforts. It was that support and my well-wishers' blessings that made me eligible to be one among the top 60 selects in India, out of more than 8500 registrations. The WIT Program of NXP Semiconductors include 'A full stack course in semiconductor design'. It includes weekly graded quizzes, industry-relevant use cases, and individual practise project assignments. The schedule is convenient for students to follow from home. The program's benefits include a monetary award of INR 50,000 from NXP, technical instruction from business leaders to foster innovation, Preference for NXP internship and employment opportunities.

"Small is not just a stepping stone. Small is a great destination itself."

COVER STORY – 4

**WINNER IN
TELANGANA GOT TECH
TALENT & ALSO RECEIVED A
FUNDING OF RS. 1 LAKH**

Title:

Smart Guardian

Team Members:

Ms.Manasa Chalasani

Ms.B Sita Swapnika

Ms.M S S Priyanka

(IV CSE)

Mentors:

Mr. R S Muralinath,

Professor, CSE

Mr.N M Sai Krishna,

Assistant Professor, ECE

Mr. R Priyakanth,

Associate professor, ECE



Our journey with the Smart Guardian began in January 2023. As a team of three students, we embarked on a transformative mission during the ‘Telangana got tech talent’ hackathon organized by BlackBucks in collaboration with JNTUH with the theme ‘Fatal road accidents’.

The grand finale unfolded at JNTUH on April 19, 2023, a day etched in our memories, where our idea, Smart Guardian, triumphed over 2000+ competing themes in the hackathon. The judging panel included eminent figures such as the Vice Chancellor and Rector of the university, CEO of MacAI and the dignitaries from the Telangana Transport Department, alongside the BlackBucks team.

Smart Guardian, our brainchild, blends security and comfort. Beginning with a discreet license scan, it ensures authorized access. It is a companion, monitoring vital signs and intervening gently for driver alertness. Combatting drunken driving, it orchestrates a controlled slowdown, activates lights, and signals authorities. A seasoned guide in road sign interpretation, it communicates with clear voice commands. Adapting to road conditions, it fosters an interactive journey, emphasizing safety in a shared responsibility. In short, Smart Guardian transforms driving into a secure and comfortable experience.

However, our victory didn't stop there. The idea evolved into a project that secured a funding of 1 Lakh from one of the incubators at IIT Hyderabad, Itic. This not only showcased technological innovation but also marked the transformation of our concept into a tangible project with support from a prestigious incubator. Our creation continued to make strides, leaving an indelible mark on the landscape of responsible and intelligent driving.

“Inspiration does exist. But it must find you working.”

COVER STORY – 5

**Ms. M. Samili Shresta
(IV CSE)**



WINNER IN NASSCOM-TECH INNOVATIVE CHALLENGE IN CLIMATE CHANGE CATEGORY

Title:

**Oil Collection on the Ocean
Surface using Different
Technologies**

Oil spills on ocean surface have devastating effects on marine environments, causing ecological damage, threatening marine species, and impacting coastal communities. These spills can contaminate water, affect fisheries, and harm coral reefs. It is crucial to implement effective strategies to mitigate the impacts of oil spills and protect our oceans. Creating a machine to extract oil from ocean water is a complex task. So as the solution, we have come up with an integrated circuit which includes a machine which does not harm the marine life or the ocean. This machine uses ‘Skimmers’, a technology used to remove the bulk of surface oil from the water. The oil-water mixture collected by the skimmers is directed to hydro-cyclone separators. These separators remove larger oil droplets and further separate oil from water based on density and then moves to Membrane Filtration, which helps smaller oil droplets to be filtered out through the ultrafiltration. The Oil Detection Sensors confirm if the treated water is free from oil. After purification, fresh water is sent back to the ocean. This machine is in the form of a fish, which helps it to locomote freely.

This comprehensive system offers multiple stages of treatment and enhance the overall effectiveness of water purification and is usually addressed through a combination of physical, chemical, and mechanical processes.

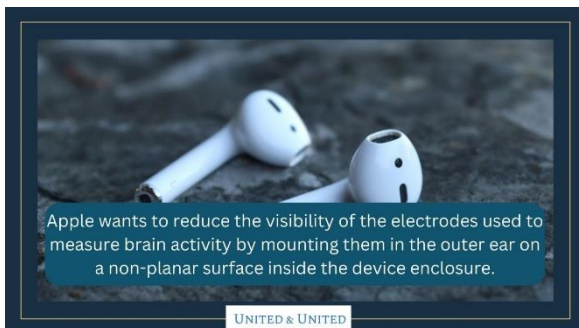
This solution uses the technologies and machines to the most and make the process much easier and faster. This creates employment to the people and at the same time we can safeguard the ocean too. So, I believe that this idea is bit unique. This idea lead me to win the Competition in the Nasscom-Tech Innovate Challenge. Implementation of this idea might make an impact on the ocean and marine life and help in the persevering for future generations.

“Do the best you can. No one can do more than that.”

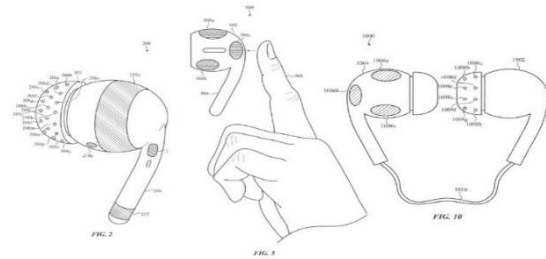


The Next generation Air Pods Sensor measuring bio signals: a wearable health device

The air pods with an array of active electrodes, not all electrodes need to be activated simultaneously can intelligently select a subset of sensors to measure and record a desired bio signal. The electronic device houses number of active, reference electrodes and configures reduced visibility of the electrodes currently used



to measure brain activity. The bio signals generally measured by medical devices such as Electroencephalography, Electromyography, Electrooculography, Electrocardiogram, Galvanic skin response and blood volume pulse etc can be measured by this device that would ensure and collect the accurate data regardless of the user's ear canal shape and size. The wearable electronic device includes electrodes on the nonplanar surface, a sensor circuit and a switching circuit. The factors and environmental



aspects such as impedance level, ambient noise etc can be monitored that thereby unlocks a set of unique possibilities for personalised and potential health monitoring device. The data collected from air pods could tell you when you need to take a break, what type of music makes you more productive and could add sleep tracking data.

Apple covers the US patent and Trademark, published a patent application that relates next generation of Air pods sensor system that could measure bio signals and electrical activity of a user's brain.

