



SRI VASAVI ENGINEERING COLLEGE(Atonomous)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

APPROVED BY AICTE, PERMANENTLY AFFILIATED TO JNTU KAKINADA



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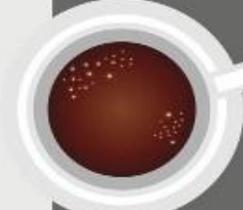
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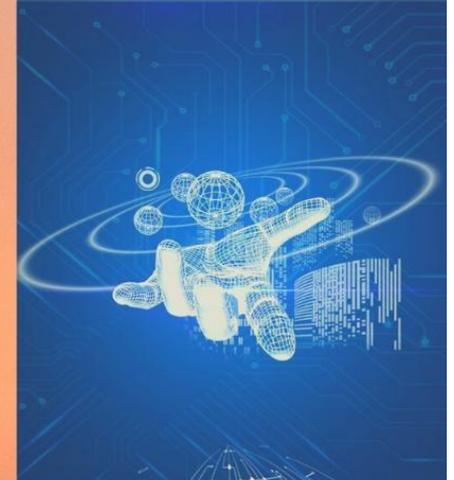
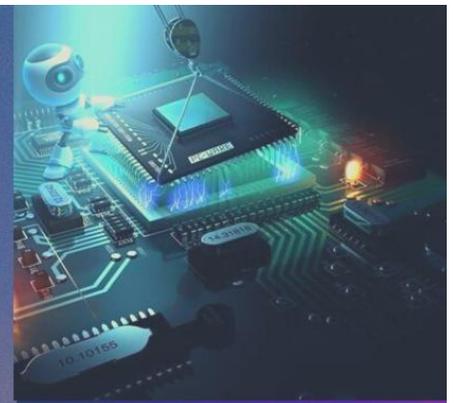
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THE FUTURE IS HERE



Natural language processing



Natural language processing (NLP) is a subfield of linguistics, computer science, and artificial intelligence concerned with the interactions between computers and human language, in particular how to program computers to process and analyze large amounts of natural language data. The goal is a computer capable of “understanding” the contents of documents, including the contextual nuances of the language within them. The technology can then accurately extract information and insights contained in the documents as well as categorize and organize the documents themselves.

History

Natural language processing has its roots in the 1950s. Already in 1950, Alan Turing published an article titled “Computing Machinery and Intelligence” which proposed what is now called the Turing test as a criterion of intelligence, though at the time that was not articulated as a problem separate from artificial intelligence. The proposed test includes a task that involves the automated interpretation and generation of natural language.

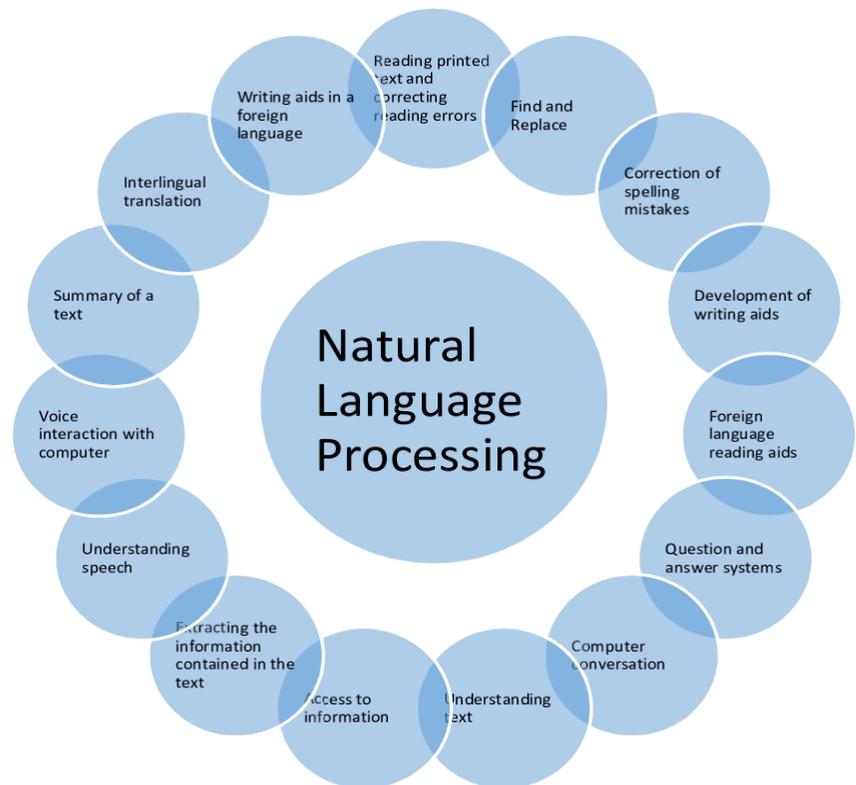
Applications of Natural Language Processing

Natural language processing tools are important for businesses that deal with large amounts of unstructured text, whether emails, social media conversations, online chats, survey responses, and many other forms of data.

By bringing NLP into the workplace, companies can analyze data to find what's relevant amidst the chaos, and gain valuable insights that help automate tasks and drive business decisions.

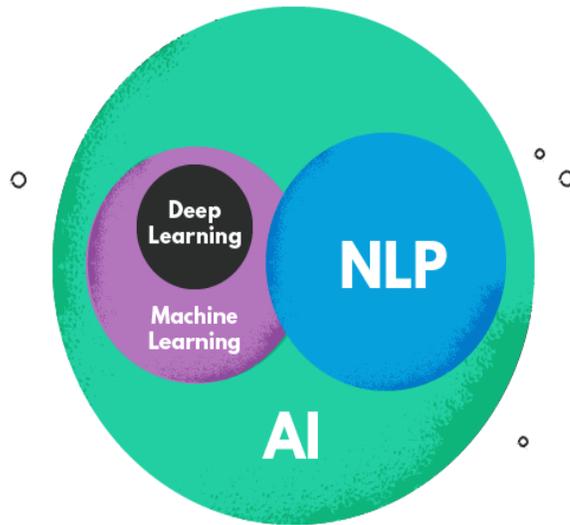
The most interesting applications of natural language processing in business:

- Sentiment Analysis
- Text Classification
- Text Extraction
- Machine Translation
- Text Summarization
- Market Intelligence
- Auto-Correct
- Intent Classification
- Urgency Detection
- Speech Recognition
- Chatbots
- Virtual Assistants



Natural language processing tools can help businesses analyze data and discover insights, automate time-consuming processes, and help them gain a competitive advantage.

Text and speech processing



By bringing Optical character recognition (OCR)

Given an image representing printed text, determine the corresponding text.

Speech recognition

Given a sound clip of a person or people speaking, determine the textual representation of the speech. This is the opposite of text to speech and is one of the extremely difficult problems colloquially termed “AI-complete” (see above). In natural speech there are hardly any pauses between successive words, and thus speech segmentation is a necessary subtask of speech recognition (see below). In most spoken languages, the sounds representing successive letters blend into each other in a process termed coarticulation, so the conversion of the analog signal to discrete characters can be a very difficult process. Also, given that words in the same language are spoken by people with different accents, the speech recognition software must be able to recognize the wide variety of input as being identical to each other in terms of its textual equivalent.

Speech segmentation

Given a sound clip of a person or people speaking, separate it into words. A subtask of speech recognition and typically grouped with it.

Text-to-speech

Given a text, transform those units and produce a spoken representation. Text-to-speech can be used to aid the visually impaired.

Word segmentation (Tokenization)

Separate a chunk of continuous text into separate words. For a language like English, this is fairly trivial, since words are usually separated by spaces. However, some written languages like Chinese, Japanese and Thai do not mark word boundaries in such a fashion, and in those languages text segmentation is a significant task requiring knowledge of the vocabulary and morphology of words in the language. Sometimes this process is also used in cases like bag of words (BOW) creation in data mining.

Natural Language Processing is the practice of teaching machines to understand and interpret conversational inputs from humans. NLP based on Machine Learning can be used to establish communication channels between humans and machines.

L·Aditya Kumar
20A81A05M4...

BLOCKCHAIN

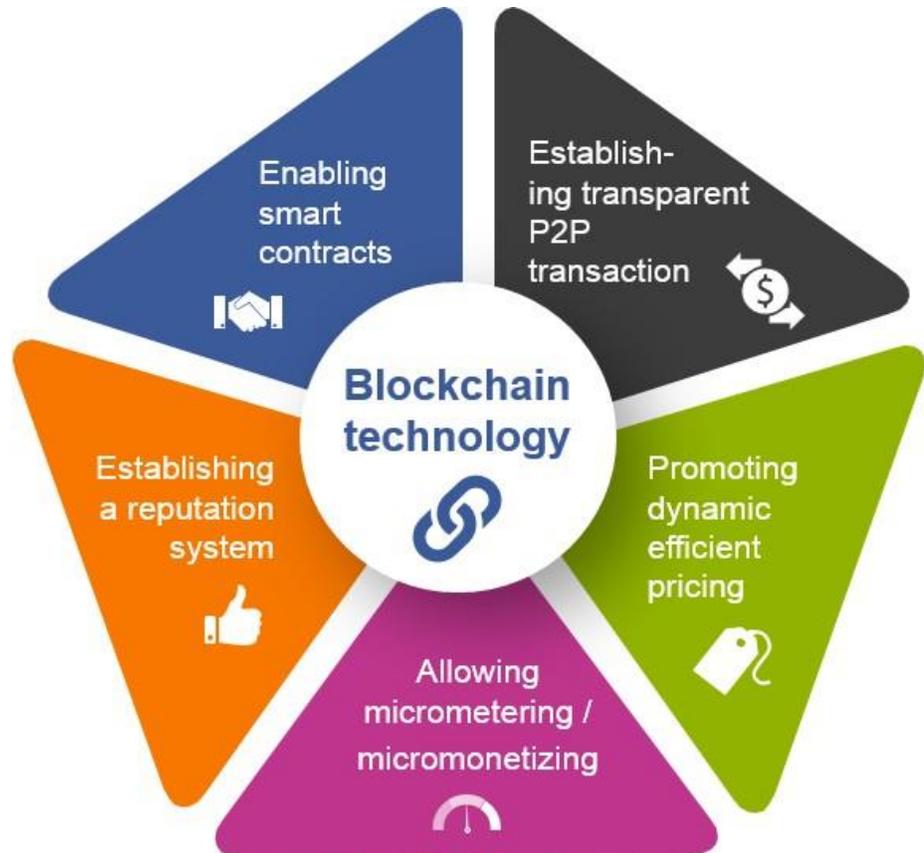
TECHNOLOGY

BLOCKCHAIN

Blockchain is a system of recording information in a way that makes it difficult or impossible to change, hack, or cheat the system

IMPORTANCE

A blockchain is essentially a digital ledger of transactions that is duplicated and distributed across the entire network of computer systems on the blockchain.



