TECH BYTES

JUNE 2019 **DEPARTMENT OF CSE**

CMRIT
CELEBRATING 25 YEARS
CMR INSTITUTE OF TECHNOLOGY, BENGALURU.
ACCREDITED WITH A+ GRADE BY NAAC
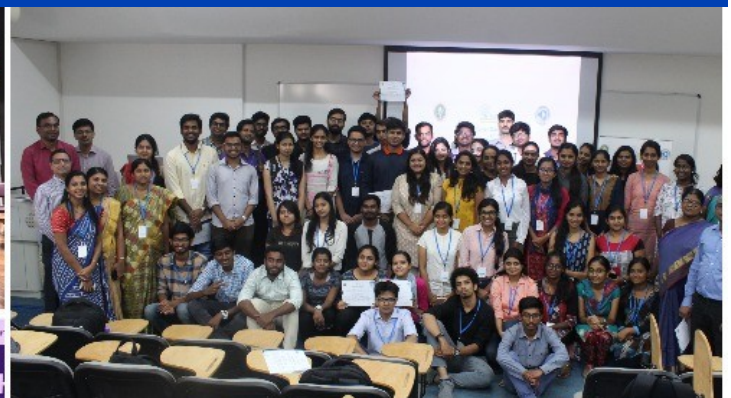
Faculty Achievements

Guest Lectures

Workshops

Club Activities

Expert Talks

Coding Competitions

Smart India Hackathon 2019 Winners

National Conference

Dr. Sanjay Jain
(Principal)

Dr. B. Narasimha Murthy
(Vice Principal)

Vision

"To be a centre of excellence in computer science and engineering education producing competent professionals for a successful global career contributing to the society".

Mission

- To build a faculty team with industry and academic exposure, capable of moulding students into competent professionals, supported by adequate computing and software resources.
- To prepare the students for a global career in computing by enriching the curriculum with a blend of theory and practice.
- To develop industry relevant programming and soft skills through training programs, vibrant student clubs and student internships.
- To engage with industry and institutes of repute and collaborate in academics, research and development involving faculty and students.

Dr. Jhansi Rani P.
(Professor and HOD,
Dept of CSE)

Message from HoD

"I am very happy to inform all the stake holders that Department of CSE has been Accredited for THREE years (i.e upto June 2022) by National Board of Accreditation (NBA). NBA is an autonomous body with the objective of Assurance of Quality and Relevance of Education, especially of the programs in professional and technical disciplines, i.e., Engineering and Technology, Management, Architecture, Pharmacy and Hospitality, through the mechanism of accreditation of programs offered by technical institutions. I am thankful to management for their support and all the staff for their dedicated work to achieve this milestone"

INSIDE THIS

National Conference on Emerging Technologies on Computing and Communication (NETC2) 2019 was held on 17th and 18th May 2019. This conference was organized by the Department of CSE in collaboration with Computer Society of India, Bangalore. The aim of the conference was to promote research and developmental activities in the areas of computing and communication. A total of 48 teams registered in this conference including participants from institutions other than CMRIT. The conference had 8 tracks—Adaptive computing and machine learning, Big data analytics, Computer vision and image processing, Cyber security and data forensics, Industrial applications, Networking and data communications, Signal processing and communication engineering, Internet of Things (IoT) and Blockchain.

Following papers were appreciated:

- VIBHAV KUNJ, "DrishtiShakti - Lightning fast object recognition for price-sensitive smart devices"
- SWAPNIL RAJPAL, "Loyalty Management System using Dynamics 365"
- ADITI D BHAT, ISHAAN ABHINAV, "Hydravo – A Smart Gardening System Using Internet of Things (IoT)"
- PAVAN TEJA B DIWAKAR BABU,SURAJ R BELLAD, PAWAN V, "Data transmission to a portable speaker using Li-Fi technology and solar charger for smart phones"
- ASWATH A CHANDRASEKHARAN, AJAY KRISHNA ANGULURI, PRAGATI JHA, TANYA SINGH, AND DR.BINISH FATIMAH, "Wind noise cancellation using TQWT and adaptive filtering" (ECE)

Technical Events

2 days workshop on Big data with Hadoop and Spark was conducted on May 16 and 17, 2019. Workshop was conducted by Mr. Sumit Mittal, CEO of Trendy Tech. He is an alumni member of NIT Trichy and IIIT Bangalore. He has worked for over 6 years in Cisco and vmWare. He has received many awards and recognition for his corporate training programs.

Guest Lectures

Date	Topic	Resource person	Photo
21-2-2019	MOOC platforms	Mr. Dominic P.D, Training Consultant	
8-3-2019	Internet Treat Mitigation	M A Jayendran Senior Staff QA Engineer, FireEye Inc	
11-3-2019	ITIL - SDLC standards in IT industry	Ashuthosh, Senior Deployment Engineer, Eurofins, Bangalore	
13-3-2019	Mobile based eLearning on Blockchain Technology	Vikas Kumar, CMO, KMPARDS Ltd, Mumbai	
18-3-2019	Windows platform foundation (WPF) development	Mayank Roshan, Software Developer, EY, Bangalore	

Guest Lectures			
Date	**Topic**	**Resource person**	**Photo**
29-3-2019	Knowledge Management	Lal Manoj Kumar, Senior Consultant, TCS	
3-4-2019	Aegis IBM Meetup: Data science, Big data analytics & deep learning	Mr Bhupesh Daheria, Aegis School of Data Science	
4-4-2019	Embedded platforms for AI and Blockchain	LK Prasad, Acceleron Labs Pvt Ltd	
4-5-2019	Overseas Education	Ajaz Ahmed , Edway Education, Bangalore	

Student Club Activities				
Club	**Topic**	**Resource Person**	**Date**	**Photo**
ACE	IOT Modeling with TinkerCAD	RICHARD DELWIN SAYAN PAL	26-2-2019	
Moziety	JavaScript Primer	VIBHAV SHASHI KUMAR	20-3-2019	
ACE	CodeSwap (Cultura)	-	22-3-2019	
MindSpark	Introduction to data visualization and manipulation	ADITHYA KAKDE	29-3-2019	
ACE	CodeSwap with CSI	-	22-4-2019	
Moziety	Node.JS	VIBHAV SHASHI KUMAR	29-4-2019	