Reference:

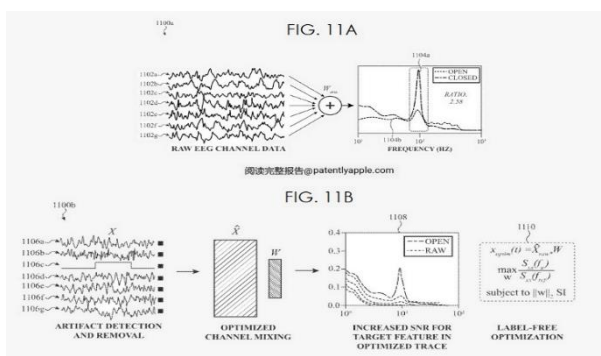
<https://shorturl.at/JLOPT>

Dr. V. Madhavi
Associate Professor
Department of BS&H

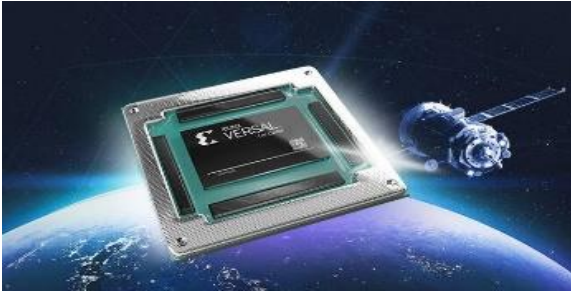


AI SoC in Space Applications

In the ever-evolving landscape of space exploration, Artificial Intelligence (AI) System-on-Chip (SoC) technology has emerged as a transformative force. These specialized chips, designed to process AI algorithms efficiently, are finding crucial applications in space missions. The integration of AI SoCs in space applications empowers spacecraft with advanced onboard processing capabilities, enabling autonomous



decision-making, navigation, and data analysis directly in space.



Reprogrammability is a key feature, allowing these AI SoCs to adapt to dynamic mission requirements through software updates. This enhances the flexibility and longevity of space systems. Deep learning algorithms implemented on AI SoCs facilitate tasks such as celestial object recognition and image analysis, contributing to the success of scientific experiments and space exploration missions.



Moreover, the use of AI SoCs in satellite constellations optimizes communication, data transmission, and network management among interconnected satellites. The challenge of radiation in space is addressed through the development of radiation-hardened AI SoCs, ensuring the reliability of electronic components in harsh space environments.

As collaborations between semiconductor companies and space agencies intensify, AI SoCs continue to drive innovation, bringing enhanced autonomy, efficiency, and adaptability to the frontiers of space exploration. These

technological advancements mark a new era in space applications, where the marriage of AI and SoC technologies propels us further into the cosmos.

Reference:

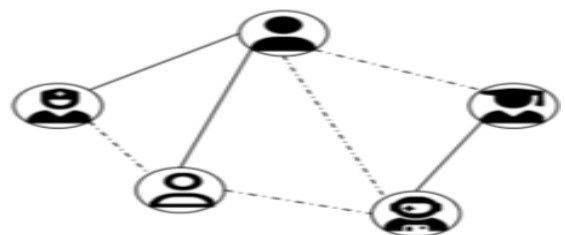
<https://ieeexplore.ieee.org/document/9288809>

Ms. R Sahithi
Assistant Professor
Department of ECE



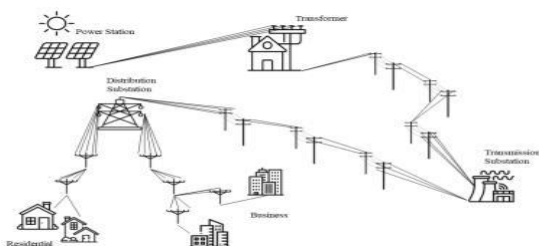
Enhancing Power System Using Graph Topology

Power system analysis is a critical aspect of ensuring the reliable and efficient operation of electrical grids. Traditionally, power system analysis has focused on mathematical models and optimization techniques to analyse the behaviour of individual components and the overall system. However, with the increasing complexity of modern power systems, there is a growing need to incorporate the inherent graph topology of the grid into the analysis process. With the use of graph theory and graph-based models like Graph Neural Network (GNN), the intricate interconnections between power system



components are captured. In Power flow analysis, we calculate the unknown variables using known variables using electrical formulas. Similarly, GNN employs the prediction of unmeasured variables using measured variables to effectively compute the power flow.

“It is better to fail in originality than to succeed in imitation”



GNN models effectively utilize the connectivity information of a graph by incorporating the adjacency matrix in their operations. This characteristic allows for parameter sharing, which improves model accuracy, particularly when the size of the training dataset is limited. The utilization of graph topology in power system analysis offers valuable insights and benefits for understanding the behaviour and operation of electrical grids. Further research and advancements are still needed to fully harness the potential of graph topology analysis in power system analysis. This includes developing more sophisticated graph-based models, refining data representation and pre-processing techniques.

Tools and Technology

The IEEE 14 bus system is designed using the PyPsa tool. The PyPsa tool is used to transform normal IEEE 14-bus system data into a visible bus network connection. Artificial neural networks are the technology in use. Both Graph Neural Networks (GNNs) and Fully Connected Neural Networks (FCNNs) are employed in the field of artificial neural networks.

Conclusion:

The study offers a thorough analysis of GNN's use in power flow applications. The outcome leads to several inferences. GNN models effectively utilize the connectivity information of a graph by incorporating the adjacency matrix in their operations. This characteristic allows for parameter sharing, which improves model

accuracy, particularly when the size of the training dataset is limited. In scenarios where data availability is restricted, such as when acquiring new data is expensive, GNN outperforms traditional FCNN models. In conclusion, the utilization of graph topology in power system analysis offers valuable insights and benefits for understanding the behaviour and operation of electrical grids. Further research and advancements are still needed to fully harness the potential of graph topology analysis in power system analysis. This includes developing more sophisticated graph-based models, refining data representation and pre-processing techniques, and exploring novel applications that leverage the inherent structure of power systems.

