This Issue

Allenhouse
Institute of Technology
B.Tech

B+ NAAC

1st Rank in UP

in the category of **"Quality of Campus Life"** in the Education World India Higher Education Grand Jury Awards 2022-23

Chief Patron
Mr. Mukhtarul Amin
President,
Superhouse Education Foundation

Patrons
Mr. Syed Javed Ali Hashmi
Joint Secretary,
Superhouse Education Foundation

Prof. (Dr.) Bhagwan Jagwani
Campus Director, Allenhouse Group of Institutions

Dr. Rubby Chawla
Director, Allenhouse Group of Institutions

Editor-in-Chief
Prof. (Dr.) Ajay Kumar Singh
Professor and Head of CSE Department

Co-Editor- Ms. Renu Chaurasia
Assistant Professor (CSE)

Student Member:
- Poornima Mishra
   B.Tech (CSE 4th Year)
- Rubina Naaz
   B.Tech (CSE 4th Year)
- Ruhul Ameen Liyaqat
   B.Tech (CSE-AI&ML 3rd Year)
- Selina Dwivedi
   B.Tech (CSE-AI&ML 3rd Year)

Editor's Note

Greetings to all our readers of Allenbytes!!

We are thrilled to present you with the fifth edition of Allenbytes, our bi-annual newsletter. Our goal in creating this newsletter was to provide a platform for students to interact with one another and share information and opinions on various topics that are relevant and interesting. Additionally, we aim to provide an overview of the numerous activities and breakthroughs happening in the Department of Computer Science & Engineering. To engage our readers further, we have included a crossword puzzle and quiz that will challenge your thinking.

We hope that this edition will meet your expectations while also enhancing your knowledge. We would like to take this opportunity to thank all students who contributed towards making this newsletter possible. We would also like to extend our gratitude towards the editorial board for their generous assistance. Finally, we would like to express our sincere appreciation towards Prof. (Dr.) Bhagwan Jagwani, Campus Director of the Allenhouse Group of Institutions, Dr. Rubby Chawla, Director of the Allenhouse Group of Institutions for their leadership and suggestions that helped us make the most out of our efforts.

We hope that you find this edition engaging, informative, and relevant as it provides a range of perspectives on contemporary concerns. Your insightful recommendations and comments are always welcome.

Editor-
Prof. (Dr.) Ajay Kumar Singh
Professor and Head of CSE Department

"The mind is not a vessel to be filled but a fire to be ignited." - Plutarch

DATA Science

With the development of new technologies there has been a rapid increase in the amount of data, this has created an opportunity to analyze and derive meaningful information from all this data. Data Science is defined as, "The process of extracting knowledge and insights from complex, large sets of structured and unstructured data by using processes like data mining, data cleaning & data visualization." An example for data science is google maps, but have you ever wondered how Google knows the traffic conditions between where you are and where you want to go and also find the shortest and fastest path to your destination, this is only possible through data science. They collect data every day from a multitude of reliable sources that primarily includes smartphones, it takes the data from drivers, passengers and pedestrians, and then by the use of machine learning algorithms google maps updates the traffic by way of colored lines on the traffic layers. Some of the features of Data Science we see or use in our daily life, like- Recommendation of Videos (on Youtube, Netflix), Auto Correct system while typing, Virtual Gaming, Weather Forecasting. Most preferred programming languages to learn Data.

Malay Gupta
B.Tech CSE (AI &ML)-3rd year

Why Windows OS is more popular than any other?

When it comes to computer operating systems, there's no confusion that Microsoft Windows is surely the most popular choice. According to Stat Counter in May 2018, 81.73 percent of all computer druggies were running some interpretation of Windows. The operation statistics speak for themselves regarding how popular Windows is.