Student Club Activities

Club	Topic	Resource Person	Date	Photo
Hacker Earth Club	404 Runtime terror Hackathon	Sagar Datta, SSE Sunil P, Director of Engineering, Harman International	30-4-2019	
MindSpark	Block Chain and Crypto Currency	ABHILASH S	21-5-2019	
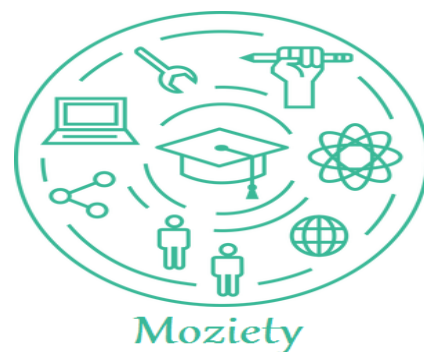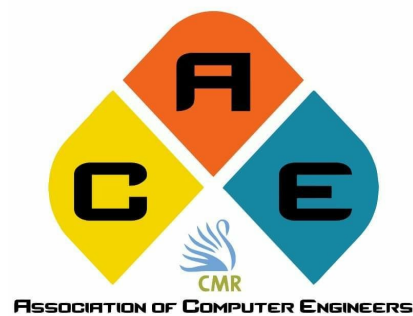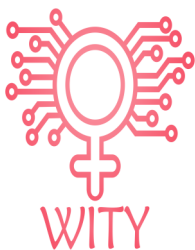
Smart India Hackathon-2019

SHAILAV SHRESTHA (1CR16CS154) and BHAVYA (1CR15CS188) were part of the team of Smart India Hackathon -2019 Grand Finale winners—Software. The students developed a standalone solution for in app push notification and user customization which can be used by any e-commerce player. Cash prize: Rs 1,00,000/-

	PRADEEP KUMAR R (1CR16CS116) won first place in web designing event organized by CMRIT during 22/3/2019
	ASHAV SRIVASTAVA (1CR17CS021), MUKUL NAIR (1CR17CS077) Won 1st place in the event conducted by ACE Club CSE Department in association with CSI on 2019-04-22
	ABHILASH S (1CR16CS004) Won 1st place in python coding contest organized by COSS INDIA "EVERY ENGINEER IS A CREATOR" on 29/4/2019.
	AJAY.M (1CR16CS011), ATHREYA UPPILI S (1CR16CS030) Won 2nd place in the event conducted by ACE Club CSE Department in association with CSI on 2019-04-22
	SURAJ KISHOR (1CR17CS159) got 157th rank in Open contest - Code Gladiators 2019 on 2019-04-07 organized by TechGig.com
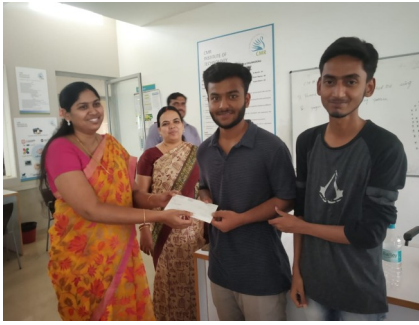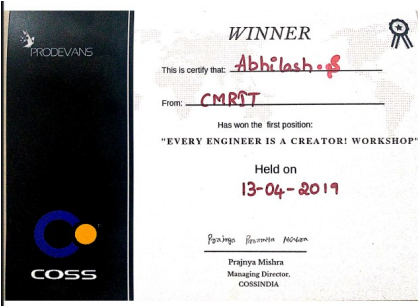
	ABHINAB MISHRA (1CR17CS004) was selected as Google Crowdsource community representative on 29-1-2019
	RICHARD DELWIN MYLOTH (1CR17CS109), SAYAN PAL (1CR17CS132), PILLAI VIGNESH SURESHKUMAR (1CR17CS091),PRAKHYATH JAIN (1CR17CS094),NEERAJ KUMAR (1CR17CS080) participated and won TYL Hackathon title organised on 16/2/2019 at CMRIT
	YASH MATHUR (1CR17CS179), ZEESHAN ISLAM (1CR17CS181) won TYL Hackathon title organized on 16/2/2019 at CMRIT
	KRISHNA KESHAN (1CR17CS062) was selected as Lead of the Developer Student Club community for CMRIT Campus on 25-1-2019
	PAVAN TEJA (1CR16CS113) : • has won best paper award in the Second International Conference on Emerging Trends in Science and technologies conducted by SJCIT on 17/5/2019 • has won best paper award in the conference NETCC conducted by CMRIT on 18/5/2019
	PILLAI VIGNESH (1CR17CS090) has won first place in MADADS conducted by CMR university
	UJJWAL JAIN (1CR17CS165) Participated in National Conference held on Leadership and Youth Empowerment on 2019-03-24

Student Achievements (Academic)

RAMYA
1CR17CS107 91.25%

SHRUTI SINGH
1CR17CS144 89.50%

PRAKYATH JAIN
1CR17CS094 88.75%

ANJU KP
1CR16CS020 82.63%

SONU S
1CR16CS163 82%

NIHARIKA GUPTA
1CR15CS104 82.875%
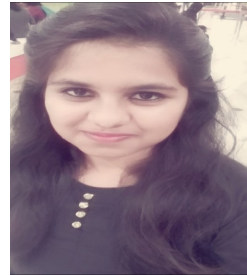
RAMYA SHREE N
1CR15CS128 82.375%

VARSHA M
1CR15CS169 82.25%

Ashika Pemmaiah
1CR16CS163 100% in Maths III

Swati P
1CR16SCN02 6th rank in VTU

Result Analysis

Semester	Passing %
III	85.56 %
V	81.50 %
VII	67.56 %

PASS PERCENTAGE

SEMESTER	PASS PERCENTAGE
III	85.56
V	81.5
VII	67.56
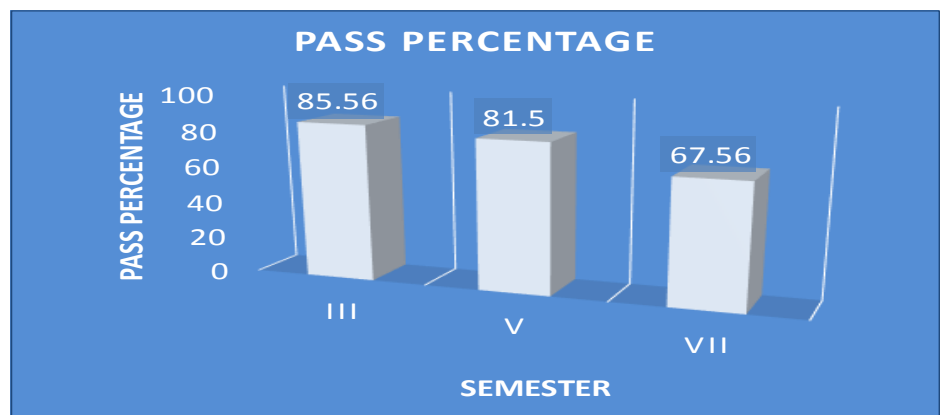
Mini Projects