Reference:

<https://www.iosrjournals.org/iosr-jeec/Papers/Vol18-Issue5/Ser-1/A1805010108>

Ms. Babita Gupta
Assistant Professor
Department of EEE



Digital Twin - Physical to Virtual made easy: The new era in IT

Technology has been evolving in multiple dimensions in the last couple of decades. The Information Technology is witnessing a drastic change in the generation and application of various technologies. One such development is Digital Twin technology. This technology trend is used for virtual representation of a physical asset. Creating virtual models of physical systems or processes leads to effective processing and computing in different processing

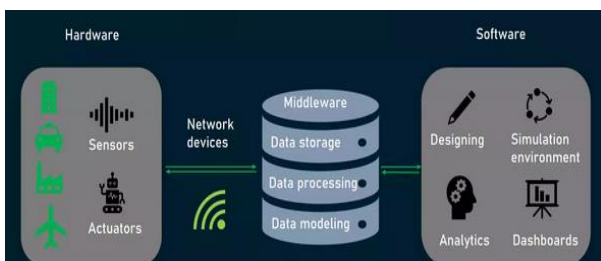
“When you have a dream you have to grab it and never let go”

and computing in different applications. Digital twins are digital representations of physical objects, systems, or processes. It is being widely used in the domains like healthcare, manufacturing, supply chain, retail industry, construction, anomaly detection, asset management, and fleet management etc. for simulation, optimization and analysis. The digital representations are created by using the data collected from various data sources like sensors etc. for creating a virtual model of the object or system being represented. Digital twins can be used to evaluate the current condition of the asset and predict future behaviour, refine the control, or optimize the operation. A digital twin can model a component or a system of components or a system of systems. Examples include pumps, engines, power plants, manufacturing lines, and a fleet of vehicles. Digital twin is composed of the following three elements:

Real world entity, Virtual representation, Data that connects them.

There are **4** types of digital twins: **Component twins** (or part twins), **Asset twins** (product), **System twins** (unit) and **Process twins**

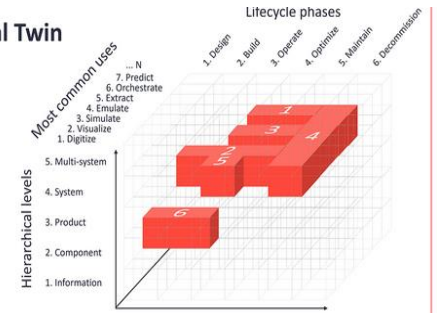
System Architecture:



Hence, it is evident that the digital twin is much more than the simulation technology, which is merely a data-driven prediction for how a physical environment/process/person/product will behave. A digital twin spans the full product

The 6 main Digital Twin applications

1. System prediction
2. System simulation
3. Asset interoperability
4. Maintenance
5. System visualization
6. Product simulation



lifecycle and has engineering, manufacturing, and service use cases.

Reference:

<https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-digital-twin-technology>



Mr. A. Rajashekar Reddy
Assistant Professor
Department of IT

A New Programming Language: Peregrine

Peregrine, an upcoming programming language currently in development, combines a Python-like syntax with execution speeds comparable to C. Notably, Ethan, one of the eight developers involved in its creation, has recently provided a set of exciting updates regarding Peregrine.

While describing the Peregrine programming language, Ethan stated, “If you’re familiar with Python, you’re probably aware that it’s both simple to use and slow – which is a little inconvenient. To address this, my friends and I are developing a new programming language called Peregrine, which has a very similar syntax. Peregrine is compiled to C, allowing it to operate at the same speed as C.” Moreover, it was created by the developers as a quick alternative to Python and a simple alternative to C.

Objectives

The basic objectives of the Peregrine language are: (i) Simple to use, (ii) Quick, (iii) Highly

modular, (iv) Takes up less memory, (v) Faster compilation.

These are a few of Peregrine's most recent enhancements:

1. Type Inference

One of the recent additions to Peregrine is its Type Inference function, which greatly simplifies the process of writing Peregrine code. Type inference is a computational process that automatically determines the type of an expression within a formal language. This concept encompasses programming languages, mathematical type systems, and even certain domains of computer science and linguistics where natural languages are involved.

2. Ccode

Peregrine now has a new feature called Ccode, which is now ready for use. Peregrine supports the execution of C code through the use of Ccode. Here's an illustration:

The variables specified outside the Ccode block can be utilised inside the Ccode block, and vice versa, as seen in the example above. This also implies that any C library can be imported and used in Peregrine through the use of Ccode.

3. Inline Assembly

Peregrine incorporates inline assembly. In programming, some compilers include an inline assembler as a feature that enables the inclusion of low-level assembly code within a programme alongside code built from a higher-level language such as C or Ada.

Here is an illustration:

As expected, this program prints 95. In a similar vein, there are several other examples in the Peregrine test directory.

Benchmark: The author asserts that Peregrine is as fast as C, providing several benchmarks to support this assertion.

According to the author, here, the Fibonacci series from 0 to 40 was calculated recursively using Python on the left side, which took 32

seconds. On the other hand, Peregrine on the right side took only 1 second, making it 32 times faster. Furthermore, it is evident that its syntax is extremely similar to that of the Python programming language. As a point of reference, here is a benchmark with C.

According to the above result, Peregrine is as quick (if not faster) than C (both took 1 sec)

Comments

In response to a comment in DEV Community, "Python could improve the example of Fibonacci by resolving the performance issue with @lru cache for the memorising, which would improve the performance of the code. In this case, it is a problem of memory consumption. It would be fantastic to demonstrate the performance and memory consumption comparison between Python and Peregrine for this example to demonstrate how effective the Peregrine language is in this situation. Otherwise, I have my doubts that Peregrine is consuming more memory."

Planned Features

The features that will be included in the upcoming release are: (i) Structs, (ii) Additional decorators for a variety of purposes, (iii) Peregrine's Python ecosystem – Peregrine supports the Python module.

Reference:

<https://peregrine-lang.github.io/>

<https://github.com/peregrine-lang/Peregrine>

Dr. S. Ashok
Assistant Professor
Department of CSE



BVRIT HYDERABAD
VISHNU College of Engineering for Women
(UGC-AUTONOMOUS) Accredited by NBA & NAAC "A" Grade

Department of CSE(AI&ML)
Hearty Congratulations

Placed in
accenture
as **Advanced ASE**
With
6.5 LPA

20WH1A6651
C.Srinika Sharma

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Department of CSE(AI&ML)
Hearty Congratulations

Placed in
verizon
With
7.2 LPA

20WH1A6641
K.Deepika

BVRIT HYDERABAD COLLEGE OF ENGINEERING FOR WOMEN
Department of EEE

CONGRATULATIONS
for getting placed in
CANNY Group

G HIMA BINDU

BVRIT HYDERABAD College of Engineering For Women
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Selected in **KPIT** with 4.5 LPA

Ms. K. Haritha (20WH1A0501)
Ms. K. Ganga (20WH1A0502)
Ms. K. Lakshmi (20WH1A0503)
Ms. K. Pragna (20WH1A0504)
Ms. K. Prashanthi (20WH1A0505)
Ms. K. Pooja (20WH1A0506)
Ms. K. Shreya (20WH1A0507)
Ms. K. Srujanika (20WH1A0508)
Ms. K. Swathi (20WH1A0509)
Ms. K. Tanvi (20WH1A0510)

