



**NARASARAOPETA ENGINEERING COLLEGE**  
(AUTONOMOUS)

CYBER CHRONICLE



## DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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**VSN Jyothi**  
III – B.Tech. CSE

#### VISION:

To become a centre of excellence in nurturing the quality Computer Science & Engineering professionals embedded with software knowledge, aptitude for research and ethical values to cater to the needs of industry and society.

#### MISSION:

The department of Computer Science and Engineering is committed to

M1: Mould the students to become Software Professionals, Researchers and Entrepreneurs by providing advanced laboratories.

M2: Impart high quality professional training to get expertise in modern software tools and technologies to cater to the real time requirements of the Industry.

M3: Inculcate team work and lifelong learning among students with a sense of societal and ethical responsibilities.

#### PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

The graduates of the programme are able to:

- PEO1: Apply the knowledge of Mathematics, Science and Engineering fundamentals to identify and solve Computer Science and Engineering problems.
- PEO2: Use various software tools and technologies to solve problems related to academia, industry and society.
- PEO3: Work with ethical and moral values in the multi-disciplinary teams and can communicate effectively among team members with continuous learning.
- PEO4: Pursue higher studies and develop their career in software industry.

#### PROGRAM OUTCOMES (POs)

1. Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.





6. The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and Team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
9. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
10. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
11. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

## PROGRAM SPECIFIC OUTCOMES (PSOs)

- PSO1: Apply mathematical and scientific skills in numerous areas of Computer Science and Engineering to design and develop software-based systems.
- PSO2: Acquaint module knowledge on emerging trends of the modern era in Computer Science and Engineering
- PSO3: Promote novel applications that meet the needs of entrepreneur, environmental and social issues.

## ARTICLE ON BLOCK CHAIN TECHNOLOGY

### What Is a Block chain?

A block chain is a distributed database that is shared among the nodes of a computer network. As a database, a block chain stores information electronically in digital format. Block chains are best known for their crucial role in crypto-currency systems, such as Bitcoin, for maintaining a secure and decentralized record of transactions. The innovation with a block chain is that it guarantees the fidelity and security of a record of data and generates trust without the need for a trusted third party.

### Educational applications using block chain technology

Present Block chain applications in education

Nowadays, some universities and institutes have applied block chain technology into education, and most of them use it to support academic degree management and summative evaluation for learning outcomes.

Block chain technology can formulate the whole transcript. In the formal learning context, this includes learning contents and outcomes as well as students' achievements and academic certificates. Subsequently, in the informal learning context, information about research experience, skills, online learning experience as well as individual interests are included. These data can be safely stored and accessed on a block chain network in appropriate ways. The University of Nicosia is the first school which uses block chain technology to manage students' certificates received from MOOC platforms. Sony Global Education also used the block chain technology to create a global assessment platform to provide services for storing and managing degree information. Additionally, Massachusetts Institute of Technology (MIT) and the Learning Machine Company cooperated to design a digital badge for online learning based on block chain technology. Students who have attended the projects of MIT Media Lab and passed the assessment will receive a certification which will be stored on a block chain network. What's more, Holberton School is the first institute applying block chain technology to store degrees and has claimed that they would share this information from 2017. The block chain ledger can match all kinds of educational information with the user's unique ID. It includes learning behaviour in class, micro academic project experience, and macro educational background, etc.

Moreover, block chain technology contributes to reducing degree fraud. In the past, there were numerous cases of degree fraud. However, it can be avoided by employing block chain in granting and managing student's degree now. The data matched with users' ID and stored in block chain are checked, validated, and maintained by the miners from all over the world. Block chain distributed ledger is immutable and trustworthy. Thus, the reliability and authority are both ensured, which will significantly reduce degree fraud.

Future innovative educational applications using block chain technology

Block chain technology can be applied to education in many innovative ways beyond just diploma management and achievements assessment. For both learners and teachers, block chain technology has a great potential for broader application prospects on formative evaluation, learning activities design and implementation, and keep tracking the whole learning processes. Some innovative applications of using block chain technology in the field of education are proposed as follows.