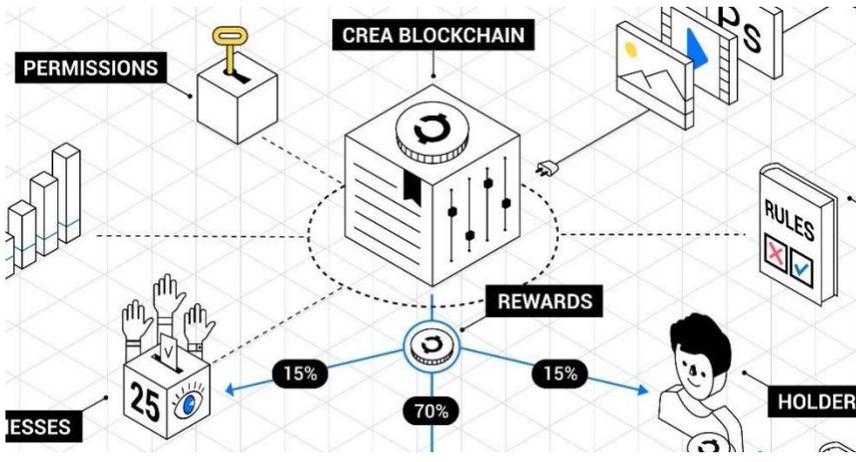
DLT TECHNOLOGY

Each block in the chain contains a number of transactions, and every time a new transaction occurs on the blockchain, a record of that transaction is added to every participant's ledger. The decentralised database managed by multiple participants is known as Distributed Ledger Technology (DLT).

Blockchain is a type of DLT in which transactions are recorded with an immutable cryptographic signature called a hash.

Blockchain is the technology behind digital assets. It is the indestructible ledger responsible for recording economic transactions and can be programmed to maintain financial transactions and anything else that has value.

It Is a decentralized ledger that is not controlled by a third party or financial institution. No technology is perfect or flawless and the Blockchain technology is one of them.



TYPES OF BLOCKCHAINS

There are primarily two types of blockchains; Private and Public blockchain. However, there are several variations too, like Consortium and Hybrid blockchains. Before we get into details of the different types of blockchains, let us first learn what similarities do they share. Every blockchain consists of a cluster of nodes functioning on a peer-to-peer (P2P) network system. Every node in a network has a copy of the shared ledger which gets updated timely. Each node can verify transactions, initiate or receive transactions and create blocks.

PUBLIC BLOCKCHAIN

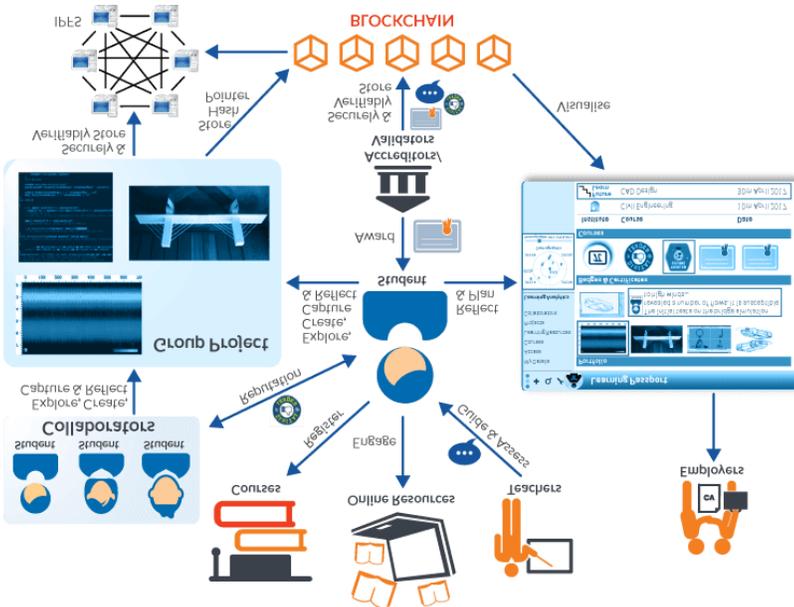
A public blockchain is a non-restrictive, permission-less distributed ledger system. Anyone who has access to the internet can sign in on a blockchain platform to become an authorized node and be a part of the blockchain network. A node or user which is a part of the public blockchain is authorized to access current and past records, verify transactions or do proof-of-work for an incoming block, and do mining. The most basic use of public blockchains is for mining and exchanging cryptocurrencies. Thus, the most common public blockchains are Bitcoin and Litecoin blockchains. Public blockchains are mostly secure if the users strictly follow security rules and methods. However, it is only risky when the participants don't follow the security protocols sincerely.

Example: Bitcoin, Ethereum, Litecoin

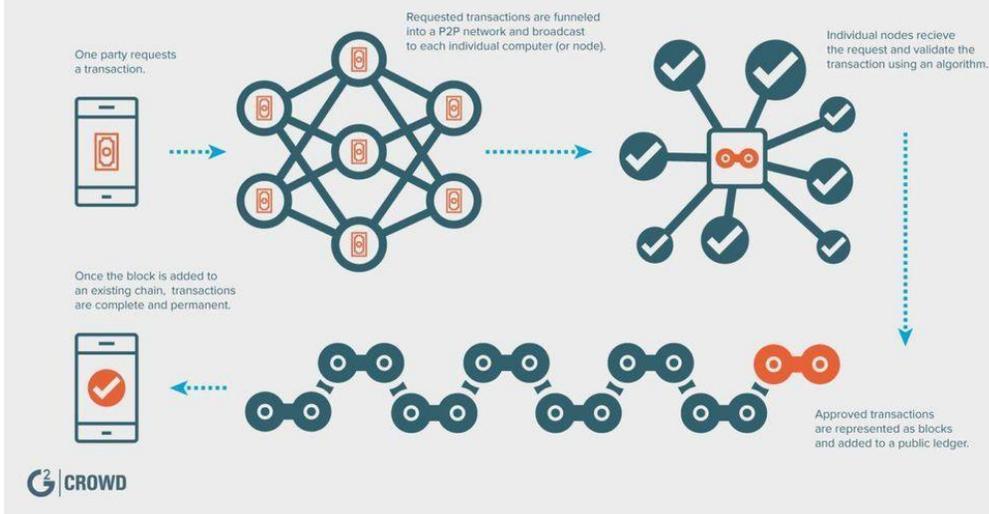
PRIVATE BLOCKCHAIN

A private blockchain is a restrictive or permission blockchain operative only in a closed network. Private blockchains are usually used within an organization or enterprises where only selected members are participants of a blockchain network. The level of security, authorizations, permissions, accessibility is in the hands of the controlling organization. Thus, private blockchains are similar in use as a public blockchain but have a small and restrictive network. Private blockchain networks are deployed for voting, supply chain management, digital identity, asset ownership, etc.

Examples of private blockchains are; Multichain and Hyperledger projects (Fabric, Sawtooth), Corda, etc.



HOW DOES BLOCKCHAIN WORK?



CONSORTIUM BLOCKCHAIN

A consortium blockchain is a semi-decentralized type where more than one organization manages a blockchain network. This is contrary to what we saw in a private blockchain, which is managed by only a single organization. More than one organization can act as a node in this type of blockchain and exchange information or do mining. Consortium blockchains are typically used by banks, government organizations, etc.

Examples of consortium blockchain are; Energy Web Foundation, R3, etc.

HYBRID BLOCKCHAIN

A hybrid blockchain is a combination of the private and public blockchain. It uses the features of both types of blockchains that is one can have a private permission-based system as well as a public permission-less system. With such a hybrid network, users can control who gets access to which data stored in the blockchain. Only a selected section of data or records from the blockchain can be allowed to go public keeping the rest as confidential in the private network. The hybrid system of blockchain is flexible so that users can easily join a private blockchain with multiple public blockchains. A transaction in a private network of a hybrid blockchain is usually verified within that network. But users can also release it in the public blockchain to get verified. The public blockchains increase the hashing and involve more nodes for verification. This enhances the security and transparency of the blockchain network.

BENEFITS OF BLOCKCHAIN

SECURE – Since it is an open source ledger, every transaction is made public. This leaves no room for fraud. The integrity of the blockchain is monitored by minors who have their eyes on all the transactions.

NO THIRD PARTY INFLUENCE– No government or financial institution has control of the cryptocurrencies based on blockchain technology. This means no government can meddle with the value of the currency.

SECURE TRANSACTIONS– The blockchain responsible for keeping record of all the transactions cannot be edited or manipulated. Both ends of a transaction and the public can view the transaction data at any given time. This makes online transactions more secure.

INSTANT TRANSACTIONS– Blockchain technology transactions are completed in a few minutes. Take for example a bank transaction made to a person with a different bank account. It takes two days minimum to complete the transactions. At this time, the person doing virtual transactions with crypto can complete a series of transactions.

**M.WAAZIDA SULTANA
20A81A05N2**

VIRTUAL REALITY

- 20A81A05A6 (Pavan)

Virtual Reality

Virtual Reality (VR) is a computer-generated environment with scenes and objects that appear to be real, making the user feel they are immersed in their surroundings. This environment is perceived through a device known as a **Virtual Reality headset or helmet**. VR allows us to immerse ourselves in video games as if we were one of the characters, learn how to perform heart surgery or improve the quality of sports training to maximize performance.

Although this may seem extremely futuristic, its origins are not as recent as we might think. In fact, many people consider that one of the first Virtual Reality devices was called **Sensorama**, a machine with a built-in seat that played 3D movies, gave off odours and generated vibrations to make the experience as vivid as possible. **The invention dates back as far as the mid-1950s**. Subsequent technological and software developments over the following years brought with them a progressive evolution both in devices and in interface design.



Gyroscope in VR

Six degrees of freedom

A gyroscope is defined as a device which uses the earth's gravity to help determine orientation. It is termed as gyro-sensors when it comes to smartphones. They measure the rate of rotation around the device's x, y and z axes.