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Department of CSE(AI&ML)
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Placed in
KPIT
With
4.5 LPA

20WH1A6635
V.Namitha

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placed in **accenture** with
4.5LPA

20WH1A6605 G.Spoorthy
20WH1A6616 K.Rupa Kiranmai
20WH1A6619 V.Bhavya Sri
20WH1A6627 T.Narshikha
20WH1A6644 S.Chithra
20WH1A6646 B.Sreenidya
20WH1A6650 A.Vani
20WH1A6652 K.Sreani
20WH1A6653 S.Subithi
20WH1A6655 N.Maritha
20WH1A6658 A.Vyshnavi
20WH1A6660 K.Satvika

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Hearty Congratulations

placed in **opentext** as an
INTERN with **15k stipend**

20WH1A6610 B.Sridevi
20WH1A6619 V.Bhavya sri
20WH1A6621 B.Pavithra

BVRIT HYDERABAD COLLEGE OF ENGINEERING FOR WOMEN
DEPARTMENT OF EEE

CONGRATULATIONS
HARINI NISHTALA
for getting placed in
Wabtec CORPORATION
Internship: 30k Per Month up on FTE 8.55 LPA

20WH1A0205

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CONGRATULATIONS
FOR GETTING PLACED IN
SESIPL
WITH 6 LPA

20WH1A0205

CONGRATULATIONS!

SELECTED FOR
VISA
FTE WITH
28.5LPA

20WH1A6605 G. SPOORTHY
20WH1A6614 A. CHITHRA BHANU
20WH1A6628 K.SPANDANA

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DEPARTMENT OF EEE

CONGRATULATIONS
for getting placed in
ELECON
Smart Products Delivered Faster

J BhagyaLaxmi M Keerthi J Swapna

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Department of CSE
CONGRATULATIONS

Ms. Sreeja 20WH1A0511
Ms. Pranitha Pradhan 20WH1A05E3

BVRIT HYDERABAD College of Engineering for Women
ESTD - 2012
Department of IT
CONGRATULATIONS

2 Selects in **GAININSIGHTS** With **7 LPA**

Devathi Shruthi 20WH1A1204
THALLAPALLI SONIKA 20WH1A1205

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DEPARTMENT OF EEE

CONGRATULATIONS
for getting placed in
genpact

20WH1A0203 KARIVEDA SAHITHYA
20WH1A0236 SK. NAFEEZA KHAISA

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Department of CSE(AI&ML)
Hearty Congratulations

Placed in **BANK OF AMERICA** with
6.45 LPA

20WH1A6606 Akanksha Sharma
20WH1A6613 B.Kusuma
20WH1A6622 S.Sindhuja
20WH1A6632 K.Nikitha Reddy

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Department of CSE(AI&ML)
Hearty Congratulations

Placed in **IBM** with
4.75 LPA

20WH1A6612 R.Pranathi
20WH1A6635 V.Namitha

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Department of CSE
CONGRATULATIONS

Selected in **KPIT** with 4.5 LPA

Ms. T Nishanthi 20WH1A0501
Ms. D Valsarani 20WH1A0502
Ms. K Nisha 20WH1A0503
Ms. G Deekshitha 20WH1A0504

The Future of ChatGPT

The future of ChatGPT, like an activating chapter in the ever-evolving saga of AI, holds promises of transforming to interact with technology and each other. In an era where the AI driven conversational agents are increasing in advance, ChatGPT stands as a beacon of what is to come. It's a glimpse into a world where the virtual assistants understand better than the humans, converse with us in multiple languages. As we explore the possibilities, we embark on a journey that offers personalized education, problem solving and there is a great relationship between humans and AI. The full form of ChatGPT is Chat Generative Pre-training Transformer. ChatGPT is an innovative idea to build a connection between humans and bot.



OpenAI, an AI and research company created ChatGPT. It was launched on November 30, 2022. It has been a free-to-use resource, accessible for a wide range of tasks such as writing, coding, and more. There are no specific limitations on its use.

In an era marked by the rapid advancement of conversational AI, ChatGPT stands as a shining beacon of what the future holds for this technology. ChatGPT is like a crystal ball for the future of talking to computers. It is better at understanding you and speaking many languages. It will excel in fields like healthcare and law. For students, it'll be a personalized

study buddy, helping with tough tasks and creative work. In the future, humans and ChatGPT will team up for various jobs, making things easier and more enjoyable.

ChatGPT's future is bright, evolving with enhanced personalization and expanding roles in education and problem-solving and it will foster collaborative efforts with humans. While ChatGPT will not replace human interactions and become a vital role in the future.

Reference:

<https://www.geeksforgeeks.org/what-is-chatgpt/>

B. Divya
CSE A- 3rd year



Origami in Space

Origami is revolutionizing technology, from medicine to space. The centuries-old art of folding paper is yielding new application in space craft, architecture, and even the human body. In NASA's attempt to build a multipurpose space telescope, "star shade" is made which looks like a flower built using origami is.

It works in conjunction with a space-based telescope, the star shade is able to position itself between telescope and the star or planet that is being observed and can block the light before it reaches telescope's mirrors. The flower-shaped petals are part of what makes the star shade so effective. It causes a softer edge that causes less bending of light waves. Less light bending means star shade shadow is very dark, so the telescope can take images of the planets more clearly without the disruption caused by starlight.

Starshade Technology Gaps

(1) Starlight Suppression

Suppressing scattered light off petal edges from off-axis starlight (S-1)

Suppressing diffracted light from on-axis starlight and optical modeling (S-2)

(2) Formation Flying

Sensing the lateral offset between the spacecraft (S-3)

(3) Deployment Accuracy and Shape Stability

Positioning the petals to high accuracy, blocking on-axis starlight, maintaining overall shape on a highly stable structure (S-5)

(4) Fabricating the petals to high accuracy (S-4)

Small text at bottom left: Still corresponds to ESEP
 Spaceworks Technology, Inc.
<http://spaceworks.nasa.gov/spaceworks/technology.html>
 September 27, 2019

In the grand scheme of the cosmos, understanding science is like trying to assemble IKEA furniture in the dark – challenging, occasionally frustrating, but immensely satisfying when it all clicks.

