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### COLLEGE

#### Vision of the Institute

To be one of the nation's premier Institutions for Technical and Management Education and a key contributor for Technological and Socio-economic Development of the Nation.

#### Mission of the Institute

To produce technically competent Engineers and Managers by maintaining high academic standards, world class infrastructure and core instructions.

To enhance innovative skills and multi disciplinary approach of students through well experienced faculty and industry interactions.

To inculcate global perspective and attitude of students to face real world challenges by developing leadership qualities, lifelong learning abilities and ethical values.

### CSE Department

#### Vision of the Department

To be a choice for education in the area of Computer Science and Engineering, serve as a valuable resource for IT industry & society and exhibit creativity, innovation and ethics to cater the global challenges.

#### Mission of the Department

M1: To educate learners by adapting innovative pedagogies for enhancing their cognitive skills, technical competence and lifelong learning.

M2: To provide training programs and guidance to learners through industry institute partnerships, social awareness programs, internships, competitions and project works to inculcate research skills to address the global challenges.

M3: To provide opportunities for students to practice professional, social and ethical responsibilities using IT expertise with a blend of leadership and entrepreneurial skills.

### Program Educational Objectives (PEOs)

**PEO 1:** Procure employment/progress towards higher degree and practice successfully in the CS/IT profession. (Successful Career Goals).

**PEO 2:** Address complex problems by adapting to rapidly changing IT technologies. (Professional Competency).

**PEO 3:** Gain respect and trust of others as effective and ethical team member by demonstrating professionalism and functioning effectively in team-oriented and open-ended activities in industry and society. (Leadership, Ethics and Contribution to Society).

## PROGRAM OUTCOMES (PO's)

**PO\_1:** Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**PO\_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.

**PO\_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.

**PO\_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.

**PO\_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.

**PO\_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.

**PO\_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.

**PO\_8:** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO\_9:** Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO\_10:** 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.

**PO\_11:** 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.

**PO\_12:** 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.

## PSOs of the Department

**Domain Specific Knowledge:** Apply the relevant techniques to develop solutions in the domains of algorithms, system software, computer programming, multimedia, web, data and networking.

**Software Product Development:** Apply the design and deployment principles to deliver a quality software product for the success of business of varying complexity.



## A National Level Technical Symposium “AROHAN 2020”

CSE Department of NEC, Nellore organized Arohan – 2020, a National Level Student Technical Symposium which started with a grand fervor on 26th September, 2020 at A Block Auditorium of Narayana Engineering College in association with CSI Student Branch. This Symposium is conducted virtually for UG & PG students. The inauguration program started with a warm welcome to everyone and a striking Audio Visual that vividly captured the details of the CSE department. Subsequently, a peaceful welcome prayer was presented by the III B.Tech student of CSE department. The dignitaries were honored and lit up the lamp marking an auspicious beginning to the event.

Program Chief Guest Sri Tandava V Krishna Popuri Garu, Software Engineering Director, Dell India R & D,, addressed the gathering, Krishna Popuri shared his experiences during his education and inspired the students to come out of their shells to explore and take up challenges in life by moving out of the “comfort zone” to reap success. He said that the students need to develop entrepreneurship skills and that it is something most graduates don’t endeavor in India.

Three different events were conducted namely, Paper Presentation, Poster Presentation, and Coding Contest. Around 520 students participated in the Symposium in various events and were awarded with mementos and certificates. Participation Certificates were also awarded to all participants. Dr AVS Prasad-Director-Narayana Engineering & Pharmacy Colleges appreciated the participants from various states.

Dr G.Srinivasulu Reddy- Principal, told that it was a great opportunity to the students to improve their knowledge. Dr C. Rajendra-HOD CSE, advised the students to participate in such programs to enhance their skills. Mr. V.Muniraju Naidu-CSI SBC participated in the Symposium. 520 students benefitted from the Symposium.