IV Sem:

Student Name	Project	Rank
ASHWIN.M.S	Neural Style Transfer	1ST PRIZE
MADHUMITHA SUDHAKARA,PRERNA MAISNAM AND NGANBA IROM	College Enquiry Chat Bot	2ND PRIZE
HARSHIT KUMAR,KAIWALYA SHUKLA AND KRISHNA KESHAN	Online Car Pooling System using Android App	3RD PRIZE

VI Sem:
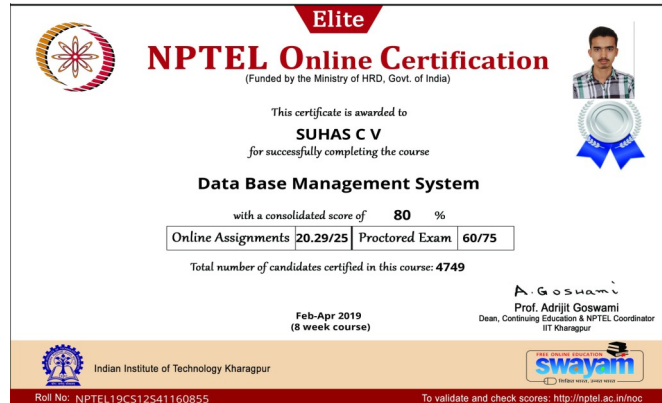
Student Name	Project	Rank
BURHANUDDIN KHOMOSI AND HARSH KUMAR	E2EE	1ST PRIZE
MANISHA JANGID AND PRADEEP KUMAR R	Sales Prediction using ARIMA	2ND PRIZE
RAHUL PRASAD MAJGI	Speech Recognition Dictionary	3RD PRIZE

Student Achievements (MOOC)

Elite Certification (NPTEL)

Student Name	Course	
ROSHNI KONDU	Programming, Data structure and Algorithms using Python	
SUHAS C V	Database Management System	

CMRIT MOOC Toppers:

Course	Student Name
Database Management System	SHREYA R
HTML CSS fundamentals	AADITYA RANJAN, MAMTHA.M VATHAR, RAMYA T
Programming Data structure and Algorithms using Python	NISARGA K.

Student Achievements (Sports)

- NGANBA IROM (1CR17CS083) Participated in 29th senior national fencing championship 2019 on 2019-02-02 conducted by Government Of INDIA
- HARI HARAN S (1CR16CS054) won Rs.5000/- in Counter strike: global offensive organized by Cambridge Institute of Technology on 2019-03-01
- SHIVAPRASAD S B (1CR17CS138) won Runner-up in cricket tournament held at SEACET- Bangalore on 2019-04-14
- K H MEGHANA (1CR16CS062),M AISHWARYA (1CR16CS077),MANJULA K (1CR16CS082) and SUSHMITHA B V (1CR16CS169) part of CMRIT Women hockey team won in VTU zone hockey tournament at SIT Tumkur on 2019-04-20
- ADITYA S (1CR16CS010) part of CMRIT Football team won UVCE football tournament held at Central college grounds from 2nd May-7th May during which he received the best mid fielder of the tournament award.
- MAYUR SHIVAKUMAR(1CR16CS087) has won first prize in the weight lifting competition organized by Global academy of technology on 11/5/2019
- Pillai Vignesh (1CR17CS090) has won third place in MIME conducted by MVJ college of Engineering, Bangalore.

Faculty Achievements

Dr. Paras Nath Singh:

- Served as Chairperson for 106th Indian Science Congress Association , Information and Communication Science & Technology held at Lovely Professional University, Phagwara, Jalandar

- Won "Best professor of CSE (National) 11th Innovative Education Leadership award by DNA, at aj Lan Ends Mumbai"

- "3rd Awardee as team"- National of TBT of e-Yantra by IIT, Bombay under MHRD Ministry for e-Yantra Lab in CMRIT

Served as chairperson/Expert (External)

Dr. Pushpa Mohan	Chairperson	East Point college of Engineering and Technology, Bangalore	National Conference on New Generation Trend Paradigm
Dr. Pushpa Mohan	Evaluation	Sri Venkateshwara College of Engineering ,Bangalore	Jury member for Project Exhibition - ISE_Forum Byte-2019
Dr. Paras Nath Singh	Experts	KEA, Govt. of Karnataka	Scrutiny of questions/Answers for recruitment exams
Dr Pushpa Mohan	BOE	Dayananda Sagar University, Bangalore	M.Tech. Question Paper Scrutiny
Dr Pushpa Mohan	BOE	REVA University, Bangalore	B.E Question paper setting

Faculty Achievements (Paper Publication)

Faculty Name	Paper Title	Publication
Dr. Jhansi Rani P.	A Multiple-Layer Machine Learning Architecture for Improved Accuracy in Sentiment Analysis	The Computer Journal , 27 April 2019
Dr. P N Singh	Searching faster in Big Data-Applied Machine Learning	106th Indian Science Congress Association , Information and Communication Science & Technology held at Lovely Professional University, Phagwara, Jalandar
Prof. Poonam V Tijare and Dr. Jhansi Rani P.	Exploring popular topic models	International conference on Advances in Electrical and Computer technologies ICAECT 2019
Prof. Shanthi M B	Secure Localization in UWSN using Combined Approach of PSO and GD Methods	International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-7, Issue-6, March 2019
Dr.Pushpa Mohan	Prediction of User Behavior Pattern in Multimedia Social Network	International Journal for Research in Applied Science & Engineering Technology (IJRASET) ,Volume 7 Issue V, May 2019
Prof. Sagarika Behera	A secure scheme for storing data on the cloud using Attribute based signatures and Blockchain concept	National Conference on Big Data, IOT, Cloud and Security
Dr. Kavitha	Providing Security and Privacy for Communication in Vehicular Cloud Computing	International Journal of Scientific Research and Engineering Trends (IJSRET), Volume 05, Issue 02 Apr.2019,Pages 594-599