A Smart Contract running on the Ethereum block chain network is essentially a computer protocol that simulates a real contract. It can facilitate contract negotiation, simplify contract terms, implement contract execution, and verify contract fulfilment state. It marks the unique and precise identity of parties in a transaction (contract subjects) through a digital way and stipulates the rights and obligations of both sides (contract terms) by code. The smart contract not only reduces "third party costs" in traditional transactions but also dramatically guarantees the transaction security and reliability. For example, in the context of car instalment, the buyer negotiates with the seller directly rather than loans from the bank, saving any additional processing fees. If buyer breaks the rules, the code will be executed, and the smart contract will be terminated. The smart contract greatly improves executive power and fairness than the traditional one. Therefore, if teachers and students carry out instructing and learning activities based on a smart contract, some of the educational issues would be solved.





From the perspective of students, there are still some negative subjective or objective factors causing poor learning outcomes, such as the lack of motivation and financial pressure. Due to the trait of currency property, block chain can be used to motivate students by implementing “learning is earning”. The smart contract between teachers and students can be applied to the educational scenario. Real-time awards can be given to students through some simple clicks by the instructors. Students will get a certain number of digital currency according to smart contract as rewards. This kind of money can be stored in the education wallet, used as tuition, even exchanged with real currencies.

Evaluation is also a problematic issue in the education system. Formative assessment has been advocated for a long time, and yet it is still not ripe because it is not easy to track every detail of teaching and learning. Applying block chain and smart contract can cope up with this challenge. Notably, the immutability, traceability, and reliability of block chain mean that the data recorded on block chain are more specific, authentic, and anti-theft. Take the “collaborative learning” for instance, which is regarded as an excellent way to carry out constructivism instruction and cultivate students’ ability to work with others. However, it is often accompanied by the problem of free-riding hindering fair evaluation. Block chain technology can mitigate this phenomenon. Each student submits his/her work to the learning platform through his/her unique account, the smart contract running on it will review student’s performance, and the results will be recorded into blocks. All behaviors during collaboration will be saved into blocks as evidence for evaluation as well. Moreover, public block chain has the trait of decentralization. It means that the distributed ledger ensures the consistency of most nodes. Thus, as nodes in block chain network, students’ opinions would be taken into consideration when assessing them. In this context, block chain ensures the fairness of the evaluation.

From the perspective of teachers, the instruction is sophisticated and artistic so that it is difficult to evaluate. The traditional method based on students’ feedback tends to be one-sidedness, lacking subjectivity and is hardly helpful for teachers’ improvement. A new assessment system can be constructed based on block chain network and smart contract. First, teachers need to submit pre-planned instructional activities as a smart contract to the schools. During the teaching process, all teaching activities will be recorded in the block chain network. The smart contract will verify the consistency of the teaching design and practice, which is going to be an important instruction evaluation indicator. What’s more, a smart contract between teachers and schools, as well as the one between teachers and students can be verified and supplemented with each other. Teachers who meet the standards will get digital currency as a reward. It serves as both an appreciation and encouragement for teachers’ teaching skills.

From the perspective of student development, supervisor or academic advisor is directly responsible for the supervision of the student’s program. They have the responsibilities of assisting the student in planning study programs and staying informed of student’s research activities and progress. However, in practice, these issues are not checked and supervised, so it will be controversial to distinguish the responsibilities if something negative happens in the future. This situation will be changed if smart contract and block chain technology is used in this area. All details should be monitored by smart contract platform and recorded into block chain ledger. Such as how many times has the supervisor discussed with students in the past semester? How many times has the supervisor reviewed the thesis