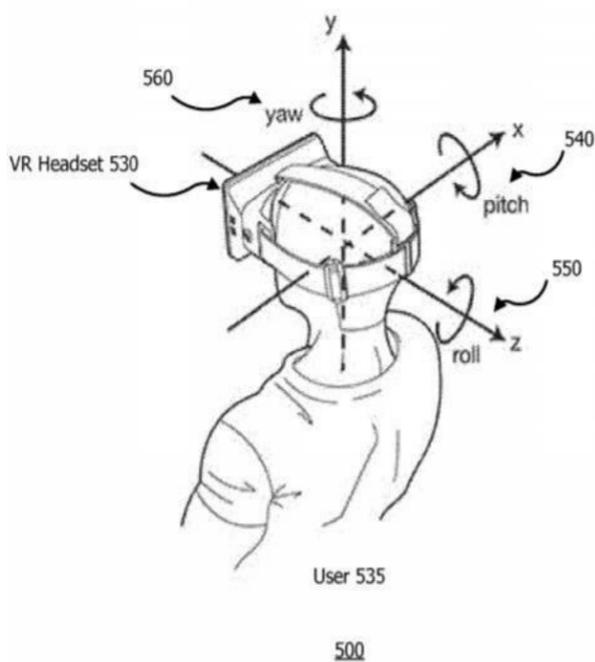
while playing a game, we tap our fingers on the screen to aim and direct a player to move forward/backward, left/right. This phenomenon is the result of the gyro sensors embedded in our smartphones, which are constantly sending information to the display driver to change the orientation of the phone from portrait to landscape, or allow player movement in multi-directions.

The amalgamation of the gyroscope, the accelerometer, and the magnetometer have further enriched the viewing experiences from within a virtual environment. All these sensors come together to achieve the ultimate goal of the best viewing experience, six degrees of freedom, or 6DOF.

That is, the freedom of movement experienced by a user in 3D space. 6DOF is commonly represented by 3 translations – up/down, right/left, forward/backward, and 3 rotations – pitch, yaw, and roll of gyroscope.

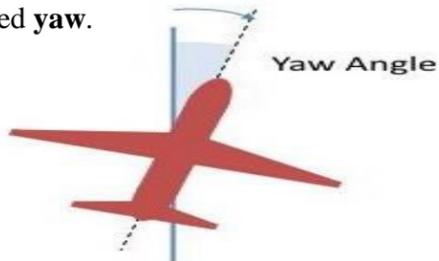
The freedom of movement that can be achieved in 3D space is important for virtual reality, enabling greater ease in tracking the movement of users and levels of interactivity within the environment.

It is impossible to think about virtual reality without mentioning the gyroscope because it has ushered in a new wave of engagement and movement within a virtual world. This connection between the device (VR headset) and the effect (gyro) has created immense opportunities for developers to deliver interactive and meaningful experiences to VR enthusiasts, novitiates, and students alike.



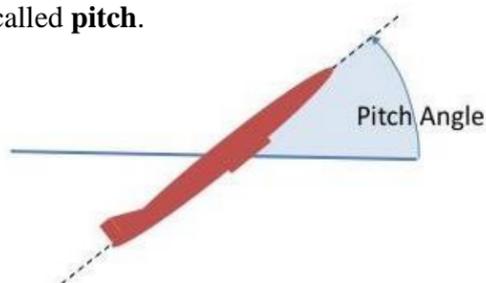
Yaw

Rotation around the vertical axis is called **yaw**.



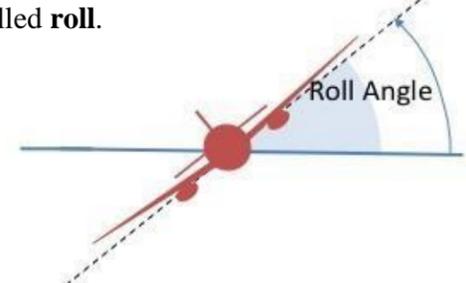
Pitch

Rotation around the side-to-side axis is called **pitch**.



Roll

Rotation around the front-to-back axis is called **roll**.



VIRTUAL REALITY

Optical tracking in VR

Optical tracking uses cameras placed on or around the headset to determine position and orientation based on computer vision algorithms. This method is based on the same principle as stereoscopic human vision. When a person looks at an object using binocular vision, he/she is able to define approximately at what distance the object is placed due to the difference in perspective between the two eyes. In optical tracking, cameras are calibrated to determine the distance to the object and its position in space. Optical systems are reliable and relatively inexpensive, but they can be difficult to calibrate. Furthermore, the system requires a direct line of light without occlusions, otherwise it will receive wrong data.

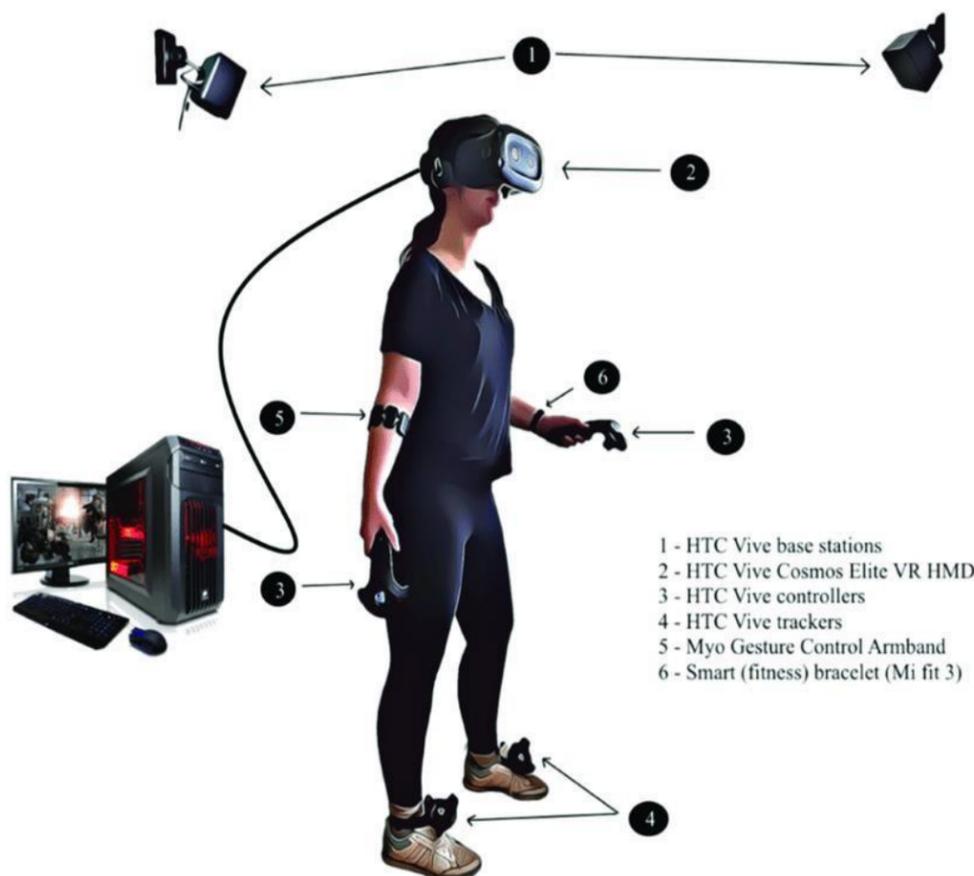
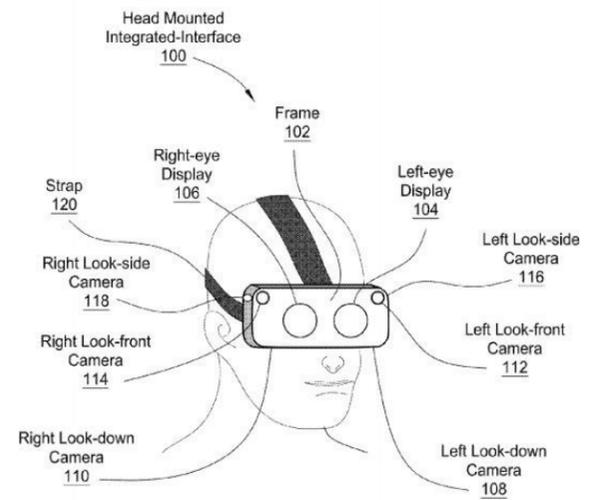
Outside-in tracking

In this method, cameras are placed in stationary locations in the environment to track the position of markers on the tracked device, such as a head mounted display or controllers. Having multiple cameras allows for different views of the same markers, and this overlap allows for accurate readings of the device position.

Inside-out tracking

In this method, the camera is placed on the tracked device and looks outward to determine its location in the environment. Headsets that use this tech have multiple cameras facing different directions to get views of its entire surroundings. This method can work with or without markers. The Lighthouse system used by the HTC Vive is an example of active markers.

Each external Lighthouse module contains IR LEDs as well as a laser array that sweeps in horizontal and vertical directions, and sensors on the headset and controllers can detect these sweeps and use the timings to determine position.



Architecture Of VR system

The creation of VR systems to support virtual environments (VE) is a challenging problem requiring diverse areas of expertise, ranging from networks to psychology. Developing VEs is a very expensive task in terms of time and financial and human resources. VEs can be applied in a broad range of areas, such as scientific visualization, socializing, training, psychological therapy, and gaming (for more details, see the “Applications” part of this book). Such a diversity of applications produces a set of requirements that make it very difficult, if not impossible, to build a single system that fits all needs. The result has been the creation of monolithic systems that are highly optimized to a particular application, with very limited reusability of components for other purposes.