Projects Grants

Name of project and amount	Faculty Name
MODROBs - Data Science Lab - 20 Lacs (AICTE)	Dr. P.N. Singh
Faculty Development Programme - Big-Data Analytics in Python - 7 Lacs (AICTE)	Dr. P.N. Singh

Served As Expert/ Chairperson (Internal)

Dr. Jacob Augustine	Judge	Social Hackathon 2019, CMRIT
Dr. Jhansi Rani P.	Convener	
Dr. Jhansi Rani, Prof. Rajkumar JK, Dr. P. Kavitha, Dr. Sugato , Prof. Jagadishwari , Dr. Jacob Augustine, Prof. Sreedevi N. and Prof. Manoj Challa	Chairperson	National Conference on Big data, Internet of Things, Cloud and Security NCBICS 2019, CMRIT

Student Achievements (Paper Publication)

| NATIONAL CONFERENCE ON EMERGING TECHNOLOGIES ON COMPUTING AND COMMUNICATION	
NIHARIKA GUPTA, PRAGYAT SINGH	ANOMALY DETECTION IN ORGANIZATION PAYMENTS USING MACHINE LEARNING AND STATISTICAL MODEL
PAVAN TEJA B, DIWAKAR BABU, PAVAN G REDDY	DOPAMINE- A PROTOTYPING FRAMEWORK FOR REINFORCEMENT LEARNING
DR. JHANSI RANI P, PROF. APURVA KULKARNI, ADITYA VIDYADHAR KAMATH,AADITH MENON, PRAJWAL DHATWALIA AND RISHABH D	DECISION TREES – A PROPOSED MODEL TO SOLVE PREDICTIVE ANALYSIS IN AN IPL AUCTION SCENARIO.
AKANKSHA, ISHAM, KAJAL KULSHERASTA, VENU VIVEK	CREDIT CARD FRAUD DETECTION USING AUTO ENCODERS
ANUP PAUDEL, BHAVYA, LEGEN DANGOL, MANISH SHRESTHA	PREDICTION OF LIVER DISEASE USING MACHINE LEARNING
PIYUSH KUMAR, RAJU KUMAR,NISHU NISHANK	SENTIMENTAL ANALYSIS OF TWITTER USING MACHINE LEARNING ALGORITHMS
KALYAN KUMAR SINGH , KESHAV VIKAS, KUNAL KUMAR, SHRUTI YUVRAJ PANALE	STOCK MARKET PREDICTION USING ANN
DIVYA T, AISHWARYA Y, CHAITRA B, LOCHAN A	EFFICIENT FEATURE BASED MACHINE LEARNING ALGORITHMS
SHAMALA C, SABYASACHI GOSH, SHABARI VIGNESH, VARSHA S	SOCIAL Q&A: AN ONLINE SOCIAL NETWORK BASED QUESTION AND ANSWER SYSTEM.
ANJU K P , ANMOL, B R AISHWARYA, KARUNA ROHILLA	DATA ANALYSIS OF BREAST CANCER WISCONSIN DATASET USING MACHINE LEARNING ALGORITHM (DECISION TREE)
ANIRUDH NAIR, ARCHANA RAGHUNATH, SEHRAN KHAN, AND VIMAL SHETTY	EMOTION BASED MUSIC PLAYER USING CONVOLUTIONAL NEURAL NETWORK
K PRIYA SHETTY KRUTHIKA P, PUNNYA MARY C P, SINCHANA M	DIABETICS PREDICTION USING MACHINE LEARNING
SANA CHATTARKI, KANCHAN KAPSE, RESHMA TOTAD, SHAHEEN SHAIKH	IDENTIFICATION OF PARKINSON'S DISEASE USING HANDWRITING
DARSHAN A S, ANJALI	MOVIE RECOMMENDATION SYSTEM
SHREEVATHSA S CHATRA, DHANUSHKUMAR S, ABHISHEK S	DEPRESSION ANALYSIS USING DATA PROCURED FROM SOCIAL MEDIA
SWAROOP K, V.VARUN KUMAR REDDY, VIVEK SAHU AND SUYASH SHAKYA	DISEASE PREDICTION SYSTEM
SALONI PATNAIK, SWETHA V ANNAPOORNI, TRISHALA P V	STOCK MARKET : TIME SERIES DATA ANALYSIS
DIVYA HG, NAVYA S, LISHA RANJINI D, HARSHINI REDDY	HOUSE PRICE PREDICTION USING ADVANCED REGRESSION TECHNIQUES
SHRIDHAR, SHRUTI MADHAV KULKARNI, SANDHYA J M, SOWMYA SHREE	STOCK IT: AN APPLICATION FOR TRACKING OBJECTS
VIBHAV KUNJ	DRISHTISHAKTI - LIGHTNING FAST OBJECT RECOGNITION FOR PRICE-SENSITIVE SMART DEVICES
NANDITA.E,KARTHICK S K,RAJAT CHOUDHARY,JAVERIYA	DETECTING MALARIAL PARASITES IN BLOOD SMEAR
DOLLY BAGARIA, A. DEEPTHI, GANESUNI MYTRI, H GAAYATHRI	SMS SPAM DETECTION USING RECURRENT NEURAL NETWORKS

Student Achievements (Paper Publication)