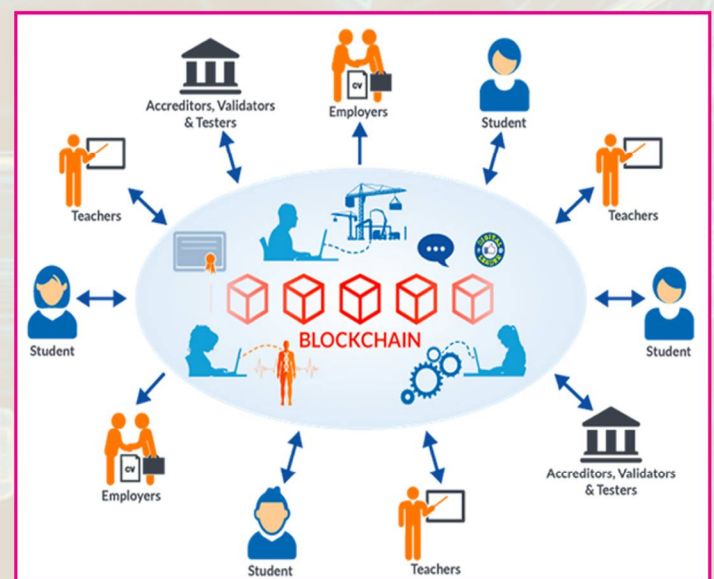
both in draft and final form? Whether they provide appropriate guidance to the students in course selection and research design? Thanks to the traceability and immutability of block chain technology, both students and supervisors’ behaviors will be recorded in the block chain ledger. This innovative application can protect the interests of both parties.

Overall, block chain can be used to construct a balance to measure learning process and outcomes. It is a reliable and an equal proof of value for everyone. Theoretically, block chain can solve the problems of information asymmetry and trust among strangers because of its decentralization and immutability. It ensures the authenticity because the information and value are published and maintained collectively. It provides a trustworthy way for talent investment. The user with more education on digital currencies has much chance to win the appreciation and investment. Block chain ledger tracks everything you’ve ever learned. Employers can use this information to offer you a job that matches your skills. On the other hand, the user who wants an excellent employee can also resort to the block chain ledger. It will greatly decrease the risk of investment bias and failure. In a word, block chain maximizes the interests of both parties.

Potential issues of applying block chain technology in education It is undeniable that there are potential drawbacks of applying block chain technology in education.

As a complex system, some learning behaviors and learning outcomes need to be reviewed by the instructors subjectively such as essays and classroom presentations. It is quite hard to evaluate this kind of learning activities by the pre-programmed smart contract without human intervention.

If an educational block chain system were put into use in schools, all students’ educational data would be integrated into block chain ledgers. The immutability feature of block chain technology would act as a double-edged sword. It removes the possibility of modifying educational record for legitimate reasons for some students.





# Department of Computer Science & Engineering



## Jubilation-2K20

The Technical Fest, Jubilation - 2K20, events were commenced in the Department of Computer Science and Engineering on 14th February, 2020, at 11:00 AM.

57 students of 17 different colleges except NEC group have participated in the technical events.

175 students of NEC group have participated in the technical events.

The number of participants in Technical Quiz, PPT, Code contest and Tech Hunt was 67, 108, 107, 143 respectively.

S.No	Event Name	Faculty Coordinators
1	Reception	Ms. M Sireesha, Asst. Professor, Ms. O Aruna, Asst. Professor Ms. Sd Rizwana, Asst. Professor, Ms. S. Chaitanya Bharathi, Asst. Professor, Mr. V. Radhika, Asst. Professor, Mr. K Suresh Babu, Asst. Professor
2	Technical Quiz	Dr. M. Venkata Reddy, Associate Professor, Mr. K. Hazarathaiiah, Asst. Professor, Mr. E Ramakrishna, Asst. Professor, Ms. T. Rupa, Asst. Professor.
3	Paper Presentation	Mr. K Gnanendra, Asst. Professor, Mr. M. Siva Naga Raju, Asst. Professor, Mr. K. V. Narasimha Reddy, Asst. Professor,
4	Code Contest	Mr. P. Lakshmi Narayana, Asst. Professor, Mr. SK. Rafi, Asst. Professor, K. Nagaeswara Rao, Operator
5	Tech Hunt	Mr. K. Vamsi Krishna, Asst. Professor, Mrs. T. Rupa, Asst. Professor
6	Sports	Mr. M Syam Kumar, Asst. Professor, Mr. K Hazarathaiiah, Asst. Professor, Ms. V Radhika, Asst. Professor

### COLLEGEWISE EVENTWISE - No. of PARTICIPANTS LIST

	NEC	NIT	SMCE	TEC	STEN	QISCE	VVIT	VNIT	CR	UCEN	MALI	ESWAR	MLWEC	URCET	RISE	PACE	PNC	SACE	MPES	Total
PPT	19	5	13	3	1	1	2	0	0					2	4	3	9	4	1	67
Technical Quiz	50	3	18	7			3	3	1		1	3			4		8	7		108
Code Contest	61	0	21	4			3			1	1	1	7		4	2		2		107
Tech Hunt	107		10	2			5				1	1			4		9	4		143
TOTAL	237	8	62	16	1	1	13	0	3	2	2	3	10	2	16	5	26	17	1	425