## TECHNICAL SEMINARS ON LATEST TECHNOLOGIES

CSE Department of NEC, Nellore organized TECHNICAL SEMINARS ON LATEST TECHNOLOGIES, like IoT, Big-Data, Cloud Computing, Artificial Intelligence & Machine Learning, Oracle applications., which started with a grand fervor on 19th December, 2020 at Srinivasa Ramanujan Seminar Hall of Narayana Engineering College in association with CSI Student Branch. The inauguration program started with a warm welcome to everyone and a striking Audio Visual that vividly captured the details of the CSE department. Subsequently, a peaceful welcome prayer was presented by the II B.Tech student of CSE department. The dignitaries were honored and lit up the lamp marking an auspicious beginning to the event. Around 117 students participated in this event and were awarded with mementos and certificates. Participation Certificates were also awarded to all participants. Dr AVS Prasad-Director-Narayana Engineering & Pharmacy Colleges appreciated the participants. Mr. V.Muniraju Naidu-CSI SBC, told that it was a great opportunity to the students to improve their knowledge and advised the students to participate in such programs to enhance their skills. Final Winners are N. Rupika Yasodhara, B.Sanjana, Md Azeefa Anjum, P.Akhil, P.SaiLasya, K.V.LakshmiRamya, C.Eswar Saikumar, C.Venkata Sahana Royal. 120 students benefitted from this activity.





## An awareness Program on "Basic Communication Ideology for Various Career Paths"

Narayana Engineering College, Nellore has organized an awareness Program on "Basic Communication Ideology for Various Career Paths" on 22nd December 2020. The Resource Person Sana Shaik Mehajabeen, Manager, Byjus (Learning Application), Bangalore took over the session and created awareness among the students regarding improve the career path by using the best communication ideology. In this programme, the resource person explained about the importance of communication, types of communication i.e., verbal, non-verbal, written and visual that a computer science student must have to get an opportunities to improve the career path by using the best communication ideology. She specified that a CSE student must be aware i.e., a career path is a series of jobs that help you progress towards your goals and objectives



## Awareness Program on Overseas Education

Narayana Engineering College, Nellore has organized "Awareness Program on Overseas Education" on 30<sup>th</sup> December 2020. The Resource Persons Mr. D.Kanthi Kiran & Mr. S.PadmaKiran, New Edge Overseas Edu Consultancy, Vijayawada took over the session and created awareness among the students regarding importance of overseas education. In this programme, the resource persons explained about the objectives, and importance of overseas education.



## Value Added Course on "ETHICAL HACKING"

A value added course on "Ethical Hacking" is conducted for III B.Tech A& B students from 23-11-2020 to 27-11-2020. Resource person Dr. M. Sunil kumar, Professor of CSE, SVEC, Tirupati. The course will cover various attacks and vulnerabilities and ways to secure them. This course can help individuals and organizations to adopt safe practices and usage of their IT infrastructure. Starting from the basic topics like networking, network security and cryptography.



## Professional Development Programme on "Google Apps"

Department of CSE, Narayana Engineering College, Nellore has organized a one day Professional Development Program for non-teaching staff on "Google Apps" with hands on session on Saturday, 21<sup>st</sup> November 2020. The objectives of the program are: To introduce digital and free cloud applications., To do the tasks in better way by practice them., To keep the staff up-to-date by providing state-of-the-art technology. The resource person Dr. P.Penchalaiah, Dept of CSE started the session with an introduction on free cloud and digital applications. The following Google applications like Google Drive, Google Docs, Google Slides, Google Spread Sheets, Google forms, Google meet, Google Drawing and Google Duo. They were practiced all the Apps.



## Awareness on IEEE Membership

An Awareness program on IEEE Membership was conducted on 26-12-2020 in the dept.of CSE at Narayana Engineering College, Nellore. The theme of this Awareness is to make students aware about the advantages of IEEE and how it is utilize it effectively. The session is take by Ms. G.Renu, who is working as a Contest Coordinator. Speaker started the session with welcoming all the participants, introducing herself and sharing her thoughts about the topic.





## PROFESSIONAL SOCIETY ACTIVITIES

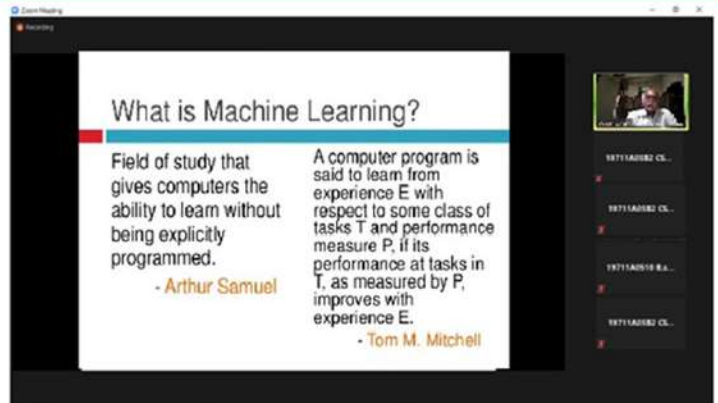
### SEMINAR ON CYBER SECURITY

The CSE Department has conducted a Seminar on Cyber Security under CSI from 20.11.2020 to 22.11.2020. Resource person is Mr.Prithik Jadhav, Data Engineer. He explained the overview of Big Data analytics in security involves the ability to gather massive amounts of digital information, to analyze, visualize and draw insights that can make it possible to predict and stop cyber-attacks. Along with security technologies, it gives us a stronger cyber defense posture.