NATIONAL CONFERENCE ON EMERGING TECHNOLOGIES ON COMPUTING AND COMMUNICATION

RAMYASHREE N , PRIYANKA SRIVASTAVA , RAINY JAIN , RIYA MISHRA	RESTAURANT BOT
MANISHA JANGID, PRADEEP KUMAR R	VIRTUAL LAB FOR DATA STRUCTURE AND ALGORITHM LAB
GARIMA SINGH	SERVICE AUTOMATION FOR BOTS ONBOARDING USING BLUE PRISM
M MANOGNA, MALAVIKA VINAY, MISHA P , MADHUSOODHANAN KM	INTELLIGENT INTRUSION DETECTION SYSTEM
SWAPNIL RAJPAL	LOYALTY MANAGEMENT SYSTEM USING DYNAMICS 365
ADITI D BHAT, ISHAAN ABHINAV	HYDRAVO – A SMART GARDENING SYSTEM USING IOT
M AISHWARYA, NAGENDRA BABU K, NAMRATHA V	USE OF BLOCKCHAIN TECHNOLOGY TO ENCOUNTER COUNTERFEITING OF PRODUCTS IN THE GLOBAL MARKET
KESHAVA MURTHY, VETSA GOWRI SANKAR, AVINASH, MAHESH	SELF-LEARNING HOME MANAGEMENT SYSTEM
HITESH KUMAR, ADITYA KUMAR	VOICE CONTROLLED HOME AUTOMATION
V ASHRIT, VAISAKH M, VARSHA M, VINIT P KANANI	DATA TRANSFER USING SOUND
HARITA A, K MADHUREKAA,KP NEETHU, KAJOL R SINGH, V ANIL KUMAR	A STUDY ON TCP PACKETS AND PYTHON FOR PACKET PROCESSING
PAVAN TEJA B DIWAKAR BABU,SURAJ R BELLAD, PAWAN V	DATA TRANSMISSION TO A PORTABLE SPEAKER USING LI-FI TECHNOLOGY AND SOLAR CHARGER FOR SMART PHONES.
NIKITHA N, KEERTHANA P N, LAXMI, MANJUNATH S	ACCIDENT NOTIFIER APPLICATION
K SAI VIKAS, VINAYAK KANADE, AKSHAY NAGARALE, SAIRAM BOGA	DROWSY DRIVER IDENTIFICATION USING EYE BLINK DETECTION
USHA ASWINI S, SHRUTHI PATIL, SUSHMITA, YAMUNA K	NEW YORK CITY TAXI FARE PREDICTION
AKSHATA KADWAD , DEEPIKA M N	NAVIGATION SYSTEM FOR THE VISUALLY IMPAIRED
SHALINI VAIBHAV1, SURYA SHREE1,VIJAY LAKHMANI	EXTRACTION OF FETAL ECG USING ANFIS TRAINED WITH PSO
DARSHAN M, MANOJ KUMAR K, NANDISH VK, BHAVYA PVN	OBSTACLE DETECTION USING STEREO VISION FOR SELF DRIVING CAR
ABDUL RAZAK, CHETHAN V P, SANMA N J	DETECTION OF PHISHING WEBSITE USING MACHINE LEARNING

Other Conferences

PRANAY REDDY, DIANA ROY, KEERTHANA M AND MANOJ P	A STUDY ON FAKE NEWS DETECTION USING NAÏVE BAYES, SVM,NEURAL NETWORKS AND	International conference on recent engineering and technology ICRET 2019
AKANKSHA ACHANTI, SAGARIKA BEHERA, P RAGHAVENDRA REDDY	A SECURE SCHEME FOR STORING DATA ON THE CLOUD USING ATTRIBUTE BASED SIGNATURES AND	National Conference on Big Data, IOT, Cloud and Security
PAVAN TEJA B DIWAKAR BABU	METHODOLOGIES FOR TRAFFIC CONGESTION PREDICTION IN IOT BASED SMART CITY USING MA-	Second International Conference on Emerging Trends In Science & Technologies For Engineering Systems

VIDHUR RK (1CR17CS174)
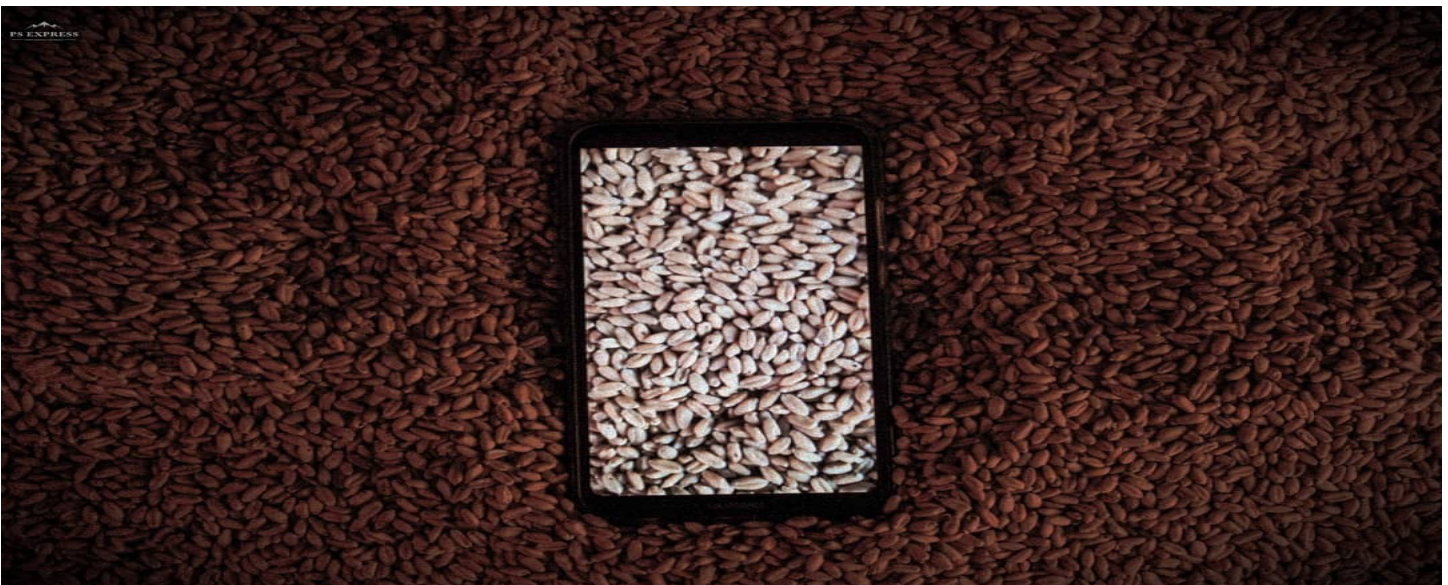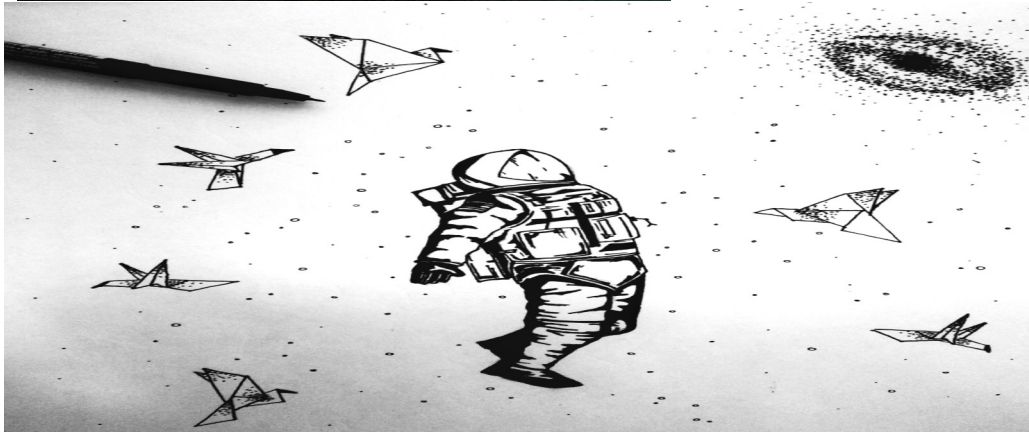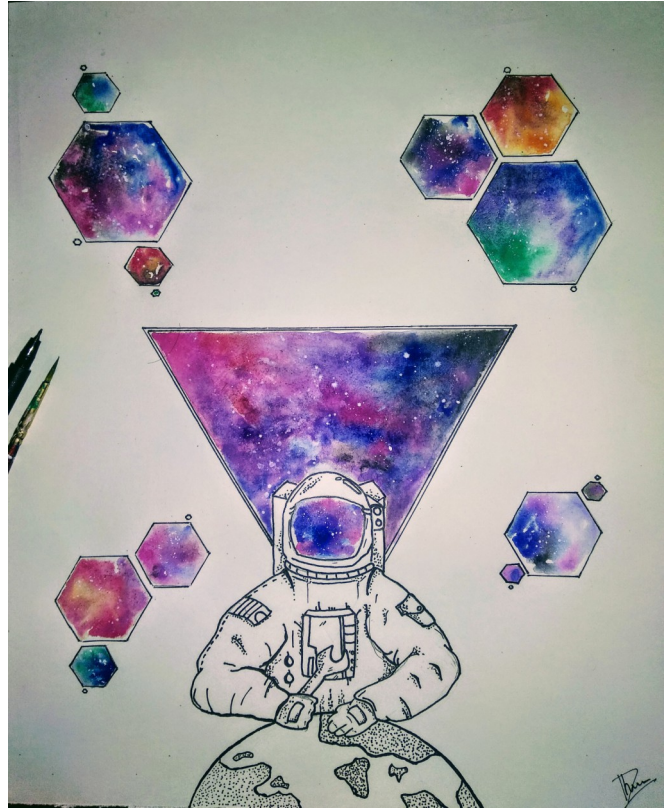
DHANUSH V