### EVENT WISE WINNERS LIST

Name of the Event	Group of NEC	Others	Total
PPT	37	30	67
Technical Quiz	71	37	108
Code Contest	82	25	107
Tech Hunt	117	25	142
Total	307	117	424

Total No. of Outside Participants: 57

### EVENTWISE COLLEGEWISE PARTICIPANTS LIST

Name of the Event	I <sup>st</sup> Prize	II <sup>nd</sup> Prize	III <sup>rd</sup> Prize
PPT	SD. KARISHMA SK.RESHMA SMCE	M.CHANDRA VALLIKA, QISCET M.SANDEEP, PACE	MD.SHEEMA V.L.N. HARI CHANDHANA RISE
	S.VENKATA SRI RAM, SMCE		SK.ANISHA T.AMULYA VVIT
Technical Quiz	K.S.L PAVAN KUMAR K. SRIKANTH Y.C.P HIMAJA NEC	P. AKHILA M.N.S.L.P AMULYA G.R.R.S ROSHNI NEC	
Code Contest	ACHUTHA SURYA TEJA NEC	G.HARSHAVARDHAN K.SANDEEP NEC	
Tech Hunt	M. VINAYASRI REDDY Y. LAKSHMI PRAVALLIKA NEC	M. SAI KUMAR A. JAYA SAI KIRAN, K. MITHRA G.V. GUPTHA NEC	

### Quotes



Computer Science is a science of abstraction -creating the right model for a problem and devising the appropriate mechanizable techniques to solve it.

— Alfred Aho —



People think that computer science is the art of geniuses but the actual reality is the opposite, just many people doing things that build on each other, like a wall of mini stones.

— Donald Knuth —



# Department of Computer Science & Engineering



Our Hon'ble Principal Sri.M.Srinivasa Kumar Garu addressing the NSS volunteers about the importance of participation in Electoral Process on the eve of National Voters' Day on 25-01-20.



Our College NSS Unit organized an Awareness Program on Covid-19 at Yallamanda village on 16-03-2020



Our college NSS Unit actively participated in Kotappakonda Maha Sivarathri Festival on 21-02-2020



College NSS Unit organized Blood Donation Program in co-ordination with Sree Welfare Blood Bank, Guntur on 17-03-2020.



Our College NSS Volunteers active participation in Chlorination Program at water tank in Yallamanda Village on 12-03-2020.



Our NSS Unit conducted Planatation Program at Kotappa konda Temple premises on 18-03-2020



Our NSS Unit organized a Free Dental Check-Up Program and distributed medicines to the villagers of Yallamanda on 13-03-2020



A Three-Day Faculty Development Programme on "AN INSIGHT INTO REVISED ACCREDITATION FRAMEWORK OF NAAC" Coordinated by Dr. S. N. Tirumala Rao and hosted by Dr. M. Sreenivasa Kumar, Principal, NEC, on 22nd to 24th June, 2020.

A Three-Day Workshop on "C Programming Concepts" Coordinated by Dr. S. N. Tirumala Rao hosted by Advisor, NEC, on 22nd to 24th June, 2020.

A Three-Day Workshop on "C Programming Concepts" Coordinated by Dr. S. N. Tirumala Rao and hosted by T.V. Rao, Advisor, NEC, on 15th to 17th June, 2020.

A One -Day Seminar on "Big Data vs Data Analytics vs Data Science" Coordinated by Dr. S.V.N. Srinivasu and hosted by Chandra Sekhar Vinjam, Sr. Big Data Engineer, Accenture, on 8th June, 2020.

A One -Day Seminar on "Big Data vs Data Analytics vs Data Science" Coordinated by Dr. S.N.Tirumala Rao and hosted by Chandra Sekhar Vinjam, Sr. Big Data Engineer, Accenture, on 8th June, 2020.

A One -Day Seminar on "Machine Learning" Coordinated by Dr. S.N. Tirumala Rao and hosted by B. Uday Kumar, on 7th June, 2020.