In Windows OS it has a veritably large number of operation supports. Operations that are available for Windows tend to have exceptional features when compared to other platforms. Windows OS is good but if we say that there is no other OS in the market better than Windows OS so, that shouldn't be true. But when we look at the bigger picture, we find that Windows-grounded operations do feel to come out on top when compared to its counterparts. One illustration of this is Microsoft Office. Indeed, though it's available for both Windows and Mac druggies, the experience of the Windows interpretation far exceeds the Mac interpretation. Without any confusion, Windows has the biggest selection of software available for its platform than any other operating system. The benefit of this is that users get to choice from a wider variety of options. This creates healthy "competition" for users, where software inventors really have to push boundaries to produce the stylish program possible.

Window has the largest request share in the world of operating system. It has 90% of the total request share since it came to the market if operating system. It's the most productive operating system among all the other OS. The majority of the businesses uses the Windows OS.

Annanya Awasthi
B.Tech (CS)

Star Achievers in Events Last Six Months

Aditya Awasthi B.Tech (CS-AIML) 3rd Year **Winner in Oorja** **Table Tennis (Doubles)**	**Rajendra Singh** B.Tech (CS-AIML) 4th Year **1st runner up** **Business Mind Rustle**	**Utkarsh Srivastava** B.Tech (CS-AIML) 4th Year **1st runner up** **Business Mind Rustle**	**Divyansh Dwivedi** B.Tech (CS-AIML) 4th Year **1st runner up in** **Business Mind Rustle**
Mohd. Shoaib Khan B.Tech (CS-AIML) 3rd Year **1st position** **Battle with Bytes**	**Abhishek Tripathi** B.Tech (CS-AIML) 3rd Year **Winner** **Visual Puzzle**	**Nikhil Singh** B.Tech (CS-AIML) 3rd Year **Winner (Oorja)** **Volley Ball**	**Ankush Kumar Verma** B.Tech (CS) 3rd Year **Winner** **Web Rachaita**
Aabish Khan B.Tech (CS) 3rd Year **Winner** **Web Rachaita**			

Amazing Technology and Innovation Facts: Latest Developments

In the ever-evolving world of technology and innovation, fascinating advancements continue to shape our lives. Here are some of the latest amazing facts:

1. Artificial Intelligence (AI) is rapidly advancing, with applications in various industries. AI-powered chatbots, virtual assistants, and self-driving cars are becoming more prevalent, revolutionizing how we interact with technology.
2. Blockchain, the technology behind cryptocurrencies, is now expanding beyond finance. It offers secure and transparent record-keeping in areas like supply chain management and voting systems, fostering trust and efficiency.
3. 5G technology is rolling out globally, promising faster internet speeds and lower latency. This breakthrough enables the development of autonomous vehicles, smart cities, and a more connected world through the Internet of Things (IoT).
4. Virtual Reality (VR) and Augmented Reality (AR) are gaining popularity in gaming, entertainment, and industries. VR provides immersive experiences, while AR overlays digital information onto the real world, enhancing our perception and interaction
5. Biometric authentication methods like facial recognition and fingerprint scanning are increasingly used for secure access. These technologies offer enhanced convenience and security, replacing traditional passwords and PINs
6. Quantum computing is an emerging field with the potential to revolutionize computation. Leveraging quantum mechanics, it promises breakthroughs in cryptography, drug discovery, and optimization problems.
7. Renewable energy technologies, such as solar and wind power, are advancing rapidly. Improved efficiency and cost reductions make clean energy sources more accessible and sustainable, addressing the global challenge of climate change.

Technology and innovation are constantly evolving, and these amazing advancements demonstrate the remarkable possibilities that lie ahead.

Ankush Kr Verma
B-Tech (CSE) 3rd Year

The Beyond of Creativity: Open Source Software

Before everything else, the question is, what exactly is open-source software?

The answer is simple: any Software or Program that the creators have made publicly available. Open-source software has transformed the technology industry by encouraging collaboration and innovation. The concept of open-source contribution, in which developers from across the world collaborate to build, improve, and maintain software that is freely available to everybody, is at the heart of this movement. The most notable aspect of Open Source is the ability of everyone, regardless of age, to contribute. Whether you're a Fun sixteen or a Mature thirty. The Creativeness is limitless.