VR Devices

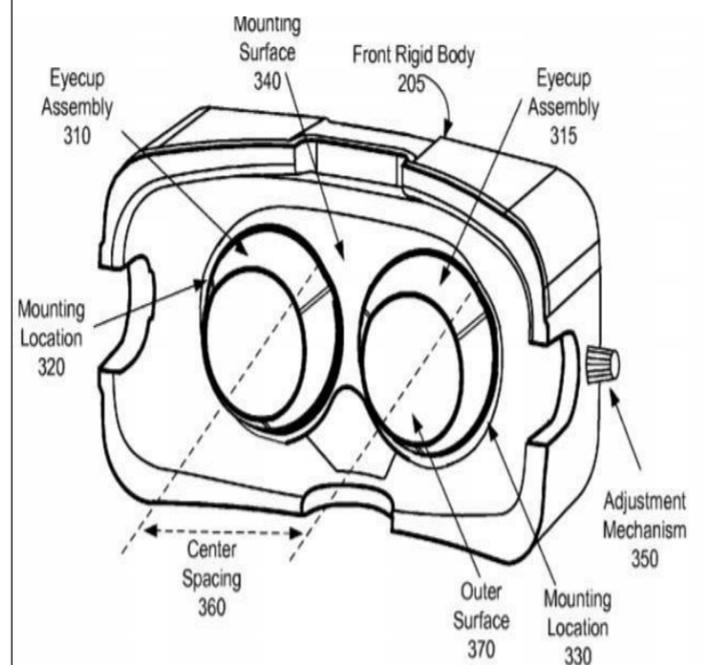
Input devices include VR controllers, balls or tracking balls, controller wands, data gloves, trackpads, on-device control buttons, motion trackers, bodysuits, treadmills, and motion platforms (virtual Omni) that employ pressure or touch to produce energy that is converted to a signal to make selection possible from user to 3D environment. These help users navigate the 3D worlds

The computer must be able to render high-quality graphics and usually employs Graphics Processing Units for the best quality and experience. The Graphics Processing Unit is an electronic unit on a card that takes data

from the CPU and manipulates and alters memory in order to accelerate the creation of images in a frame buffer and to the display.

Output devices include visual and auditory or haptic displays which stimulate a sense organ and present the VR content or environment to the users to generate a feeling.

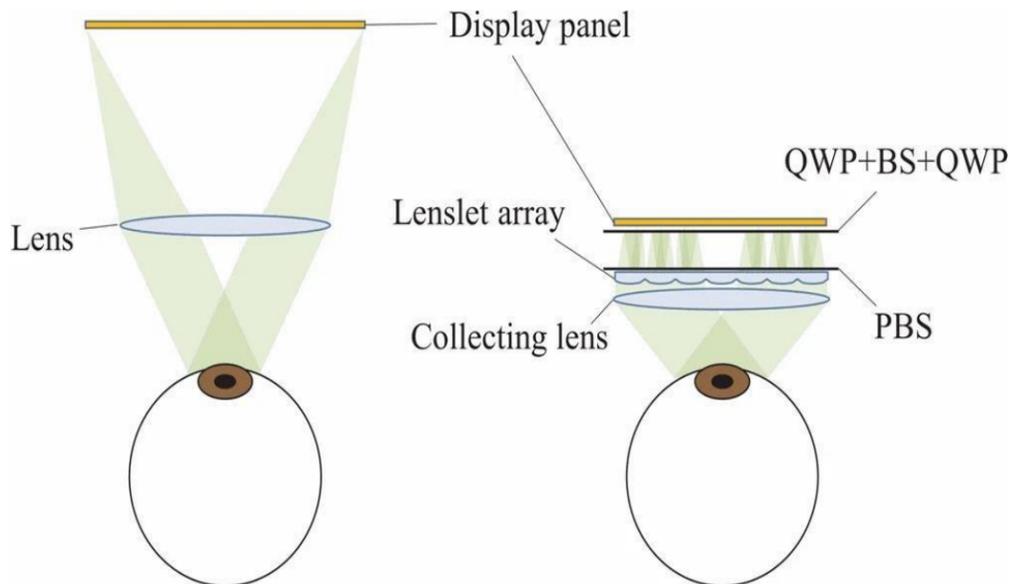
These are the hardware products that facilitate VR technology. They include a personal computer, which is used to process inputs and outputs from and to users, consoles, and smartphones.



VIRTUAL REALITY

Optics in VR

Ratcliff et al. proposed a VR display system with a 180° field of view (FOV) using a curved lenslet array^[33]. Thanks to the short focal length of the lenslet array, their VR design requires a shorter distance to float the display image. In addition, the curvature of the lenslet array enlarges the FOV and creates an eyebox at an appropriate distance. However, their system requires a curved display and a lenslet array with an individually optimized lenslet, which is quite complicated to implement. Also, the prototype they demonstrated had a 40 mm thickness, which is still not small enough.



Conventional VR optics

Proposed VR optics

Maimane and Wang proposed a flat VR display system using a polarization-based optical folding technique and a holographic lens^[25]. They demonstrated a sunglasses-sized prototype with 9 mm thickness and 90° horizontal FOV thanks to the very low f-number of the holographic lens and the folded path length.

However, since holographic lenses in their systems are highly dispersive, complex systems such as R, G, B laser sources and multiplexed holographic lenses are required for full-color display. Also, holographic lenses have high angular selectivity, limiting the system's eye-box. Most importantly, the immature fabrication technology of the holographic lens is very detrimental to display uniformity.



Thinky the ThinkFun Dragon
3-D Paper Illusion

CUT OUT, FOLD AND ASSEMBLE USING PAGE 3 OF THIS PDF.

VIEW FROM 3 FT.; CLOSE ONE EYE, LOOK INTO THE EYES OF THE DRAGON, ROCK BACK AND FORTH. WOW!



AFTER YOU FINISH FOLDING THINKY, HE SHOULD LOOK LIKE THE SMALL DRAWING SHOWN IN THE LOWER RIGHT CORNER. TO IMPROVE THE ILLUSION, HOLD HIM SO YOU CAN LOOK INTO HIS EYES, AND BEND THE HEAD AWAY FROM YOU SLIGHTLY AT THE NECK.





Igniting Minds Since 1984
www.ThinkFun.com

This dragon illusion was inspired by Jerry Andrus and is the intellectual property of ThinkFun, Inc. Copyright © 1998, 2010 ThinkFun, Inc.

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VIRTUAL REALITY

Applications of VR:



1. VR in Military

The military in the UK and the US have both adopted the use of virtual reality in their training as it allows them to undertake a huge range of simulations. VR is used in all branches of service: the army, navy, air force, marines and coast guard. In a world where technology is adopted from an early age and children are accustomed to video games and computers, VR proves an effective method of training. VR can transport a trainee into a number of different situations, places and environments for a range of training purposes. The military uses it for flight simulations, battlefield simulations, medic training, vehicle simulation and virtual boot camp, among other things. VR is a completely immersive, visual and sound-based experience, which can safely replicate dangerous training situations to prepare and train soldiers, without putting them at risk until they are ready for combat.

2. VR in Sports

VR is revolutionizing the sports industry for players, coaches and viewers. Virtual reality can be used by coaches and players to train more efficiently across a range of sports, as they are able to watch and experience certain situations repeatedly and can improve each time. Essentially, it's used as a training aid to help measure athletic performance and analyse technique. Some say it can also be used to improve athletes' cognitive abilities when injured, as it allows them to experience gameplay scenarios virtually. Similarly, VR has also been used to enhance the viewer's experience of a sporting event. Broadcasters are now streaming live games in virtual reality and preparing to one day sell virtual tickets to live games so that anyone from anywhere in the world can 'attend' any sports event.



3. VR in Medical Training

Due to its interactive nature, medical and dental students have begun using VR to practice surgeries and procedures, allowing for a consequence free learning environment; the risk of inflicting harm or making a mistake while practicing on real patients is eliminated. Virtual patients are used to allow students to develop skills which can later be applied in the real world. Using VR technology in the medical industry is an effective way to not only improve the quality of students in training but it also presents a great opportunity to optimise costs, especially since health services are continuously under pressure with tight budgets



4. VR in Education

VR uses for education don't stop at the military or medical field, but extend to schools with virtual reality also adopted in education for teaching and learning situations. Students are able to interact with each other and within a three-dimensional environment. They can also be taken on virtual field trips, for example, to museums, taking tours of the solar system and going back in time to different eras. Virtual reality can be particularly beneficial for students with special needs, such as autism. Research has found that VR can be a motivating platform to safely practice social skills for children, including those with Autism Spectrum Disorders (ASD). Technology company, Floreo, has developed virtual reality scenarios that allow children to learn and practice skills such as pointing, making eye contact and building social connections. Parents can also follow along and interact by using a linked tablet.





Ref. No.SVEC/CSE/Reports/2021-2022/02

CSE Progress Report from 1st December 2021 to 28th February 2022

1) **Details of faculty attended FDPs, Workshops, Seminars, Conferences etc., outside the college as well as in the college:**

(a) FDPs / Workshops Attended by Faculty: 05

S.No.	Name of the faculty	Name of Workshop/Seminar/ FDP/SDP Attended	Location	Nos. of days	From Date	To Date
1.	M.Nageswararao	FDP on “Python for Data Science”	Organized by NPTEL-AICTE	04	Jan-2022	Feb-2022
2.	G.Prasanthi	FDP on “Python for Data Science”	Organized by NPTEL-AICTE	04	Jan-2022	Feb-2022
3.	A. Leelavathi	FDP on “Python for Data Science”	Organized by NPTEL-AICTE	04	Jan-2022	Feb-2022
4.	K.Praveen Kumar	Online FDP on Advancements in Speech and Natural Language Processing	Organized by Department of Data Science & Artificial Intelligence, IcfaiTech, IFHE, Hyderabad	05	21-02-2022	25-02-2022
5.	R.L.Phani Kumar	Wipro Certified Faculty Training Program	Conducted by TalentNext	19	31-01-2022	18-02-2022

b) Certifications: 03

S.No.	Name of the faculty	Name of the Course certificate Attended	Certification Authority	Duration	Date
1.	A.Leelavathi	Python for Data Science	NPTEL	04 Weeks	Jan-Feb-2022
2.	M.Nageswararao	Python for Data Science	NPTEL	04 Weeks	Jan-Feb-2022
3.	G.Prasanthi	Python for Data Science	NPTEL	04 Weeks	Jan-Feb-2022

2. Workshops/FDPs/Seminars etc. conducted by the Department to the students:06

S.No.	Date	Event Name	Name of the Eminent Guest	Audience	No of Students participated
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SRI VASAVI ENGINEERING COLLEGE (Autonomous)

PEDATADEPALLI, TADEPALLIGUDEM-534 101

Department of Computer Science & Engineering (Accredited by NBA)