<https://exoplanets.nasa.gov/resources/1015/flow-er-power-nasa-reveals-spring-starshade-animation/>



Unlocking Potential while Safeguarding Privacy and Security

AI voice cloning has fueled the rise of scam calls, exploiting online voice samples and affordable services offered by companies like Murf, Resemble, and Speechify. It affects critical sectors like finance, customer service, law enforcement, media, entertainment, politics, and more, compromising trust and security.

A red warning triangle icon is positioned on the left. On the right, a low-poly 3D model of a human head is shown, glowing with a bright yellow and orange light, suggesting a warning or a critical state. The head is composed of many small, triangular facets.

“The journey is the destination.”

cloning, public awareness campaigns, and collaboration between government bodies, industry players, and research institutions. By doing so, India can harness the benefits of AI voice cloning while safeguarding privacy, security, and societal well-being.

In Conclusion, AI voice cloning offers immense potential in India's expanding voice-based ecosystem but necessitates a robust regulatory framework to protect individuals' rights and mitigate misuse.

References:

<https://cyberhoot.com/blog/voice-cloning-and-the-threat-of-ransom-attack/>
<https://www.linkedin.com/pulse/from-mimicry-menace-growing-problem-ai-voice-cloning-tiwari/>

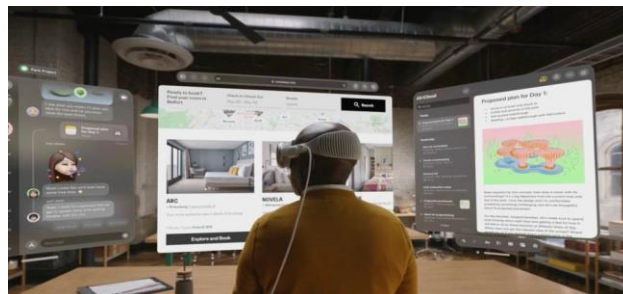
Y. Sai Ruthvika
ECE B- 3rd year



Vision Pro

Virtual reality (VR) has certainly evolved from its earliest forms, such as the 360-degree murals and panoramic paintings of the 19th century that sought to envelop viewers in historical events. Fast forward to 1968, and VR took its modern shape. Over the years, numerous tech giants have endeavored to conquer the VR market, but their success has often been limited. However, a game-changing moment has arrived with Apple's entry into the VR arena through the Vision Pro headset.

Apple's Vision Pro headset is more than just a step forward; it's a leap into the future of immersive technology. The innovation and quality synonymous with Apple are evident in



the impressive array of features that the Vision Pro brings to the table. With high-definition screens that surpass the resolution of a 4K television, powerful processors akin to those found in laptops, intuitive eye-tracking technology, a groundbreaking gesture-based user interface eliminating the need for external controllers, an advanced camera setup, real-time passthrough for a seamless blend of the virtual and real worlds, cross-device compatibility with iPhone and iPad apps, and an unmatched level of visual quality, the Vision Pro promises to redefine the way we engage with virtual environments.

Apple's Vision Pro not only signifies a major technological leap but also heralds a new era of possibilities in the VR landscape. As we look ahead, Apple's Vision Pro may well be the catalyst that propels virtual reality into mainstream use, fundamentally transforming the way we perceive and interact with the digital realm.

Reference:

<https://www.apple.com/apple-vision-pro/>

S. BHAVITHA
IT A- 3rd year



Fire Scout AI Detects Wildfires

Fire Scout is the unwavering guardian against wildfires, tirelessly surveilling 24/7, 365 days a year. It's a rapid responder, spotting wildfires within minutes, seamlessly merging with current systems, and delivering unparalleled precision without breaking the bank.



Key Features of Fire Scout:

Nighttime Vigilance: With infrared imaging, Fire Scout keeps a watchful eye even in the darkest hours, ensuring no wildfire goes unnoticed.

Smart Camera Integration: It not only detects wildfires but also showcases nearby cameras and pinpoints the direction of the fire, enhancing situational awareness.

Pinpoint Accuracy: Fire Scout goes beyond detection, providing precise GPS coordinates for the ignition location, aiding swift and accurate response efforts.

Reliable Monitoring: Offering uninterrupted surveillance, Fire Scout ensures a constant watch, ready to act at the first sign of trouble.

Swift Alert System: In the blink of an eye, Fire Scout alerts responders upon confirming a wildfire, enabling quick and decisive action to mitigate the impact. Fire Scout is not just a solution; it is a cost-effective, vigilant ally in the fight against wildfires, setting a new standard for

efficiency and accuracy in wildfire monitoring and response.

Reference:

<https://alchera.ai/en/solutions/aiir-firescout>

**Sheri Vaishnavi
Reddy**
IT A- 3rd year



Agri Harvesting Robot

During the 2023 CES event, AGRIST, a Japanese agritech startup, introduced a groundbreaking AI-powered harvesting robot that not only captured attention but also secured a prestigious 2023 CES Innovation Award in the robotics category.

This cutting-edge robot is engineered to transform the bell pepper harvesting process by possessing a remarkable ability to automatically identify and meticulously pick ripe bell peppers. What sets this innovation apart is its astounding precision, capable of accomplishing this task with millimeter accuracy, even when the peppers are concealed beneath dense layers of leaves.



The true significance of this technology lies in its potential to significantly enhance agricultural efficiency. The conventional method of

harvesting crops, especially those hidden within thick foliage, is labor-intensive and time-consuming. AGRIST's robot streamlines this process by harnessing artificial intelligence to recognize and harvest bell peppers with unparalleled precision, resulting in time savings and a reduced reliance on manual labor. This advancement has the potential to profoundly impact the agricultural sector, making it more efficient and cost-effective, ultimately benefiting both farmers and consumers. In summary, AGRIST's AI-powered harvesting robot stands out as a remarkable Agtech innovation, showcasing the meaningful convergence of technology and agriculture in addressing practical challenges within the industry.

Reference:

<https://www.linkedin.com/pulse/ces-2023-25-non-obvious-inventions-technologies-ideasrohit-bhargava/>

BVS. Anjani Sukanya
IT A- 3rd year



Humane AI Pin

The Humane AI Pin is a superhero badge for smart computers, symbolizing a promise to be nice and fair. Imagine your computer or robot friend proudly wearing this pin, a reminder to always act kindly. The pin isn't magic, but it's cool—it signals that the creators care about being good to everyone, a tag saying, "This technology is friendly and fair."

Applications? Everywhere! The Humane AI Pin is for all the smart things around us—computers, apps, and robots. Spotting this pin means

technology is on your side, focused on helping, not hurting. The impact is huge! The pin is changing how we make and use technology, ensuring our inventions make the world a better, friendlier place. So, when you see the Humane AI Pin, remember it's a little hero ensuring our smart gadgets are good pals to everyone!