The Linux Kernel Community, the Python Software Foundation (PSF), the WordPress Community, the Mozilla Community, and the KDE Communities are among the numerous examples of communities. These communities represent the open-source ethic, in which committed individuals cooperate, exchange information, and jointly produce software that benefits a wide spectrum of users.
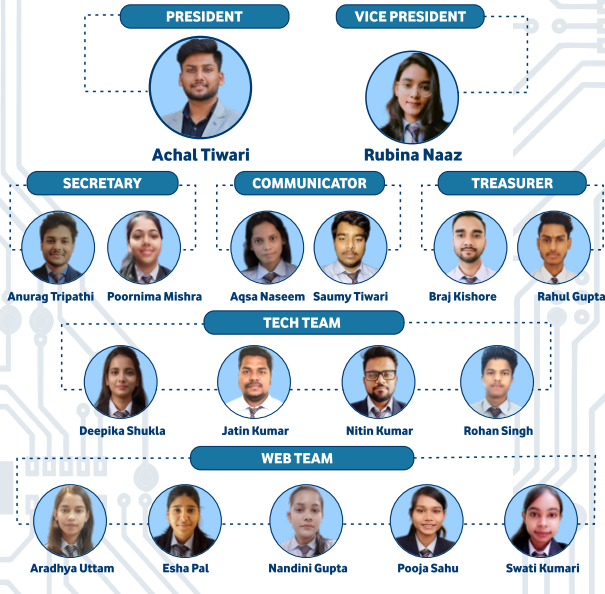
Programs Like GSoc, GSSoc, MLH Fellowship, CODE4 GovTech are the flagship that enables the university enrolled student to come through and contribute the various open-source project and as a return they also get perks from the firms. To become a contributor in any community, all you need is creativity and a tech stack that will allow you to express your imaginations.

Contributing to open-source projects is a rewarding path that leads to new opportunities and personal development. One can become an active member in the lively world of open source by selecting the proper project, connecting with the community, and making important contributions.

Yogesh Vishwakarma
B.Tech (CSE-AI & ML) 3rd Year

Congratulations

Association Members of Computer Science & Engineering (2022-23)

PRESIDENT	VICE PRESIDENT
Achal Tiwari	**Rubina Naaz**

SECRETARY		COMMUNICATOR		TREASURER	
Anurag Tripathi	Poornima Mishra	Aqsa Naseem	Saumy Tiwari	Braj Kishore	Rahul Gupta

TECH TEAM

Deepika Shukla	Jatin Kumar	Nitin Kumar	Rohan Singh

WEB TEAM

Aradhya Uttam	Esha Pal	Nandini Gupta	Pooja Sahu	Swati Kumari

Which letter replaces the question mark?

Explanation-
Adding the three numbers in each square together gives the numerical value of the letter at the center of each square.

8	2	6	9
7	Q	S	4
4	M	?	8
5	4	9	6

Ms. Renu Chaurasia
Assistant Professor (CSE)

Answer- W

Mojo: The New Programming Language for AI

The world of artificial intelligence is constantly evolving, and with it, the programming languages that are used to create AI applications. In recent years, Python has become the de facto language for AI development, thanks to its ease of use and its large library of machine learning and data science tools. However, Python can be slow for some tasks, and it can be difficult to use for complex applications.

Mojo, a new programming language that is designed to address the challenges of AI development. Mojo combines the ease of use of Python with the performance of C++, making it the ideal language for building high-performance AI applications. Mojo is developed by Modular, a company that is focused on building tools for AI development. Modular is a team of experienced engineers and scientists who have a deep understanding of the challenges of AI development. Swift language developers also developed the Mojo language.