1	17/01/2022 to 22/01/2022	Workshop on “ AWS Cloud Computing ” by APSSDC.	Mr.Ch Ramakrishna & Mr.J LovaBabu	III-Sem-CSE-A	64
2	17/01/2022 to 22/01/2022	Workshop on “ AWS Cloud Computing ” by APSSDC.	Mr. V Anil Kumar & Ms.B Sumana	III-Sem-CSE-B	64
3	17/01/2022 to 22/01/2022	Workshop on “ Web Development Using Django ” by APSSDC.	Polipalli Siddhodhana Sakhambhari	III-Sem-CSE-C	64
4	17/01/2022 to 22/01/2022	Workshop on “ Data Science with Python ” by Techsnap.	Mr. Saketh	III-Sem-CST	64
5	24/01/2022 to 29/01/2022	Workshop on “ AWS Cloud Computing ” by APSSDC.	Mr.Ch Ramakrishna & Mr.J LovaBabu	III-Sem-CSE-D	64
6	31/01/2022 to 05/02/2022	Python Programming	Polipalli Siddhodhana Sakhambhari	LE Section	30





3) Training Programmes Conducted:



SRI VASAVI ENGINEERING COLLEGE (Autonomous)

PEDATADEPALLI, TADEPALLIGUDEM-534 101

Department of Computer Science & Engineering (Accredited by NBA)

S.No.	Organisation Name	Date(s)	Event description	Audience
1.	New Leaf Learning Solutions	07-03-2022 to 13-04-2022	CRT Training	V SEM CSE & CST Students
2.	New Leaf Learning Solutions	15-12-2021 to 30-12-2021	CRT Training	V SEM CSE & CST Students

4) Details of Publications of Faculty: 04

S.No.	Name of the Staff	Title of the Publication	Publication Details	INDEXING SCI/SCOPUS/ OTHERS	Impact Factor
1.	Mrs.Y Divya Vani	Bestow Immaculate Environment exerting Sprucing Environment Method and Precognition Clustering	Design Engineering,ISSN: 0011-9342, Issue: 01, Pages: 811 – 828, February 2022.	SCOPUS	--
	Dr. D Jaya Kumari				
	Mr. M BabuRao				
	Mrs. G Prasanthi				
2.	Dr.V.S.Naresh	”Secure lightweight multi-party key agreement based on hyperelliptic curve Diffie–Hellman for constraint networks”	Concurrency ComputatPractExper. 2022;e6921. https://doi.org/10.1002/cpe.6921 ,wileyonlinelibrary.com/journal/cpe, © 2022 John Wiley & Sons, Ltd. 1 of 13	SCI	1.536
3.	Dr.V.S.Naresh	Provably secure blockchain privacy-preserving smart contract centric dynamic group key agreement for large WSN	The Journal of Supercomputing https://doi.org/10.1007/s11227-021-04175-8 .Springer nature	SCI	2.474
4.	Mr K Praveen Kumar	A Novel Method toIdentify Fake Profilesby Using Artificial Neural Networks	Design Engineering,ISSN: 0011-9342 Year2021,Issue 9,pages8262-8277	SCOPUS	--
	Dr. D. Jaya Kumari				
	Dr. P LaxmiKanth				
	Mr K Satyanarayana				

5) Student Achievements:

(a) Placements (2018-22 Batch):

(b) We are very happy to inform you that the following students are selected in different MNC’S with highest packages:

1. Ms. Kotha Dhana Lakshmi (18A81A05K9) selected in AMAZON HYD WITH PACKAGE OF RS 44 LAKHS PER ANUM.



She also got selected in

- **CAPILLARY TECHNOLOGIES - 13 LPA**
- **IBM - 4.5 LPA**
- **HEXAWARE - 3.6 LPA**
- **INFY - TQ – 3.6 to 5 LPA**
- **MINDTREE - 3.6 LPA**



2. Ms. KALLA GAYATHRI (18A81A05J8) selected in big MNC VMWARE WITH PACKAGE OF RS 20 LAKHS PER ANUM.

- **ACCOLITE DIGITAL INDIA - 5 LPA**
- **DELOITE - 4.5 LPA**
- **HackWithInfy - 3.5- 5 LPA**
- **WIPRO - 3.5 LPA**
- **VIRTUSA - 4.5 LPA**
- **HEXAWARE - 3.5 LPA**
- **DXC -4 LPA**





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S. No	Roll No.	Name of the Student	Company	No. Of Students got Selected	Package	Nature of Drive	Date
1	18A81A0545	Pippara Lakshmi Durga	TECH MAHINDRA	24	3.25 LPA	ON CAMPUS	18/02/2022
2	18A81A0567	Dake Chandu Sujini Bala					
3	18A81A0574	Gorrela Purna Sri Lakshmi					
4	18A81A0582	Maddimsetti Rupa Sri					
5	18A81A0591	Narayana Swathi Sri					
6	18A81A05A3	Sanaboina Suneesha					
7	18A81A05A5	Saride Sai Vidya Anusha Praveena					
8	18A81A05A9	Singamsetti Uma Sai					
9	18A81A05B6	Vuyyuri Keerthi					
10	18A81A05C4	Akula Sai Ram					
11	18A81A05C7	Athuluri Dinusha					
12	18A81A05D4	Gudimetla Naga Sai Santhi Keerthi					
13	18A81A05D5	Gundapaneni Brahmateja					
14	18A81A05D9	Karri Kyathi Sri Jyothi					
15	18A81A05F0	Manne Govinda Raju					
16	18A81A0576	Guduri Kushmita Priyavalli					
17	18A81A05F3	Mullapudi Navya Sri					
18	18A81A05F4	Munikoti Sri Charan					
19	18A81A05F7	Nandikam Lakshmi Aiswarya					
20	18A81A05H9	Yallabandi Harshini					
21	18A81A05I3	Badiga Mani Kanta					
22	18A81A05J3	Gidda Venkata Sindhu Ruchitha					
23	18A81A05J6	Indugapalli Lakshmi Prasanna					
24	18A81A05K4	Karpurapu Uma Sasank					
25	18A81A05I8	Datla Sriya	BERKADIA	1	9 LPA	ON CAMPUS	03/02/2022
26	18A81A05J8	Kalla Gayatri	VMWARE	2	20 LPA	ON CAMPUS	24/01/2022
27	18A81A05G9	Terli Durga Prasad	TIGER ANALYTICS	1	6.5 LPA	OFF CAMPUS	21/01/2022



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28	18A81A0537	Gopireddy Chandra Leena	HCL	16	3.65 LPA	OFF CAMPUS	06/01/2022
29	18A81A0538	Sanku Ramya Sri Vardhini					
30	18A81A0573	Yallabandi Harshini					
31	18A81A05A4	Penmetsa Sushma					
32	18A81A0537	Adarsh Ogirala					
33	18A81A05C7	Athuluri Dinusha					
34	18A81A05H2	Aketi Daneswari					
35	18A81A05H9	Kadagalla Bala Krishnaveni					
36	18A81A05I2	Kondapalli Thorani Sowmya					
37	18A81A05J3	Gidda Venkata Sindhu Ruchitha					
38	18A81A05I4	Chinnam Chandana					
39	18A81A05J7	Pamarthi Sesa Sai					
40	18A81A05K6	Udathala Durga Bharathi					
41	18A81A05M3	Saina Mohitha Sai					
42	18A81A05N0	Tammineedi Bindu Jyothsna					
43	18A81A05L9	Penmetsa Sushma					
44	18A81A05H3	Vanimireddy Bhanu Teja	WILEY MTHREE	2	7 LPA	ON CAMPUS	29/12/2021
45	18A81A05B5	Veerabathula Ruchitha Sai Lakshmi					
46	18A81A05E5	Asha Jyothi Kurada	TA DIGITAL	15	5.7 LPA	ON CAMPUS	24/12/2021
47	18A81A05K3	Baby Bhargavi Karella					
48	18A81A05H3	Bhanu Teja Vanimireddy					
49	18A81A05I7	Darapureddy Sahithi					
50	18A81A05I5	Harshavardhan Siddartha Varma Chintalapati					
51	18A81A05D3	Naga Chandana Gattam					
52	18A81A0591	Narayana Swathi Sri					
53	18A81A0592	Orusu Venkatesh					
54	18A81A05L2	Pavana Swarajya Srineha Manepalli					
55	18A81A05D8	Sai Sri Bhavana Kale					
56	18A81A05C3	Veda Sravani Addepalli					
57	18A81A05M1	Yogananda Madhu Gopal Rajulapati					



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58	19A85A0503	Avinash Kasukurthi					
59	19A85A0520	Ram Sai Pavan Katta					
60	19A85A0524	Kiran Yarramsetti					
61	18A81A0502	Arumalla Venkata Gowtham					
62	18A81A0529	Lakkapragada Sai Rama Krishnavamsi					
63	18A81A0535	Nalam Jnvsksv Challarao					
64	18A81A0537	Ogirala Adarsh					
65	18A81A0545	Pippara Lakshmi Durga					
66	18A81A0550	Pyboyina Satya Dev					
67	18A81A0565	Chilukoti Mousmi					
68	18A81A0573	Gopireddy Chandra Leena					
69	18A81A0576	Guduri Kushmita Priyavalli					
70	18A81A0577	Inumarthi Sravya					
71	18A81A0579	Konduru Sowjanya					
72	18A81A0596	Perumalla Pavan Kumar					
73	18A81A0598	Polumati Sasidhar					
74	18A81A05A1	Rudraraju Naga Sai Vara Lakshmi Revathi	CAPGEMINI	50	3.6 LPA	POOL CAMPUS	24/12/2021
75	18A81A05A3	Sanaboina Suneesha					
76	18A81A05B1	Tirumalla Koteswara Rao					
77	18A81A05B4	Valluri Sharmisri					
78	18A81A05B8	Yalamati Ramsai					
79	18A81A05B9	Yalavarthi Raghava Rao					
80	18A81A05C3	Addepalli Veda Sravani					
81	18A81A05C6	Annam Venkata Sai Siva Karthik					
82	18A81A05C7	Athuluri Dinusha					
83	18A81A05D5	Gundapaneni Brahmateja					
84	18A81A05F2	Molleti Renuka Sai					
85	18A81A05F4	Munikoti Sri Charan					
86	18A81A05F6	Nalli Swathi					
87	18A81A05G6	Sai Nammi					
88	18A81A05H0	Thirthala Leesha Pallavi					