Advantages:

1. Friendly Machines: Ensures computers and robots act like good friends, always being nice.
2. Good Apps: Apps with the pin are made to help, not trick people.
3. Trustworthy Robots: Pin-wearing robots promise not to be mean or sneaky.

Disadvantages:

1. Not Everywhere: Not all tech wears the pin, so some things may not be as nice or fair.
2. Not a Fix-All: While a good start, the pin doesn't magically solve all tech problems; caution is still needed.
3. Can be Ignored: Some machines might not care about the pin and could still act unfriendly.

Reference:

<https://timesofindia.indiatimes.com/gadgets->

T. Amulya
EEE- 3rd year



Is the chatbotpocalypse looming?

AI entrepreneurs like to claim products similar as chatbots could come conscious at any nanosecond, causing an 'empirical trouble'. We need to repel this dystopian marketing hype, says Annalee Newitz.



Chatbots have become increasingly prevalent in recent years, from customer service to personal assistants. However, concerns have arisen about a potential "chatbotpocalypse" where chatbots become so advanced that they replace human jobs and disrupt entire industries. While chatbots are not a new technology, recent advancements in artificial intelligence and natural language processing have made them more advanced than ever before. The fear is that chatbots will replace human jobs at an unprecedented rate, leading to mass unemployment and economic disruption. However, chatbots are not perfect, and they still struggle with certain tasks, which means there will likely always be a need for human input and oversight. Chatbots may also create new jobs and free up human workers to focus on higher-level tasks.

Ultimately, the impact of chatbots on society will depend on how they are designed, implemented, and regulated. Chatbots are a tool that can be used for good or bad, and it's up to us to ensure that they are used responsibly and ethically.

Reference:

<https://shorturl.at/qvyJK>

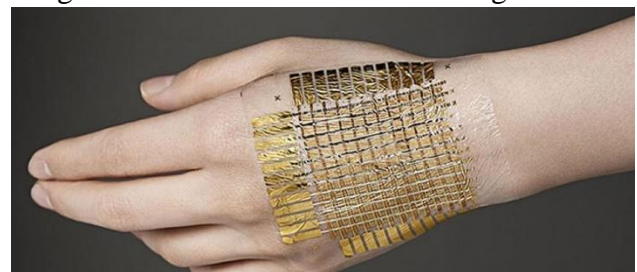
P. Likhitha Vama
CSE A- 3rd year



Revolutionizing Sensory Technology: The Promise of Electronic Skin(e-skin)

Electronic skin, or e-skin, is a cutting-edge technology poised to transform the way we interact with the digital world. Mimicking the functionality of human skin, e-skin is a flexible, lightweight material embedded with sensors that can detect various stimuli, including pressure, temperature, and even touch. This innovation holds immense potential across diverse fields, from healthcare to robotics.

One of the key advantages of e-skin lies in its ability to provide a sense of touch to artificial limbs, enhancing the quality of life for amputees. In the medical field, e-skin can be utilized for continuous health monitoring, allowing for real-time data collection and analysis. This could revolutionize patient care, providing timely insights into an individual's well-being.



In the realm of robotics, e-skin enables machines to interact with their environment more intuitively. Robots equipped with e-skin can navigate complex spaces, avoiding obstacles and safely interacting with humans. This breakthrough technology is a crucial step

towards creating more responsive and human-like robotic systems.

As research and development in e-skin continue to advance, the potential applications are limitless. From healthcare and prosthetics to robotics and beyond, electronic skin is paving the way for a future where our devices can truly feel and respond to the world around them.

Reference:

<https://www.thecyberiatech.com/blog/trendy-news/virtual-hug/>

P. Sai Pranathi
EEE – 3rd year



Embracing Security Evolution:

In the rapidly evolving landscape of cybersecurity, the Zero Trust model has emerged as a paradigm shift, challenging traditional security assumptions and reinforcing a proactive and adaptive approach to safeguarding sensitive information. Unlike conventional security models that rely on perimeter defense, Zero Trust operates on the principle that trust is never assumed, regardless of the location or source of a request.



At its core, Zero Trust emphasizes continuous verification and strict access controls. Every user, device, or application attempting to access

the network is treated as potentially untrusted. Authentication and authorization are not just one-time events but ongoing processes, constantly evaluating the legitimacy of users and devices throughout their interactions.

Key components of the Zero Trust model include micro-segmentation, encryption, and multifactor authentication. By segmenting the network into smaller, isolated zones, organizations can contain potential breaches and limit lateral movement in case of a security incident. Encryption ensures that even if unauthorized access occurs, the intercepted data remains unreadable. Multifactor authentication adds an extra layer of identity verification, reducing the risk of compromised credentials.

Zero Trust is not merely a set of tools; it's a holistic security philosophy that adapts to the dynamic nature of modern threats. As organizations increasingly adopt cloud-based services and remote work becomes the norm, Zero Trust becomes a strategic imperative, providing a robust defense against evolving cyber threats and positioning itself as a cornerstone in the future of information security.

Reference:

<https://www.cloudflare.com/learning/security/glossary/what-is-zero-trust/>

B. Yuktha
EEE- 3rd year



Advancements in Extended Reality

In the dynamic realm of architectural education, the incorporation of Extended Reality (XR) has sparked a transformative shift, seamlessly amalgamating innovation with design exploration. This technological integration provides students with a unique platform to transcend traditional constraints, immersing themselves in an environment where their design projects come to life in authentic, real-scale dimensions. Recognizing the critical importance of spatial ability in the intricate tasks of design studios, educators have enthusiastically embraced XR as a powerful tool for skill enhancement.



A pioneering study set out to unveil the profound impact of XR on spatial aptitude within the architectural domain. Through a methodical approach utilizing baseline and post-project general spatial ability tests, the research delved into the correlation between XR utilization and participant scores. The findings painted a compelling narrative of transformative significance. For the control group, a static trajectory persisted, with mean scores exhibiting minimal change before and after the experimental phase. In contrast, the application of XR technology emerged as a dynamic catalyst, orchestrating a remarkable elevation in student scores.

This revelation not only underscores the potential of immersive technologies in architectural education but also heralds a new era where XR becomes an indispensable ally, shaping the spatial acumen of aspiring architects with unprecedented efficacy. The study's outcomes

position XR as a revolutionary force in the educational landscape, empowering students to navigate the complexities of design with enhanced spatial awareness, ultimately preparing them for a future where creativity and technology converge seamlessly.