Mojo is a superset of Python, which means that it is fully compatible with Python code. This means that Mojo developers can take advantage of the vast ecosystem of Python libraries and tools. However, Mojo also adds new features that make it well-suited for AI development. One of the key features of Mojo is its support for parallel programming. Mojo can automatically parallelize code across multiple cores, which can significantly improve performance. Mojo also supports vectorized operations, which can further improve performance for certain types of code. Another key feature of Mojo is its support for machine learning. Mojo includes a built-in machine learning library that provides support for a wide range of machine learning algorithms. This makes it easy to build machine learning models in Mojo.

Mojo is still under development, but it has the potential to revolutionize the way that AI applications are developed. Mojo is faster, more powerful, and easier to use than Python, making it the ideal language for building high-performance AI applications.

Pooja Katiyar
B.Tech (CS-AIML) 3rd Year

Google Home and Roku TV: Stream Like a Pro

As in the leading world we are seeing that how the Technology is spreading in our basic need and it is observed that everything is dependable upon AI and its functions. There are other streaming gadgets on the market, but the two that are most well-known are Google Home and Roku TV, they are the common household items available in the market today, which have shown the wide variety of features in their usage and provide more benefit to the users and also provide It is easy to stream movies, TV episodes, web series and other entertainment content from the comfort of your own home.

The Google Assistant is the voice-activated speaker known as Google Home. With it, you can operate your smart home appliances hands-free, get assistance with routine activities, and ask questions. Music, podcasts, and other audio files can also be streamed via Google Home. There are more than 40,000 smart home devices available in the market with over 5,000 brands and the company is more exploring more benefits and features that work with just your voice.

On the other hand, the Roku TV is a smart TV that allows the user to stream different variety of movies and TV episodes directly from the internet without even going to different options. Thousands of streaming channels, including well-known ones like Netflix, Hulu, Amazon Prime, and Disney+, are accessible through the device's built-in Roku operating system. As a complete entertainment package, Roku TV also offers alternatives for viewing live TV. Google Home and Roku TV both provides a wide range of option while streaming a video. Spotify, YouTube Music, Pandora, and other well-known audio streaming services are all accessible through Google Home. YouTube, Netflix, and Google Play Movies & TV are just a few of the video streaming services that Google Home can access.

Google Home provides a high-quality sound experience that is competitive with many other smart speakers on the market in terms of audio quality. You can simply adjust the volume, change tracks, and pause playback with your voice thanks to Google Assistant connectivity. For TVs that support it, Roku TV provides a range of streaming choices, including 4K HDR streaming. To improve your watching experience, the gadget also provides a variety of audio settings, including Dolby Audio.

Roku TV and Google Home both have possibilities for multiple users. You may create separate Google Home accounts for each member of your family, giving them access to their own playlists and preferences. Each user may have a unique home screen and access to their preferred streaming channels by setting up several accounts on Roku TV.

In conclusion, if you want to simplify your home entertainment, Google Home and Roku TV are two great choices. These gadgets provide a variety of features and advantages that make them well worth consideration, whether you're searching for a voice-controlled speaker or a smart TV that can stream your favourite shows and movies. Why then wait? Google Home and Roku TV allow you to start streaming like a pro right away!

Adnan Ahmad
B.Tech (CS-AIML) 3rd yr
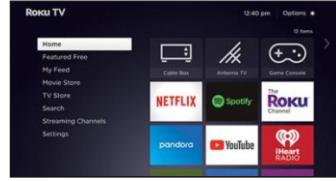
RECENT TRENDS IN DEEP LEARNING

Deep learning is a subset of machine learning that uses deep neural networks, which are very large artificial neural networks. Neural networks are systems that can learn from data. Without being instructed what to do, they have the capacity to do better. Deep learning is therefore recognized as a key actor in the artificial intelligence (AI) industry.

Deep learning techniques have recently tended to use larger data sets and more complex designs, as well as to interact between various neural network types and other AI tools like decision trees and natural language processing. In this article, we will look at 5 recent trends in deep learning and how they have the potential to bring about significant change.