(1CR17CS035)

DIVYA REDDY
(1CR17CS197)

SHRUTI SINGH (1CR17CS144)

PAVAN KUMAR (1CR16CS111)
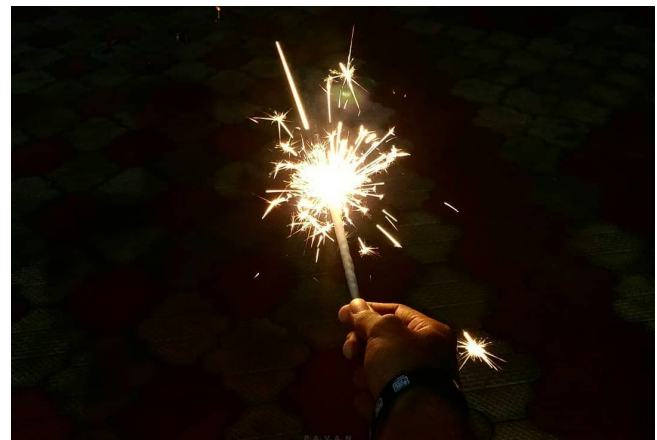
APPLICATIONS OF BLOCKCHAIN TECHNOLOGY BEYOND CRYPTOCURRENCY

The goal of this article is to summarise the literature on implementation of the Blockchain and similar digital ledger techniques in various other domains beyond its application to crypto-currency and to draw appropriate conclusions. Blockchain being relatively a new technology, a representative sample of research is presented, spanning over the last ten years, starting from the early work in this field. Different types of usage of Blockchain and other digital ledger techniques, their challenges, applications, security and privacy issues were investigated. Identifying the most propitious direction for future use of Blockchain beyond crypto-currency is the main focus of the review study. Blockchain (BC), the technology behind Bitcoin crypto-currency system, is considered to be essential for forming the backbone for ensuring enhanced security and privacy for various applications in many other domains including the Internet of Things (IoT) eco-system. International research is currently being conducted in both academia and industry applying Blockchain in varied domains. The Proof-of-Work (PoW) mathematical challenge ensures BC security by maintaining a digital ledger of transactions that is considered to be unalterable. Public Key (PK) is used to record the users' identity that provides an extra layer of privacy. The successful adoption of BC has been implemented in diverse non-monetary systems such as in online voting, decentralized messaging, distributed cloud storage systems, proof-of-location, healthcare and so forth. Recent research articles and projects/applications were surveyed to ascertain the implementation of BC for enhanced security and to identify its associated challenges and thence to propose solutions for BC enabled enhanced security systems.

Technology Fundamentals of Blockchain

This section briefly describes the fundamentals of the technology behind the Blockchain.
A Blockchain comprises of two different components, as follows:
 1. Transaction: A transaction, in a Blockchain, represents the action triggered by the participant.
 2. Block: A block, in a Blockchain, is a collection of data recording the transaction and other associated details such as the correct sequence, timestamp of creation, etc. The Blockchain can either be public or private, depending on the scope of its use. A public Blockchain enables all the users with read and write permissions such as in Bitcoin, access to it. However, there are some public Blockchains that limit the access to only either to read or to write. On the contrary, a private Blockchain limits the access to selected trusted participants only, with the aim to keep the users' details concealed.
This is particularly pertinent amongst governmental institutions and allied sister concerns or their subsidies thereof. One of the major benefits of the Blockchain is that it and its implementation technology is public. Each participating entities possesses an updated complete record of the transactions and the associated blocks. Thus the data remains unaltered, as any changes will be publicly verifiable. However, the data in the blocks are encrypted by a private key and hence cannot be interpreted by everyone. Another major advantage of the Blockchain technology is that it is decentralized.
It is decentralized in the sense that:
• There is no single device that stores the data (transactions and associated blocks), rather they are distributed among the participants throughout the network supporting the Blockchain.
 • The transactions are not subject to approval of any single authority or have to abide by a set of specific rules, thus involving substantial trust as to reach a consensus.
• The overall security of a Blockchain eco-system is another advantage. The system only allows new blocks to be appended. Since the previous blocks are public and distributed, they cannot be altered or revised. For a new transaction to be added to the existing chain, it has to be validated by all the participants of the relevant Blockchain eco-system.
For such a validation and verification process, the participants must apply a specific algorithm. The relevant Blockchain eco-system defines what is perceived as "valid", which may vary from one eco-system to another. A number of transactions, thus approved by the validation and verification process, are bundled together in a block. The newly prepared block is then communicated to all other participating nodes to be appended to the existing chain of blocks. Each succeeding block comprises a hash, a unique digital fingerprint, of the preceding one.