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89	18A81A05H3	Vanimireddy Bhanu Teja					
90	18A81A05H7	Veeramallu Yuvaraj					
91	18A81A05H8	Velugonda Bhargavi					
92	18A81A05I4	Chinnam Chandana					
93	18A81A05I5	Chintalapati Harshavardhan Siddartha Varma					
94	18A81A05I6	Chitturi Jai Krishnavamsi					
95	18A81A05I7	Darapureddy Sahithi					
96	18A81A05K5	Komatlapalli Leela Naga Lakshmi Priya					
97	18A81A05K8	Koripalli Naga Sindhu					
98	18A81A05L6	Padala Jayasri Harshitha					
99	18A81A05L9	Penmetsa Sushma					
100	18A81A05M2	Ravuri Divya					
101	18A81A05M3	Saina Mohitha Sai					
102	18A81A05M7	Sunkara Lalitha					
103	18A81A05M9	Tamma Naga Swathi					
104	18A81A05N1	Tangella Hema Surya Sai Kiran					
105	18A81A05N3	Uppalapati Gamyia Sri					
106	18A81A05N4	Vanka Renuka Rajeswari					
107	19A85A0501	Akula Chaitanya Sai					
108	19A85A0509	Kambala Hema Naga Venkata Chandravathi					
109	19A85A0520	Katta Ram Sai Pavan					
110	19A85A0524	Yarramsetti Kiran					
111	18A81A05M1	Rajulapati Yogananda Madhu Gopal					
112	18A81A0591	Narayana Swathi Sri					
113	18A81A05I5	Chintalapati Harshavardhan Siddartha Varma					
114	18A81A05N7	Vedula Bala Anuhya	MIND TREE	19	3.6 LPA	OFF CAMPUS	22/12/2021
115	18A81A05G3	Pragallapati Rohit					
116	18A81A0582	Maddimsetti Rupa Sri					
117	18A81A05C6	Annam Venkata Sai Siva Karthik					



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118	19A85A0520	Katta Ram Sai Pavan					
119	18A81A05I4	Chinnam Chandana					
120	18A81A05K3	Karella Baby Bhargavi					
121	18A81A05H3	Vanimireddy Bhanu Teja					
122	19A85A0519	Grandhi Avinash					
123	18A81A05J0	Gadde Likhitha Sai					
124	18A81A05G2	Patthipati Rajkumar					
125	18A81A05H4	Varikuti Lakshmi Sai Prasanna					
126	18A81A05K6	Kondapalli Thorani Sowmya					
127	18A81A05L2	Manepalli Pavana Swarajya Srineha					
128	18A81A05K9	Kotha Dhana Lakshmi					
129	19A85A0524	Yarramsetti Kiran					
130	18A81A05I0	Yarnagula Indira	EPAM	5	6 LPA	OFF CAMPUS	20/12/2021
131	18A81A05I8	Yarnagula Indira					
132	18A81A05G7	Yarnagula Indira					
133	19A85A0524	Yarnagula Indira					
134	18A81A05F9	Yarnagula Indira					
135	18A81A05H4	Varikuti Lakshmi Sai Prasanna	HITACHI	6	5 LPA	ON CAMPUS	20/12/2021
136	18A81A05H8	Velugonda Bhargavi					
137	19A85A0524	Yarramsetti Kiran					
138	18A81A0517	Gudala Divya					
139	18A81A05C3	Addepalli Veda Sravani					
140	18A81A05G7	Sikkandar Jainab Fathima					
141	18A81A0537	Ogirala Adarsh	QUEST GLOBAL	1	3 LPA	ON CAMPUS	20/12/2021
142	18A81A05K9	Kotha Dhana Lakshmi	AMAZON	1	44 LPA	ON CAMPUS	18/12/2021
143	18A81A0568	Daneti Rajesh	DELOITTE CONSULTING	19	4.5 LPA	POOL CAMPUS	16/12/2021
144	18A81A05A4	Sanku Ramya Sri Vardhini					
145	18A81A05C3	Addepalli Veda Sravani					
146	18A81A05C6	Annam Venkata Sai Siva Karthik					
147	18A81A05C7	Athuluri Dinusha					



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148	18A81A05F6	Nalli Swathi					
149	18A81A05G9	Terli Durga Prasad					
150	18A81A05H1	Tillapudi Bhargav					
151	18A81A05H3	Vanimireddy Bhanu Teja					
152	18A81A05I0	Yarnagula Indira					
153	18A81A05I4	Chinnam Chandana					
154	18A81A05I9	Dharani Talari					
155	18A81A05J3	Gidda Venkata Sindhu Ruchitha					
156	18A81A05J8	Kalla Gayatri					
157	18A81A05K3	Karella Baby Bhargavi					
158	18A81A05L3	Manepalli Ramya Sri					
159	18A81A05N0	Tammineedi Bindu Jyothsna					
160	19A85A0509	Kambala Hema Naga Venkata Chandravathi					
161	19A85A0522	Tonta Ravi Prakash					
162	18A81A05K9	Kotha Dhana Lakshmi	CAPILLARY TECHNOLOGIES	1	13 LPA	ON CAMPUS	08/12/2021

b) Internships:

S.No	Student Name	Roll Number	Name of the Industry	Duration
1.	N.Swathi Sri	18A81A0591	Mindtree Limited	28-02-2022 to 19-06-2022
2.	V.L.S.Prasanna	18A81A05H4		
3.	T.Sowmya	18A81A05K6		
4.	P.Raj Kumar	18A81A05G2		
5.	Tarun Deepak Kone	18A81A05E3	Hexaware	24-02-2022 to 23-08-2022
6.	Yuvaraj Veeramallu	18A81A05H7		
7.	Sai Nammi	18A81A05G6		
8.	Aketi Daneswari	18A81A05I2	Wipro	21-02-2022 to 30-04-2022
9.	Yogeswari Kanuri	18A81A05K1		
10.	Pavan kumar perumalla	18A81A0596		
11.	Sunkara Nikhita	18A81A05M8		
12.	Sai Lakshmin Ganta	18A81A05J1		
13.	Baby Bhargavi karella	18A81A05K3		
14.	Sri Pedapolu	18A81A0541		



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S.No	Student Name	Roll Number	Name of the Industry	Duration		
15.	Dharani Talari	18A81A05I2				
16.	Durga Udathala	18A81A05H2				
17.	Sowmya badana	18A81A05C8				
18.	Leela Komatlapalli	18A81A05K5				
19.	Thornai Sowmya Kondapalli	18A81A05K6				
20.	Jahnavi kusam	18A81A05E6				
21.	Swathi N	18A81A0591				
22.	Sindhu Gidda	18A81A05J3				
23.	Priya Kesarapalli	18A81A0522				
24.	Siva tha tha Reddy Satti	18A81A0551				
25.	Satya Sai Vamsi Yadiapalli	18A81A05B7				
26.	Jai krishna vamsi	18A81A05I6				
27.	Hanish kambhampati	18A81A0523				
28.	Brahma Teja Gundapaneni	18A81A05D5				
29.	Govinda Raju manne	18A81A05F0				
30.	Sai durga lasya sunkara	18A81A05G8				
31.	Chandana chinnam	18A81A05I4				
32.	Mohitha Saina	18A81A05M3				
33.	Pujitha Vegi	18A81A05N8				
34.	V L D Madhuri	19A85A0518				
35.	T Bhargav	18A81A05H1				
36.	Sai Ram Akula	18A81A05C4				
37.	K A P H H Sai Eswari	18A81A05K2			ENEM Technologies	21-02-2022 to 20-05-2022
38.	Dhana Lakshmi kotha	18A81A05K9			Capillary Technologies India Ltd	18-02-2022 to 18-08-2022
39.	Rohit Pragallapati	18A81A05JG3			Vmware	16-02-2022 to 05-07-2022
40.	Gayatri K	18A81A05J8				
41.	Indira Yarnagula	18A81A05I0			EPAM Systems private limited	16-02-2022 to 15-07-2022
42.	Kiran yarramsetti	19A85A0524				
43.	N Anmisha	18A81A05F9				
44.	S.J.Fathima	18A81A05G7				
45.	Uma Sai Singamsetti	18A81A05A9			Revature Consultancy Service Pvt Ltd	07-02-2022 to 06-05-2022
46.	Mohit Adarsh kothap	18A81A05L0				
47.	Hariprasad Satagopam	18A81A05A6				
48.	Pujadevi Kona	19A85A0504				



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S.No	Student Name	Roll Number	Name of the Industry	Duration
49.	Raghava Rao Yalavarthi	18A81A05B9		
50.	Bhanu Teja Vanimireddy	18A81A05H3	Wiley-mthree	01-02-2022 to 30-04-2022
51.	Sriya Datla	18A81A05I8	EPAM Systems private limited	03-01-2022 to 30-06-2022
52.	Addepalli Veda Sravani	18A81A05C3	Virtusa	20-12-2021 to 20-03-2022
53.	Avinash Grandhi	19A85A05I9	Virtusa	17-12-2021 to 17-03-2022
54.	Asha Jyothi kurada	18A81A05E5		
55.	Venkata Sai Shiva Karthik	18A81A05C6		
56.	Lalitha Sunakara	18A81A05M7		
57.	Siddartha Varma	18A81A05I5	Nickelfox Technologies Pvt Ltd	01-12-2021 to 30-05-2022
58.	Ambica Nandigam	19A81A0648	XLenz	13-10-2021 to 30-03-2022
59.	Jujjuru Venkata Vyshnavi	19A81A0625		
60.	Hema Padma Sri	19A81A0626		
61.	Hima Sai Sree Chimakurthi	19A81A0610		
62.	Adadadi Kamesh	18A81A05C1	Dash & Sim Pvt Ltd	01-10-2021 to 31-03-2022

c) Workshops Attended by Students(Inter College Level) :

S.No.	Regd.No.	Name of the Student	Branch	Name of the Event	Month-Date
1.	20A81A0510	D D S V R Praneetha	CSE	PPT(JNTU-GV college of Engineering, Vijayanagaram)	April 21 st - 22 nd ,2022
2.	20A81A0552	Sumasri Seernam	CSE	PPT(JNTU-GV college of Engineering, Vijayanagaram)	April 21 st - 22 nd ,2022

d) Workshops Attended by Students(Intra College Level) :

S.No.	Regd.No.	Name Of the Student	Name Of The Event	Duration	Month-Date
1.	20A81A0540	P Rohitha	Tech Fest IIT Bombay	1 Month	June 2021
2.	20A81A0540	P Rohitha	National Mathematics Day	1 day	December 2021