1. Hybrid Model Integration- A method for incorporating hybrid models from data sources including the census, the weather, and social media into decision support tools is provided via an application. Additionally, it makes it possible to build a new nested domain for location data so that it may be used in decision support systems. The findings imply that using deep learning networks in hybrid models might result in superior judgments about risks and performance indicators like growth and employment. The advantages of deep learning and symbolic AI are combined in hybrid models. The approach to artificial intelligence is top-down.

2. The Vision Transformer- The University of Washington academics that created the model, popularly known as ViT, utilize it for object detection, sentiment analysis, and picture captioning.

An input layer, a middle layer, and an output layer make up ViT. The input layer includes training pictures that have been annotated with one of the available emotions (happy, sad, joyful, angry, neutral, unsure, or negative). The intermediate layer recognizes the different kinds of items in the picture. Based on what the center and input layers saw, the output layer produces a confidence score.

3. Self-Supervised Learning- This self-supervised, in-depth learning module promotes automation. Instead than using labeled data to train a system, it learns to autonomously classify the raw data. Any additional input component may be predicted by any input component. It may, for instance, make future predictions using data from the past.

An intelligent agent or an outside source may label the input in a self-supervised learning system. A label indicating the general caliber of the system's prediction is also added to the output. A self-supervised learning system's training method will be centered on decreasing the discrepancy between anticipated labels and actual labels.

4. Neuroscience based Deep Learning- The brain of a human being is incredibly complex and has a limitless capacity for learning. In recent years; deep learning has gained popularity as a method for studying how the brain functions. A subset of machine learning (ML) called neuroscience-based deep learning trains artificial neural networks using data from neuroscience studies. It enables researchers to create models that more accurately depict how the brain functions.

Computergenerated artificial neural networks are similar to those seen in human brains. Scientists and researchers have discovered thousands of neurological treatments and theories as a result of its creation. Neuroscience has finally received the much-needed boost from deep learning. The dynamics of adaptability ratio have greatly improved with the deployment of progressively more reliable, comprehensive, and sophisticated deep learning implementations and solutions.

5. High- Performance NLP Models- Machine Learning based NLP is still in the early stages. However there is presently no method that will allow NLP computers to recognize the meanings of different words in various contexts and respond appropriately.

Mr. Apoorv Mishra
(Assistant Professor, CSE)

Find any six Technical Terms
1. BIOMETRIC   2. CHATBOT
3. DRONES   4. ROBOTICS
5. BLOCKCHAIN 6. SENSORS

Malay Gupta
B.Tech- CS(AI &ML)
3rd Year

A	Z	D	B	M	Y	H	L	B	P	I
Q	W	V	I	E	R	T	U	L	K	J
X	C	O	O	Q	J	T	S	O	Q	S
N	V	J	M	N	D	S	E	C	A	C
Y	U	E	E	L	R	P	N	K	X	I
C	H	A	T	B	O	T	S	C	Y	T
X	C	B	R	G	N	H	O	H	G	O
F	N	E	I	R	E	M	R	A	J	B
J	Z	B	C	S	S	Y	S	I	I	O
K	L	D	S	R	T	P	X	N	L	R

QUIZ ON ROBOTICS

a)   **What does PUMA stand for in context to Robots?**
i.   Programmable used machine to assemble
ii.   Programmed utility machine for assembly
iii.   Programmable universal machine for assembly
iv.   Programmed utility machine to assemble

b)   **What does ZMP in terms of robotics stand for?**
i.   Zero Moment Point
ii.   Zero Mean Point
iii.   Zenith Moment Point
iv.   Zenith Measurement Point

c)   **Which organization is developing "Asimo"?**
i.   Google
ii.   Honda
iii.   Space X
iv.   Boston Dynamics

d)   **Which among the following robot is made by NASA for space exploration purpose?**
i.   Eskimo
ii.   Zenbo
iii.   Athlete
iv.   Pepper

e)   **Which among the following is an Indian robot, made by ISRO for space exploration purpose?**
i.   Valkyrie
ii.   Sita
iii.   Athlete
iv.   Vyommitra

f)   **Which sensor is used in robots for measuring distance?**
I.   Mpu6050
ii.   Piezoelectric sensor
iii.   LDR module
iv.   Ultrasonic Sensor