Use of Blockchain beyond

Although the Internet is a great tool to aid every sphere of the modern digital life, it is still highly flawed in terms of the lack of security and privacy, especially when it comes to FinTech and E-commerce. Blockchain, the technology behind cryto-currency, brought forth a new revolution by providing a mechanism for Peer-to-Peer (P2P) transactions without the need for any intermediary body such as the existing commercial banks. BC validates all the transactions and preserves a permanent record of them while making sure that any identification related information of the users are kept incognito. Thus, all the personal information of the users are sequestered while substantiating all the transactions. This is achieved by reconciling mass collaboration by cumulating all the transactions in a computer code based digital ledger. Thus, by applying Blockchain or similar crypto-currency techniques, the users neither need to trust each other nor do they need an intermediator; rather the trust is manifested within the decentralized network system itself. Blockchain thus appears to be the ideal "Trust Machine" paradigm. In fact, Bitcoin is just an exemplary use of the Blockchain. Blockchain is considered to be a novel revolution in the domain of computing enabling limitless applications such as storing and verifying legal documents including deeds and various certificates, healthcare data, IoT, Cloud and so forth. Tapscott rightly indicated Blockchain to be the "World Wide Ledger", enabling many new applications beyond verifying transactions such as in: smart deeds, decentralized and/or autonomous organizations/ government services etc. In the cloud environment, the history of creation of any cloud data object and its subsequent operations performed thereupon are recorded by the data structure mechanism of 'Data Provenance', which is a type of cloud metadata. Thus this is very important to provide the utmost security to the data provenance for ensuring its data privacy, forensics and accountability. Liang et al. puts forward a Blockchain based trusted cloud data provenance architecture, 'ProvChain', which is fully decentralized. Such adoption of the Blockchain in a cloud environment can provide strong protection against records being altered thus enabling an enhanced transparency as well as additional data accountability. This also increases the availability, trustworthiness, privacy and ultimately the value of the provenance data itself.

In an IoT ecosystem, most of the communication is in the form of Machine-to-Machine (M2M) interactions. Thus establishing trust among the participating machines is a big challenge that IoT technology still has not been met extensively. However, Blockchain may act as a catalyst in this regard by enabling enhanced scalability, security, reliability and privacy. This can be achieved by deploying Blockchain technology to track billions of devices connected to the IoT eco-systems and used to enable and/or coordinate transaction processing. Applying Blockchain in the IoT ecosystem will also increase reliability by axing the Single Point of Failure (SPF). The cryptographic algorithms used for encryption of the block data as well as the hashing techniques may provide better security. However, this shall demand more processing power which IoT devices currently suffer from. Thus further research is required to overcome this current limitation.

The Future of Blockchain

According to the Gartner Hype Cycle for Emerging Technologies 2017, shown in Figure below, Blockchain still remains in the region of "Peak of Inflated Expectation" with forecast to reach plateau in "five to ten years". However, this technology is shown going downhill into the region of the "Trough of Disillusionment". Because of the wide adoption of the Blockchain in a wide range of applications beyond cryptocurrency, the authors of this paper are forecasting a shift in classification from "five to ten years" to "two to five years" to reach maturation. Blockchain possesses a great potential in empowering the citizens of the developing countries if widely adopted by e-governance applications for identity management, asset ownership transfer of precious commodities such as gold, silver and diamond, healthcare and other commercial uses as well as in financial inclusion. However, this will strongly depend on national political decisions.

CHETHAN B S

(1CR17CS032)

Student Corner

BATTLE BETWEEN HTTP & HTTPS

In this ever-evolving technology era, security on the web has become a prime concern for everyone. News headlines of data breaches; companies and systems getting compromised are all over the place and are creating a fearful ecosystem. Even though big organizations across the world are taking serious and advanced steps to eliminate or at least mitigate cyber threats, new vulnerabilities and data breaches are being reported on a daily basis. Today, it has become imperative to do a better job of securing our data online.

When the concern is security on the web, talking about HTTPS is must. There was a time when HTTP was enough to get our job done, however, gone are those days. Today, if you are not making use HTTPS you are putting yourself and your data in risk.

You all must be wondering now, what is the difference between HTTP and HTTPS? And why HTTPS is more secured. In this article, we will be seeing just that.

Hyper Text Transfer Protocol (HTTP) is an application protocol for distributed, collaborative, hypermedia information systems. In simple words, it is a protocol that is used to transfer hypertext over the Web. Even though it has been one of the widely used protocol, it couldn't last for a long time because of the security flaw it poses — data (i.e. hypertext) exchanged using HTTP goes as plain text. Meaning, if anyone establishes a connection between the browser and the server can keep an eye on the data. Today, in order to set up a secure session between server and browser, almost every website is getting rid of HTTP and implementing HTTPS.

HTTPS is what we are looking for to protect our data and privacy. Obviously the main reason for us to switch from HTTP to HTTPS is security and the 'S' here stands for Security and to check if you are on a secured connection just see the address bar and look if a lock sign is there or not; if present it means that you are on an encrypted website. This is highly needed for the sites where you share your sensitive details like bank information, government documents information, ATM pins, etc. Google having kept this thing in mind has even made your search results private. But previously anyone on the same network can view your search results.

Another flaw in HTTP is that it enables attackers to slow web servers by overwhelming them with seemingly innocent messages that carry a payload of gigabytes of data, putting them into infinite loops and even causing them to crash. Another major benefit of using HTTPS is that it prevents Man in The Middle (MITM) attack. If you don't know what a man-in-the-middle attack is, it is an attack where the attacker secretly establishes space and eavesdrop on the communications between two parties. Sometimes, the attacker also alters the communication between both the ends, and they believe they are directly communicating with each other. So, when a website uses HTTPS, it encrypts the communication, making it difficult for third-party connections to intercept the network.

So, the bottom line is that if you are still using a HTTP connection you are compromising your data big time. And now, we can say that the clear winner of the battle concerning security on web is HTTPS.