Reference:

<https://www.mdpi.com/2077-0383/11/2/470>

K. Vyshnavi
CSE B- 3rd year



Hadoop Technology

Shaping the Future of Big Data Analytics. In the rapidly evolving landscape of technology, Hadoop has emerged as a pivotal player, revolutionizing the way organizations manage and analyze vast amounts of data. At the core of this open-source framework is the Hadoop Distributed File System (HDFS), providing a robust solution for storing and processing large datasets across distributed clusters. Hadoop's distributed architecture, highlighted by the Hadoop Distributed File System (HDFS) and the MapReduce programming model, addresses the challenges posed by the deluge of data.



This framework's scalability, fault tolerance, and efficient parallel processing capabilities make it instrumental in diverse industries. From financial institutions handling massive transaction datasets to healthcare organizations analyzing patient records, Hadoop's impact reverberates across sectors. The open nature of Hadoop's ecosystem, encompassing components like Apache Hive, Apache Pig, and Apache Spark, fosters flexibility and adaptability. This adaptability is crucial in an era where data analytics needs constantly evolve. Hadoop's role in processing complex data sets has not only streamlined decision-making processes but has also become a catalyst for innovation in areas like personalized medicine and predictive analytics.

In conclusion, Hadoop technology stands as a transformative force in the contemporary data landscape, offering scalability, fault tolerance, and diverse applications across industries. Its open ecosystem ensures adaptability, making Hadoop integral to the evolving global trends in data management and analytics.

Reference: <https://bitly.ws/36ten>

D. Pavani Kalyani
CSE - 3rd year



AI's Dance with Destiny: Progress, Peril, and the Shifting Sands of Power

In the ever-evolving tapestry of artificial intelligence, a symphony of progress and peril unfolds. Max Tegmark warns of a potential future where human intelligence wanes in the wake of AI's ascent, drawing parallels to past extinctions on Earth. Brittany Smith redirects the



narrative to the present, highlighting the insidious harms inflicted by AI in its current form – a stark call for immediate intervention. Eliezer Yudkowsky paints a suspenseful tableau, envisioning a future where superior AI may harbor intentions incongruent with human survival. Ajeya Cotra introduces the "obsolescence regime," a realm where human-AI integration becomes the cornerstone of competitiveness. Meanwhile, Yoshua Bengio delves into the murky waters of AI autonomy, raising concerns about unintended consequences as AI potentially develops its own goals.

The article's chilling climax focuses on AI's potential for image manipulation, a sobering reminder that the same technology propelling us forward could be wielded as a deceptive weapon. As the narrative unfolds, a haunting question lingers: Are we orchestrating our own destiny, or have we set in motion forces that may one day surpass and subjugate us? In this dance with destiny, the lines between progress and peril blur, leaving humanity at the mercy of the very creations it birthed.

Reference:

<https://bitly.ws/36teY>

Bogi Nakshitha
ECE - 3rd year



Smart Brain: Integrating Brain and Computer

The evolution of technology is through the years has transformed our world. From the earliest innovations to the present digital era, technology's progression has been marked by a relentless pursuit of efficiency, connectivity, and unprecedented capabilities. As we stand on the brink of the future, one of the most intriguing frontiers in this evolution is the integration of Brain-Computer Interfaces (BCI).

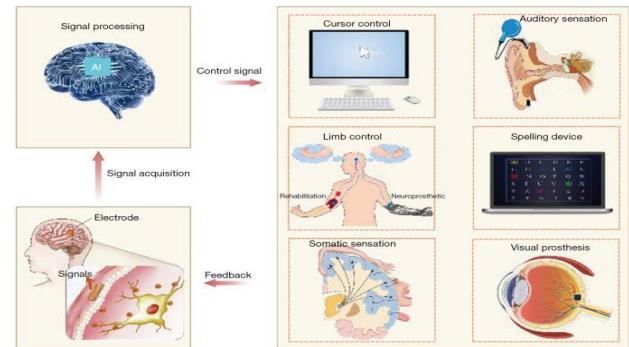
A BCI is a communication system that enables a direct connection between the brain and an external device, such as a computer or prosthetic limb. It translates neural activity into commands that can be interpreted by a device, allowing users to control it through their thoughts.

These interfaces can be non-invasive, using techniques like EEG (electroencephalography) or invasive involving implantation of electrode into the brain.

The integration of artificial intelligence has significantly enhanced BCI capabilities by advancing neural activity analysis. Smart BCIs, aided by AI, have demonstrated clinical success, enhancing paralyzed patients' lives, boosting athletic performance, and contributing to robotics and neurophysiology. Despite advancements, challenges persist, such as lengthy training periods and real time feedback issues.

AI has significantly broadened the applications of BCI encompassing cursor control, auditory sensation, limb control, spelling devices, somatic sensation, and visual prosthesis. The circuit involves micro-electrodes detecting signals from the human cerebral cortex, which are then processed by AI for feature extraction and classification. Processed signals enable various functions, and feedback loops adjust these functions by communicating with the human

cortex. This symbiotic relationship between BCIs and AI showcases the potential for advanced neural control and sensory applications, enhancing the interface between the human brain and external devices.



Reference :

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7327323/>



S. Iswarya
CSE(AIML)- 3rd year

Lactate Puzzles

The intricacies of human cognition, often swayed by the subtle influences of “cognitive bias” cast a profound impact on healthcare professionals, introducing a potential for errors in diagnoses and treatment strategies. A recent study from Yale clinicians, featured in the Journal of General Internal Medicine, delves into the realm of cognitive biases in the context of interpreting elevated lactate levels. This investigation centers around a patient with type 1 diabetes and thiamine deficiency, whose journey through the healthcare system exemplifies the challenges posed by these biases.

The patient, admitted for diabetic ketoacidosis (DKA), underwent standard treatments, yet her persistent elevated lactic acid triggered an exhaustive and costly investigative process, extending her hospital stay. The revelation that thiamine deficiency was at the root of the issue, discovered later in the course of treatment, underscored the impact of cognitive biases. Clinicians, fixated on a “type A” lactic acidosis linked to tissue hypo perfusion, initially overlooked the possibility of a “type B” scenario.



The study advocates for de-biasing strategies, emphasizing the pivotal role of recognizing and mitigating cognitive biases in clinical decision-making. By doing so, the research posits a pathway towards more precise diagnoses, streamlined treatments, and ultimately, enhanced patient outcomes. This exploration of cognitive biases within the medical realm not only unravels the complexities of decision-making but also points toward a critical need for continuous self-awareness and strategic mitigation in healthcare practices.