Selina Dwivedi
B.Tech (CSE-AIML) 3rd Year

Answers : A-(iii),B-(i),C-(ii),D-(iii),E-(iv),F-(iv)

Achal Tiwari — Jaro Education

Anushka Jain — HCL Technologies

Vaibhav Mishra — TCS

Chetan Kumar — TCS

Ummulwara — Amin International Ltd

Devashish Khare — Geeks For Geeks

Gaurav Sachan — Geeks For Geeks

Mohammad Alim — Geeks For Geeks

Anushka Jain — Geeks For Geeks

Achal Tiwari — Geeks For Geeks

Riya Dhawan — Geeks For Geeks

Fatima Shakeel — Tech Mahindra

Punit Raj Chaurasia — Dataman

Aatiq Afzal — Jalan Technologies

Mohammad Alim — Jalan Technologies

Ishita Jaiswal — Chetu

Ankit Singh — Chetu

Salabh Saxena — Chetu

Kaushlendra Dwivedi — Chetu

Kashan Shadab — Chetu

Mohd Kaif — Chetu

Punit Raj Chaurasia — IndiaMart

Kashish Kaif — IndiaMart

Aradhya Nishad — Astrea IT Services

Salabh Saxena — Astrea IT Services

Shubhjeet Paul — BidTronix Pvt Ltd

Tanmay Singh — BidTronix Pvt Ltd

Anushka Jain — Intellipaat Software Solutions Pvt Ltd

Tarun Mishra — Taxtron Technologies

Tanmay Singh — Taxtron Technologies

Kshama Gupta — Wittybrains Software Technologies Pvt. Ltd.

Kashan Shadab — BYJU's

Pakhi Biswas — BYJU's

Pushpanjali — MyAnatomy

Punit Raj Chaurasia — Auto Mechanics

Shane Alam — Androcoders

Mohd Shahzeb — Androcoders

Farukh Khan — Androcoders

Ankit Singh — Academor

Fatima Shakeel — Ffreedom App (Suvision Holdings Pvt Ltd)

Annanya Awasthi — Rabiya Hide Company

Abhishek Nishad — Futures First Info Services Pvt Ltd

Riya Dhawan — AI Web Solutions

Shane Alam — Jewelnme Pvt Ltd

Sakshi Pathak — CBI Solutions Pvt. Ltd.

Mohammad Alim — Cedcoss Technologies

Sahil Khan — Cedcoss Technologies

Tricha Mishra — SmartBrains

Ishita Jaiswal — SmartBrains

Riya Dhawan — Airdit Software

Pushpanjali — Airdit Software

Sakshi Pathak — Airdit Software

Shivansh Awasthi — Airdit Software

Chetan Kumar — Airdit Software

Aradhya Nishad — Collabera

Kshama Gupta — Collabera

Anushka Jain — Collabera

Gaurav Sachan — Collabera

Annanya Awasthi — Collabera

Ankit Singh — WFM Experts

Pakhi Biswas — WFM Experts

Abhishek Nishad — WFM Experts

Tarun Mishra — WFM Experts

Vaibhav Mishra — Infosys

Ashvani Shukla — Infosys

Aatiq Afzal — Infosys

Umesh Chaudhary — Infosys

Achal Tiwari — Infosys

Ankit Singh — Infosys

Mahak Kushwaha — Infosys

Devashish Khare — Infosys

Vaibhav Mishra — Palle Technologies

Mohd Alim — Palle Technologies

Achal Tiwari — Palle Technologies

Gaurav Sachan — Palle Technologies

Allenhouse
Institute of Technology
B.Tech • Polytechnic

Rooma, Kanpur
8127505222, 8127405222
www.allenhouse.ac.in

Allenhouse
GROUP OF INSTITUTIONS
MBA • BBA • BCA • B.Tech • Polytechnic