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3.	20A81A05N7	Paidimukkala Jahnvi	Quiz-Technico,Programming Quest,Web Designing,El-Dorado (Treasure Hunt),Evocazione (Memory Game)	2 days	10 th -11 th January, 2022
4.	20A81A05P0	Veerla Supriya	Quiz-Technico,Programming Quest,Web Designing,Evocazione (Memory Game)	2 days	10 th -11 th January, 2022
5.	19A81A05B1	M Santosha Srija	Choose Your Picasso (Arts)	2 days	10 th -11 th January, 2022
6.	20A81A05P5	Y Gayathri Devi	Quiz-Technico,Web Designing	2 days	10 th -11 th January, 2022
7.	20A81A0546	P Indu	Quiz-Technico,Programming Quest,Put Yourself Up (Idea Presentation),Evocazione (Memory Game)	2 days	10 th -11 th January, 2022
8.	20A81A05K9	G Garaga Lakshmi	Web Designing,El-Dorado (Treasure Hunt),Evocazione (Memory Game)	2 days	10 th -11 th January, 2022
9.	20A81A05L6	Kalapala Prasanthi	Quiz-Technico,Web Designing,El-Dorado (Treasure Hunt)	2 days	10 th -11 th January, 2022

e) Co-Curricular Activities:

NPTEL Certifications

S.NO.	Roll Number	Name of the student	Course Name	Certificate Type
1.	19A81A0544	P Madhusmara	An Introduction to Programming through C++	Elite
2.	19A81A0601	A S V Satyanarayana Raju	Programming in Java	Elite
3.	19A81A05K3	Dhanaboyina Sunitha	Programming in Java	Elite
4.	19A81A05K9	K Bhanu sri	Python for Data Science	Elite
5.	19A81A05P4	Solasa Sriya	Python for Data Science	Elite
6.	19A81A05K3	Dhanaboyina Sunitha	Python for Data Science	Elite
7.	19A81A05L9	M M J S Srivalli	Python for Data Science	Elite
8.	19A81A05K8	K Sujita	Python for Data Science	Elite
9.	19A81A05N7	P RadhaMadhavi	Python for Data Science	Elite



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10.	19A81A0652	R Kavya Naga Sree	Python for Data Science	Elite
11.	19A81A0509	T N M Lakshmi Ishwarya	Python for Data Science	Elite
12.	19A81A0655	S Dhana Gayathri	Python for Data Science	Elite
13.	19A81A05P5	Ch Khyathi Sri	Python for Data Science	Elite
14.	20A85A0522	S Divya Sri Lakshmi	Python for Data Science	Elite

COURSERA CERTIFICATIONS

S.No	Regd.No.	NAME OF THE STUDENT	NAME OF THE COURSE	Month-Date
1.	19A81A0526	K Sai Sireesha	Programming for Everybody getting started with Python	23.12.2021

UDEMY CERTIFICATIONS

S.No	Regd.No.	NAME OF THE STUDENT	NAME OF THE COURSE	DURATION	Month-Date
1.	20A81A05P7	K Thanuja	Python Programming from basics to Advanced level	08hrs	21.01.2022
2.	20A81A05J6	A Harshini	Python for beginners – Learn all the basics of Python	05hrs	21.01.2022

APSSDC CERTIFICATIONS

S.No	Regd.No.	NAME OF THE STUDENT	NAME OF THE COURSE	DURATION
1.	19A81A0661	V Naga Srivalli	AWS Cloud Computing	08.11.2021- 13.11.2021
2.	19A81A05P4	S.Sriya	AWS Cloud Computing	01.11.2021- 06.11.2021

OTHER CERTIFICATIONS

S.No	Regd.No.	NAME OF THE STUDENT	NAME OF THE COURSE	Institution	Month-Date
1.	19A81A05B7	S Sirisha	Programming with C and C++	INTERNSHALA	November-2021
2.	20A81A05G1	Surya Prakash	Python for Beginners	Sololearn	Jan-2022



		Laveti			
3.	19A81A05P5	Ch Khyathi sri	AWS Academy Graduate- AWS Academy Cloud Foundation	AWS Academy	Jan-2022 (05/01/22)
4.	19A81A05P5	Ch Khyathi sri	AWS Academy Graduate- AWS Academy Cloud Foundation	AWS Academy	Jan-2022 (26/01/2022)

6. Conducted Department TechFest SCUDVERVE 2K22 on 10th & 11th January 2022

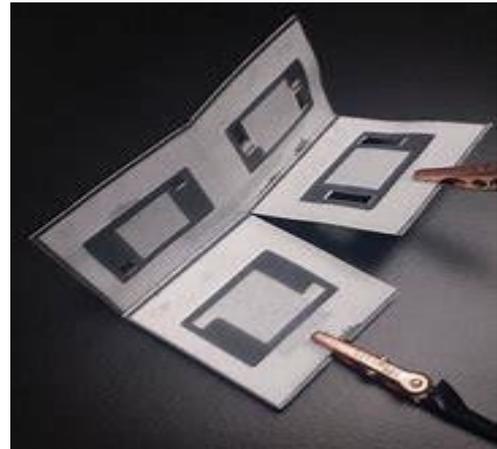






Paper battery:

Broadbent, Pulickel M. Ajayan, Omkaram Nalamasu with a joint meeting in Material Science and engineering developed the Paper Battery, which is also known as Nano Composite Paper. In December 2009, Yi Cui and his team at Stanford University successfully made an actual prototype that gave a terminal voltage of 1.5 V.



A paper battery is a thin, flexible energy production and storage device that is formed by combining carbon nanotubes with a conventional sheet of cellulose-based paper. In addition to being disposable, paper batteries may be folded, cut or otherwise shaped for different applications without any loss of integrity or efficiency.

As sensors are increasingly being embedded in everyday objects, there has been a corresponding need for alternative power sources in the Internet of Things (IoT). The high cellulose content and lack of toxic chemicals in paper batteries make them both biocompatible and environmentally friendly, especially when compared to the lithium-ion batteries used in many present-day electronic devices.

Specialized paper batteries are expected to act as power sources for any number of devices implanted in humans and animals, including RFID tags, drug-delivery systems and pacemakers. In theory, a capacitor introduced into an organism could be implanted fully dry and then be gradually exposed to bodily fluids over time to generate voltage.

Ten years ago, scientists at Rensselaer Polytechnic Institute and MIT grew nanotubes on a silicon substrate and then impregnated gaps in the matrix with cellulose. When two sheets were combined with the cellulose sides facing inwards, a supercapacitor could be activated with ionic liquid forms, including salt-laden solutions like human saliva, blood, sweat or urine.

Recently, researchers at the State University of New York printed thin layers of metals and polymers onto a paper surface that contains freeze-dried exo-electrogens, a type of bacteria that can transfer electrons outside the bacteria's cellular walls. Any type of bio-liquid can be used to revive the exo-electrogens and activate the paper battery by allowing bacteria to pass through cell membranes and make contact with external electrodes.

Advantages:



The composition of these batteries is what sets them apart from traditional batteries. Paper is abundant and self-sustaining, which makes paper cheap. Disposing of paper is also inexpensive since paper is combustible as

well as biodegradable. Using paper gives the battery a great degree of flexibility. The battery can be bent or wrapped around objects instead of requiring a fixed casing. Also, being a thin, flat sheet, the paper battery can easily fit into tight places, reducing the size and weight of the device it powers. The use of paper increases the electron flow which is well suited for high performance applications. Paper allows for capillary action so fluids in batteries, such as electrolytes, can

be moved without the use of an external pump. Using paper in batteries increases the surface area that can be used to integrate reagents. The paper used in paper batteries can be supplemented to improve its performance characteristics. Patterning techniques such as photolithography, wax printing, and laser micromachining are used to create hydrophobic and hydrophilic sections on the paper to create a pathway to direct the capillary action of the fluids used in batteries. Similar techniques can be used to create electrical pathways on paper to create paper electrical devices and can integrate paper energy storage.

1. Used as both battery and capacitor.
2. It is flexible.
3. It is ultra-thin energy storage device.
4. Long lasting.
5. Steady power production.
6. biodegradable
7. no leaking and overheating

Disadvantages:

Although the advantages of paper batteries are quite impressive, many of the components that make them great, such as carbon nanotubes and patterning, are complicated and expensive.[3]

1. Prone to tearing.
2. Nanotubes made from carbon are expensive due to use of procedures like electrolysis and laser ablation.
3. Should not be inhaled, as they can damage lungs.

Entrepreneurship:



Entrepreneurship is the ability and readiness to develop, organize and run a business enterprise, along with any of its uncertainties in order to make a profit. The most prominent example of entrepreneurship is the starting of new businesses.

Concept of Entrepreneurship:

Entrepreneurship is the ability and readiness to develop, organize and run a business enterprise, along with any of its uncertainties in order to make a profit. The most prominent example of entrepreneurship is the starting of new businesses.

In economics, entrepreneurship connected with land, labour, natural resources and capital can generate a profit. The entrepreneurial vision is defined by discovery and risk-taking and is an indispensable part of a nation's capacity to succeed in an ever-changing and more competitive global marketplace.

The entrepreneur is defined as someone who has the ability and desire to establish, administer and succeed in a startup venture along with risk entitled to it, to make profits. The best example of entrepreneurship is the starting of a new business venture. The entrepreneurs are often known as a source of new ideas or innovators, and bring new ideas in the market by replacing old with a new invention.

It can be classified into small or home business to multinational companies. In economics, the profits that an entrepreneur makes is with a combination of land, natural resources, labour and capital.

In a nutshell, anyone who has the will and determination to start a new company and deals with all the risks that go with it can become an Entrepreneur .

Entrepreneurship is classified into the following types:

Small Business Entrepreneurship-

These businesses are a hairdresser, grocery store, travel agent, consultant, carpenter, plumber, electrician, etc. These people run or own their own business and hire family members or local employee. For them, the profit would be able to feed their family and not making 100 million business or taking over an industry. They fund their business by taking small business loans or loans from friends and family.



Scalable Startup Entrepreneurship-

This start-up entrepreneur starts a business knowing that their vision can change the world. They attract investors who think and encourage people who think out of the box. The research focuses on a scalable business and experimental models, so, they hire the best and the brightest employees. They require more venture capital to fuel and back their project or business.

Large Company Entrepreneurship-

These huge companies have defined life-cycle. Most of these companies grow and sustain by offering new and innovative products that revolve around their main products. The change in technology, customer preferences, new competition, etc., build pressure for large companies to create an innovative product and sell it to the new set of customers in the new market. To cope with the rapid technological changes, the existing organisations either buy innovation enterprises or attempt to construct the product internally.