A One -Day Seminar on "MACHINE LEARNING IN MEDICAL IMAGE ANALYSIS: RECENT ADVANCES AND FUTURE TRENDS" Coordinated by Dr.S.V.N Srinivasu and hosted by Dr. B. Srinivas Rao, VIT Amaravathi, on 6th June, 2020.

NSS volunteers active participation in Clean and Green Program at Yallamanda Village on 14-03-2020





# Department of Computer Science & Engineering



Department of CSE Organized A Three – Day FDP on “AN INSIGHT INTO REVISED ACCREDITATION FRAMEWORK OF NAAC ” Co-ordinated by Dr. S. N. Tirumala Rao from 22-06-2020 to 24-06-2020 for faculty. The resource persons are Dr. M. Sreenivasa Kumar, Principal, NEC. Total 50 faculty attended.

Department of CSE Organized A Three – Day Workshop on “C–Programming Concepts ” Co-ordinated by Dr. S.N. Tirumala Rao from 22-06-2020 to 24-06-2020 for faculty and the resource person is Mr. T.V. Rao, Advisor, NEC. Total 35 faculty attended.

Department of CSE Organized A Three – Day Workshop on “C–Programming Concepts ” Co-ordinated by Dr. S.N. Tirumala Rao from 15-06-2020 to 17-06-2020 for faculty and the resource person is Mr. T.V. Rao, Advisor, NEC. Total 40 faculty attended.

Department of CSE Organized A One- Day Seminar on “ Big Data vs Data Analytics vs Data Science ” Co-ordinated by Dr. S.N. Tirumala Rao On 08.06.2020 for faculty and the resource person is Mr. T.V. Rao, Advisor, NEC. Total 36 faculty attended.

Department of CSE Organized A One- Day Seminar on “ Machine Learning ” Co-ordinated by Dr. S.N. Tirumala Rao On 07.06.2020 for students and the resource person is B.Uday Kumar. More than 70 students attended.

Department of CSE Organized A One- Day Seminar on “ Machine Learning in Medical Image Analysis: Recent Advances and Future Trends ” Co-ordinated by Dr. S.V.N. Srinivasu On 06.06.2020 for student and the resource person is Dr. B.Srinivasa Rao ,VIT ,Amaravathi. More than 100 students attended.

## LIST OF MOUS SIGNED BY DEPARTMENT WITH THE INDUSTRIES IS DETAILED BELOW

S No	NAME OF THE ORGANISATION	DATE OF SIGNING	NATURE OF ACTIVITY
1	JSquare technologies, gachibowli.	01-01-2019	Co-operation in the area of skill based training, education and research
2	TCS-ION THROUGH AICTE	11-07-2019	To Train Students To Develop Their Career Skills For Job Readiness

## Quotes of success

*“Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is the most important.”*

- Bill Gates



A. P. J. Abdul Kalam

**Sometimes it's better to bunk a class & enjoy with friends, coz today when I look back, marks never make me laugh memories do.**

## Student Voice:

Well , I am glad to share one and half year wonderful experience in NEC , In first year as a fresher , we were panicked about the higher education system in NEC , but started our achievements with the support and motivation from the faculty. I got the first membership card from CSI organization and participations made more and more interest to get knowledge. NEC provides skilled platforms for knowledge



Roll No : 18471A05H1

generation and sharing. NEC elevate the inner talent of students like sports , cultural activates , leadership qualities by elections, highlights the beauty of the college.



Roll No : 18471A05H1

I am honored to say, we are proud of our many achievements over the years, our various accomplishments in almost all curriculum and extra curriculum activities. Training and placement cell helped me and many students like me to get placed in the first phase of placements, We all were excited in the ending of semesters and the reason was placement training which was supposed to be started in the semester

holidays, Training was started with Aptitude classes by Byte Excel Origin where clear importance was given to the approach to solve any type of questions and also questions according to the company's pattern and even focus was given on various HR questions and the trainer's also shared their past interview experiences .With there support I got placed in CTS/RIDSYS with 4.56/2.16LPA. Finally I would like to thank the HOD of CSE department Dr S N Tirumala Rao for recognizing my capabilities and giving me the motivation and support to do things.