HITESH BHALOTIA

(1CR17CS050)

TYL Workshop and Hackathon on R Programming

4 day TYL workshop on R programming was conducted from 11th Feb to 14th Feb, 2019. The primary goal of the course is to enable students to use the programming language and tools with the emphasis on problem solving and practical application. Based on project and certification exam, students with rated on a scale of 1 to 5 stars.

Resource persons were:

- Dr. PN Singh
- Prof. Sagarika B.
- Prof Poonam V.
- Prof. Kiran Babu

TYL Hackathon on R programming

List of winners :

- RICHARD DELWIN MYLOTH (1CR17CS109)
- SAYAN PAL (1CR17CS132)
- PILLAI VIGNESH SURESHKUMAR (1CR17CS091)
- PRAKHYATH JAIN (1CR17CS094)
- NEERAJ KUMAR (1CR17CS080)

- YASH MATHUR (1CR17CS179)
- ZEESHAN ISLAM (1CR17CS181)
- VEDANT BARBHAYA (1CR17IS106)
- VIRAJ PATEL (1CR17IS107)
- VISHAL KUNDAR (1CR17IS110)

List of toppers :

6th semester

- PRADEEP KUMAR (1CR16CS116)
- B R AISHWARYA (1CR16CS031)
- SONU S BABU (1CR16CS163)

4th semester

- NEERAJ KUMAR (1CR17CS080)
- SHRUTI SINGH (1CR17CS143)
- YASH MATHUR (1CR17CS179)

Rural Trip

In the previous semester, 2 rural trips were made to Hoskote and Ramenahalli. A team of students and faculty members visited the sites to understand the problems faced by the villagers. Students keenly interacted with the villagers gain better understanding of the daily life of the villager and discussed technology based solutions to make their lives easy. Faculty coordinators: Prof. Navaneetha and Prof. Vivia John

Industrial Visits

VMware (29/3/2019) 4th and 6th semester

HAL Museum (2/4/2019) 4th semester

CSIR(8/5/2019) 6th semester

Samsung Opera House (8/5/2019) 4th semester

Spacebasics(17/5/2019) 4th and 6th semester

Samsung Opera House (30/5/2019) 6th semester

Placements	
Student	**Company**
PRIYANKA SRIVASTAVA	VMWARE (HIGHEST PACKAGE—18LPA)
DEEPA N	VMWARE (HIGHEST PACKAGE—18LPA)
MANOGNA M	VMWARE (HIGHEST PACKAGE—18LPA)
DIANA ELIZABETH ROY	OPTIMAL STRATEGIX
PRANNAY S REDDY	OPTIMAL STRATEGIX
SAMARTHA GURUMURTHY HEGDE	CYIENT
ADITYA VIDYADHAR KAMATH	UNILEVER
AYUSH ATUL HATE	UNILEVER
B VARSHAA SHREE	UNILEVER
NIHARIKA GUPTA	UNILEVER
PRIYA BATNI	UNILEVER
RISHABH D	UNILEVER
SOURAV MOHAN RANE	UNILEVER
RIYA MISHRA	UNILEVER
DAGA TARUN PAVAN	HUAWEI
KEERTHANA P N	HUAWEI
PRERANA JAIN	HUAWEI, HASHEDIN TECHNOLOGIES
SANDHYA.J.M	HUAWEI
SHRIDHAR V	HUAWEI
NISHU NISHANK	PROFINCH
V ASHRIT	SOFTWARE AG
KESAVA MURTHY	DELL EMC
DAGA TARUN PAWAN	SPRINKLR
AKSHAY	PIN CLICK
DESHRATHNA	COGNIZANT
RAMYASHREE	ELLUCIAN
NAGESHWARA REDDY	WESTLINE GROUP
SINCHANNA	DELL INTERNSHIP
YASH PUROHIT	FOREX & FOREST
SWAROOP K	EPIPHANY IP SOLUTIONS

Placements	
Student	**Company**
MAMATA B KUNTOJI	FACE
YAMUNA K	FACE
DIVYA HG	HASHEDIN TECHNOLOGIES
NIKITHA M	HASHEDIN TECHNOLOGIES
CHAITRA B	BOLT IOT
KAJAL KULSHERASTA	BOLT IOT
MAHESH T	BOLT IOT
YAMUNA K	BOLT IOT
RAMYA N	BOLT IOT
KARTHICK S K	CLOUDCHERRY
NANDITA EKAMBARAM	CLOUDCHERRY
TRISHALA P V	CLOUDCHERRY
AVINASH	OPENTEXT
VETSA GOWRI SANKAR	OPENTEXT
VINIT P KANANI	RAZORPAY
ABHINAV RAJPUT	SOFTWARE AG
AJISH A	SOFTWARE AG
ANKUR CHAUDHARY	SOFTWARE AG
ISHITA DONGRE	SOFTWARE AG
KALYAAN KUMAR SINGH	SOFTWARE AG

Alumni Meet

Sr. No	Faculty Name	Topic
1	MRS. PRIYA JOHN	APPLICATION PROGRAMMING WITH C#
2	MS. SHRUTHI DAMODARAN	SECURE AND DYNAMIC INFORMATION RETRIEVAL OVER GROUP SHARED ENCRYPTED CLOUD DATA
3	MRS. VIVIA JOHN	FEASIBILITY STUDY OF P300 COMPONENT OF VISUAL EVOKED POTENTIAL IN HUMANS
4	MRS. SAVITHA N J	IRIDIUM SATELLITE SYSTEM
5	DR. PUSHPA MOHAN	BLOCKCHAIN TECHNOLOGY
6	MRS. PREETHI SHEBA HEPSIBA	HARNESSING THE POWER OF CLOUD
7	DR JACOB AUGUSTINE	DISRUPTIVE PRODUCTS AND TECHNOLOGY
8	DR. SUGATO CHAKRABARTY	KNOWLEDGE RETRIEVAL, DIAGNOSIS AND PROGNOSIS
9	MR. YESUDIAN RAJKUMAR	HYPERVISORS
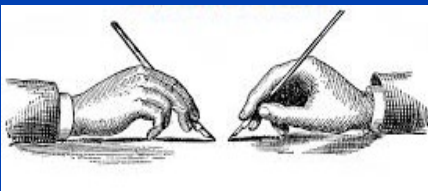
This news letter was edited by Prof. Chinmay S. Bhat , Prof. Manju S. and Prof. Priya J. under the guidance of Dr. Jhansi Rani P. We thank everyone who helped us.

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