Social Entrepreneurship

This type of entrepreneurship focuses on producing product and services that resolve social needs and problems. Their only motto and goal is to work for society and not make any profits.



Characteristics of Entrepreneurship:

Not all entrepreneurs are successful; there are definite characteristics that make entrepreneurship successful. A few of them are mentioned below:

Ability to take a risk- Starting any new venture involves a considerable amount of failure risk. Therefore, an entrepreneur needs to be

courageous and able to evaluate and take risks, which is an essential part of being an entrepreneur.

Innovation- It should be highly innovative to generate new ideas, start a company and earn profits out of it. Change can be the launching of a new product that is new to the market or a process that does the same thing but in a more efficient and economical way.

Visionary and Leadership quality- To be successful, the entrepreneur should have a clear vision of his new venture. However, to turn the idea into reality, a lot of resources and employees are required. Here, leadership quality is paramount because leaders impart and guide their employees towards the right path of success.

Open-Minded- In a business, every circumstance can be an opportunity and used for the benefit of a company. For example, Paytm recognised the gravity of demonetization and acknowledged the need for online transactions would be more, so it utilised the situation and expanded massively during this time.

Flexible- An entrepreneur should be flexible and open to change according to the situation. To be on the top, a businessperson should be equipped to embrace change in a product and service, as and when needed.

Importance of Entrepreneurship:

Creation of Employment- Entrepreneurship generates employment. It provides an entry-level job, required for gaining experience and training for unskilled workers.

Innovation- It is the hub of innovation that provides new product ventures, market, technology and quality of goods, etc., and increase the standard of living of people.



Impact on Society and Community

Development- A society becomes greater if the employment base is large and diversified. It brings about changes in society and promotes facilities

like higher expenditure on education, better sanitation, fewer slums, a higher level of homeownership. Therefore, entrepreneurship assists the organisation towards a more stable and high quality of community life.

Increase Standard of Living- Entrepreneurship helps to improve the standard of living of a person by increasing the income. The standard of living means, increase in the consumption of various goods and services by a household for a particular period.

Supports research and development- New products and services need to be researched and tested before launching in the market. Therefore, an entrepreneur also dispenses finance for research and development with research institutions and universities. This promotes research, general construction, and development in the economy.

P. Rohitha

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SHAMBHAVI MAHAMUDRA

- 20A81A05A6 (Pavan)

From Meditation to Mahamudra

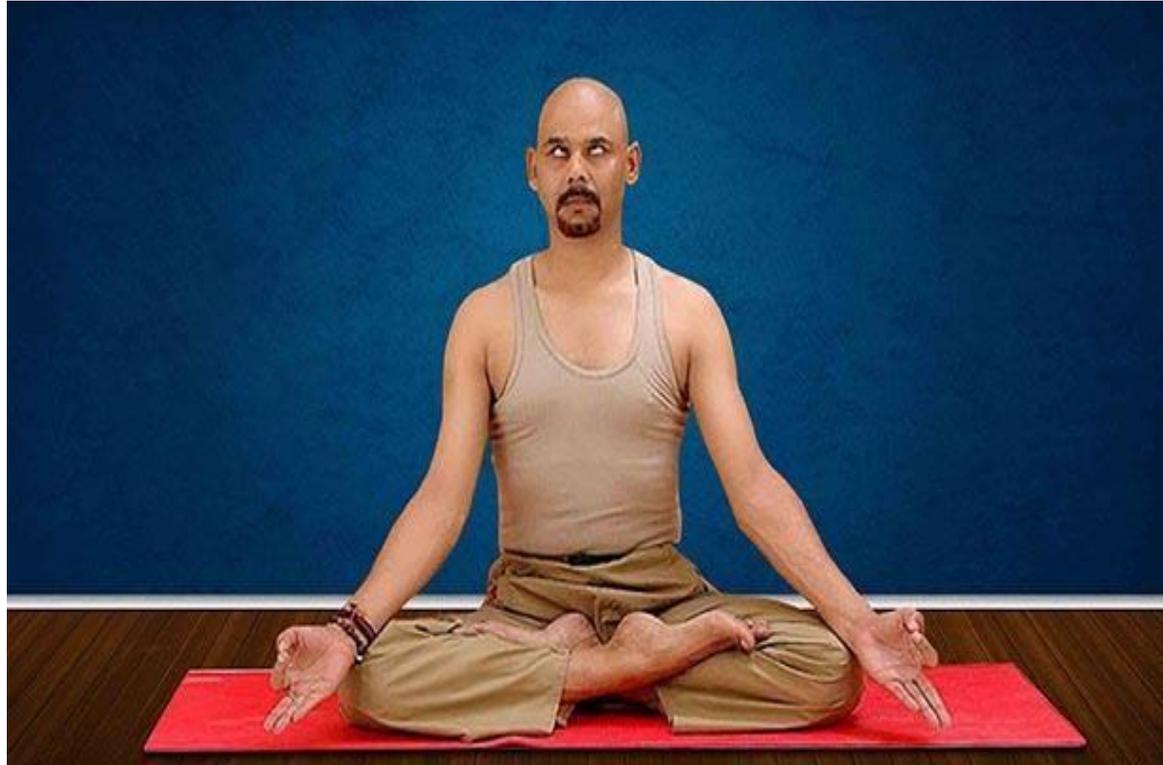
Sadhguru responds to a question on what makes Shambhavi Mahamudra unique, among the many meditation practices available in the world

Power of Shambhavi

A study on women suffering from menstrual disorders showed a significant improvement in symptoms.

EEG Study

The EEG study on Shambhavi Mahamudra

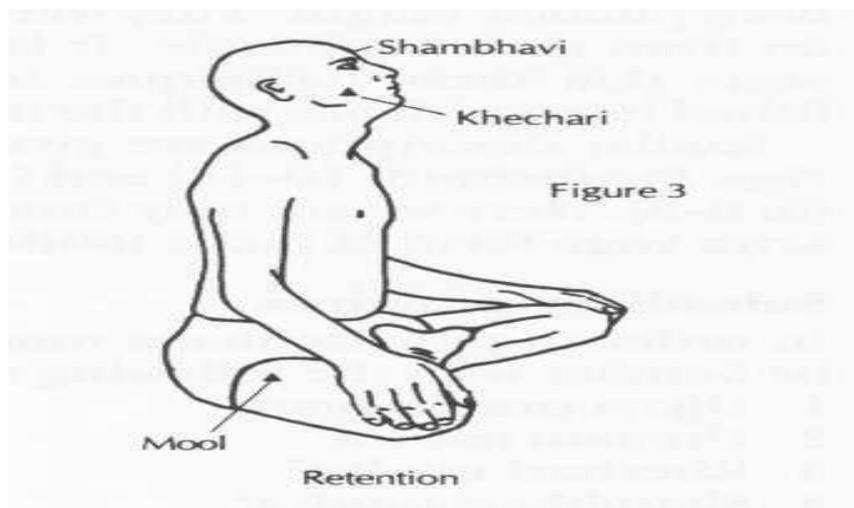


From Meditation to Mahamudra

-By Sadhguru

Sadhguru: The word “meditation” is used for so many things. Generally, if you are concentrating on something, people will say you are meditating. If you are thinking one thought continuously, people say you are meditating. If you just utter one sound, a mantra or whatever else, continuously, that is called meditation too. Or if you are mentally alert to things that are happening around you or within your physiological system, that is called meditation as well.

Shambhavi does not belong to any of these categories. This is why we are calling it a *Mahamudra* or a *kriya*. What is a *mudra*? The word “mudra” literally means a seal – you lock it. In today’s world more than ever, the biggest problem that human beings have is the dissipation of energy, because our sensory system is stimulated more than ever before in the history of humanity. For example, today we can sit the entire night with bright lights on. Your eyes were not prepared for this – they were made for twelve hours of light and twelve hours of darkness or very subdued light. Now your visual apparatus is stimulated like crazy.



Anti-Inflammatory, Anti-Aging, Anti-Stress

-By Sadhguru

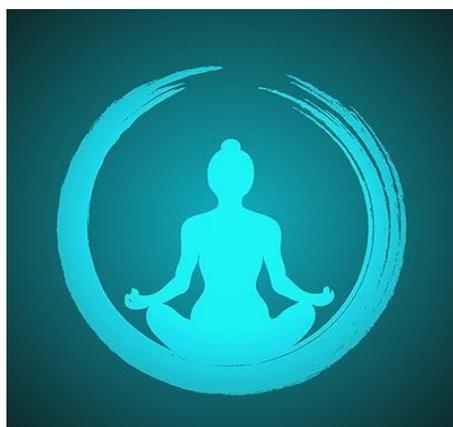
The inflammatory markers greatly improve too. And your DNA shows that after ninety days of practice, you are 6.4 years younger than what you were, on the cellular level. All this has been properly established by responsible scientists. And above all, the most beautiful thing is, the level of calmness multiplies manifold, while the brain is still active. This is a unique dimension of Shambhavi.

The studies that have been done in the United States are largely about Buddhist meditations, not other dimensions of yoga. A significant aspect of Buddhist meditations is people become peaceful, pleasant; at the same time, the brain activity goes down. What is significant about Shambhavi is people become very peaceful, pleasant, and at the same time their brain activity goes up.

Power of Shambhavi Mahamudra

That is why a Mahamudra because it is a seal. Once you put the seal and lock it, your energies will divert themselves in a completely different direction. Now things will happen. Rarely does any practice blow up people right from day one as Shambhavi Mahamudra does. This is simply because if you apply the Mahamudra right, your own energies are turning in a direction that they normally never do. Otherwise, your energies dissipate in reaction to various sensory inputs. It is like if you keep looking at something, you get tired after some time. Not just the eyes – you get tired.

Because every time you pay attention to something, you lose energy. If a ray of light comes at you, for you to see it, there is a loss of energy. If a sound comes at you, for you to hear it, there is a loss of energy. We want to turn it around in such a way that there is gain. Why we spend so much time to psychologically and emotionally prepare you for a twenty-one-minute practice is to get you to the right level of receptivity.



EEG Study

-By EEG

The EEG study on Shambhavi Mahamudra also showed higher levels of coherence between the right and left sides of the brain. This greater whole brain synchronization leads to greatly enhanced mental capabilities like better learning ability, increased creativity, heightened mental clarity, and sharper intellect.