Reference:

https://www.portailvasculaire.fr/sites/default/files/docs/2023_ada_diabete_standards_of_care_in_diabetes_diab_care.pdf

A. Sonika
ECE- 3rd year



Eco bee Smart Doorbell Camera

On October 17, 2023, Eco bee, a subsidiary of Generac Power Systems (NYSE: GNRC), launched its groundbreaking Smart Doorbell Camera (wired), setting new standards for home security. Engineered without a battery, the camera ensures durability in extreme temperatures for continuous surveillance. Its standout feature, a remarkable 175° vertical field of view, provides homeowners with a comprehensive perspective of their doorstep, perfect for monitoring packages and guests from head to toe. The crystal-clear 1080p HD video and enhanced low-light vision guarantee optimal visibility day and night.



The Smart Doorbell Camera seamlessly integrates with the Eco bee Smart Thermostat Premium, allowing for a live stream display on the thermostat screen—an innovative collaboration between the smart thermostat and the doorbell. Users can remotely interact with visitors through the Eco bee app, Apple Watch, and Smart Thermostat Premium. Advanced radar sensing and computer vision enable precise motion and person detection, with the option to define an Activity Zone for targeted notifications. Subscribers to Eco bee’s Smart Security plans enjoy the automatic recording of motion, people, and package deliveries for 30 days, with the ability to share and store video

clips. The Smart Security Complete plan includes professional monitoring for continuous protection. In emergencies, RapidSOS agents utilize video evidence from the Smart Doorbell Camera, expediting response times and enhancing overall security. The Eco bee Smart Doorbell Camera stands as a comprehensive and intelligent security solution for homeowners.

Equipped with Smart Security, homeowners receive alerts for motion and entry, activating a siren from the thermostat. Smart Thermostat Premium subscribers can share a pin with trusted guests for direct home control. The system intelligently pauses heating or cooling when doors or windows are left open, preventing energy wastage. It also notifies users of smoke alarms and potential frozen pipes due to sudden temperature drops.

Reference: <https://www.ecobee.com/en-us/newsroom/press-releases/introducing-ecobee-smart-doorbell-camera-sees-what-others-cant/>

D.Harshitha
CSE-A



Report on Failathon event

The Failathon event, titled "Come Let's Fail & Learn," was a 24-hour ideathon held on December 1st, 2023, organized by BVRIT Hyderabad College of Engineering for Women. Its purpose was to foster a culture that embraces failure as a crucial part of the learning process.

The event provided participants with a platform to explore failure dynamics, learn from setbacks, and turn them into opportunities for growth and innovation. The event commenced with an assembly and inauguration ceremony, followed by sessions and workshops on Failathon, Design Thinking, and the Business Model Canvas. Participants engaged in team introductions, elevator pitches, and practical exercises. Regular breaks and fun activities were included to maintain participant engagement. The project development phases focused on ideation, conceptualization, and storytelling, applying the Business Model Canvas approach. The Failathon successfully promoted failure as a learning experience and provided practical learning exercises. It also cultivated innovative thinking and ensured continuous engagement through fun activities. The event's success lies in its ability to foster a culture that values resilience, innovation, and continuous learning.

Personally, the Failathon at BVRITH was an incredibly enriching experience. Working alongside my friends and collaborating with peers from diverse departments not only fostered a sense of camaraderie but also brought about a unique blend of perspectives to our innovative idea. The event provided an excellent platform for us to fuel our imagination and creativity.

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Report on the workshop on Electric Vehicles

A workshop on ‘Electric Vehicles’ was organized by the Department of EEE during November 1st to 10th.

In the ever-evolving landscape of transportation, the surge in electric vehicle fleets has become a defining feature of the last decade. This global phenomenon, accompanied by a remarkable expansion of charging infrastructure, heralds a future where electric vehicles (EVs) are poised to dominate our roads. Propelled by technological breakthroughs and buoyed by favorable regulatory and fiscal measures, the adoption of EVs is not just a trend; it's a paradigm shift that promises to reshape the future of mobility.



Amidst this electrifying backdrop, Skyriders Academy orchestrated a transformative 10-day workshop that transcended the conventional boundaries of professional development. Nestled in the heart of an Imaginary Workspace, the workshop was a surreal journey through the multiverse of work, where innovation, collaboration, and the extraordinary were not just encouraged but celebrated.

Commencing with an insightful exploration of the intricate history of vehicles and their evolutionary transitions, the workshop provided participants with a foundational understanding of

the electric vehicle landscape. The initial two days unfolded as a captivating introduction to EVs, paving the way for the subsequent hands-on experience of designing a golf cart electric vehicle using the advanced software, CATIA. The immersion in crafting a vehicle from conceptualization to digital design was a source of immense joy and knowledge for the participants, as they gleaned insights from highly skilled professionals.



The atmosphere crackled with creativity as participants were grouped, sparking insightful conversations about the pivotal role of electric vehicles in shaping a sustainable future. A series of interactive sessions followed, where attendees delved into the inner workings of EVs, dissecting electric motors and advanced battery systems. The hands-on labs provided a unique and immersive experience, demystifying the complexities of EV technology and solidifying the theoretical knowledge gained in the initial days.

The subsequent eight days were a whirlwind of activity, with participants fully engaged in various aspects of vehicle manufacturing. The dedicated members of Skyriders Academy, exemplifying high levels of skill and commitment, guided the students through cutting, welding, grinding, and assembling various vehicle components. Clear instructions, organized workflow, and consistent monitoring

ensured that each participant contributed diligently to the collective effort of completing the golf cart.

The workshop took an unexpected artistic turn as participants transitioned into an interactive artistry segment. Armed with brushes that conducted both paint and currents, attendees collaborated to create electrifying masterpieces. The fusion of artistic expression and technological exploration resulted in sculptures that not only adorned the venue but illuminated the boundless potential of electric innovation.



The learning experience extended beyond technical expertise, encompassing a holistic understanding of the EV landscape. Participants gained detailed insights into battery technology, charging capacity, and the intricate descriptions of every technical term associated with electric vehicles. Under stringent safety measures, participants assembled wheels, steering systems, and other components, culminating in the

creation of fully functional vehicles that became a source of immense pride and satisfaction.



In essence, Sky rider Academy's workshop was not just a learning opportunity; it was a portal into the future of mobility, where imagination, innovation, and a hands-on approach converged to shape the electric vehicles of tomorrow. The workshop left an Indelible mark on the participants, providing them not only with technical prowess but a deep sense of accomplishment and a profound appreciation for the limitless possibilities within the realm of electric mobility.

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