### TWO DAYS WORKSHOP ON MACHINE LEARNING- HANDS ON WITH PYTHON/MATLAB

The Department of CSE has conducted a Two days Workshop on Machine Learning- Hands on with Python/Matlab under CSI from 05-08-2020 to 07-08-2020 on Zoom platform NEC, Nellore. In this session the lecture was delivered by Dr. Mamoun Alazab, Data Analyst. He explained the overview of Artificial Intelligence and Machine learning. He discussed about ML is an application of AI which allows computers to automatically learn from data without being explicitly programmed.



### SEMINAR ON UNDERSTANDING THE ROLE OF XAP FILES

A Seminar on Understanding the role of XAP Files by Mrs. D. Saritha Associate Professor Dept of CSE, NECN on 19/08/2020. When you compile a Silverlight project, it is all combined into a single file with a .xap extension. This file contains the assemblies and any other content files associated with the project, which are bundled together and compressed using the ZIP file format. You can prove this by simply changing the file extension from .xap to .zip and unzipping the file to inspect its contents. The XAP file can then be hosted on a web server, enabling it to be downloaded and run by client computers.

Files appended with the ZAP extension are also known as Zero Administration Package Files and are associated with Microsoft Windows. This file format was developed by Microsoft Corporation. They contain plain text, program specification and instructions, program file, version number, publisher and other optional information.



They allow EXE programs to be deployed or published to users who have no MSI installer on a Microsoft Windows system. They are specifically used in Active Directory Domains and are installed using a Group Policy Object which allows access to programs and files. The system administrator provides users the ZAP applications locally on their computers. ZAP files are created and edited by using any text editor. They require two basic fields namely, the Application Name or Friendly Name and the Setup Command line. Users find the applications in the Add/Remove Programs list from the Windows Control Panel. ZAP files are restricted and not as flexible as MSI package files.



## PAPER PUBLICATIONS

S. No	Name of the Author	Title of Paper	Name of the Journal	Year of Publication	ISSN No.
1.	Dr. C. Rajendra	Soil Data Classification using Data Mining Algorithms and Recommendation of Crops	Journal of Interdisciplinary Cycle Research	September, 2020	0022-1945
2.	Dr. C. Rajendra	Detecting Online Fake Reviews Using Supervised Learning and Semi Supervised Learning with Multilayer perceptron	The International journal of analytical and experimental modal analysis	July, 2020	0886-9367
3.	Dr B. Sunil Kumar	Predicting Early Reviews for Effective product Marketing	Journal of Interdisciplinary Cycle Research	September, 2020	0022-1945
4.	Dr. B. Sunil Kumar	CNN Approach for Cancer Prognosis using Machine Learning	Science, Technology and Development	September, 2020	0950-0707
5.	Mr. T. SaiPrasad Reddy	Progressive Auto Selection and Auto Setting of Cloud Network	Science, Technology and Development	September, 2020	0950-0707
6.	Mr. V. MuniRaju Naidu	High Speed Data Transmission for Heterogeneous Wireless Sensor Networks	Journal of Interdisciplinary Cycle Research	September, 2020	0022-1945
7.	Mr. V. MuniRaju Naidu	Designing Shortest Mobile Sink's Traveling Path with Diverse Sensing Rates for No Data Packet Loss	Science, Technology and Development	September, 2020	0950-0707
8.	Mr. R. Navatejareddy	A Topic Diverse Ranking Approach for Image Retrieval	Journal of Interdisciplinary Cycle Research	September, 2020	0022-1945
9.	Mr. R. Navateja Reddy	Implementation Of Pick Pockets Identification System from Multi-Scale Public Records	Science, Technology and Development	September, 2020	0950-0707
10.	Mrs. D. Saritha	Providing Security to Cloud Data by Applying Fragmentation on Data and Key	Journal of Interdisciplinary Cycle Research	September, 2020	0022-1945
11.	Mrs. D. Saritha	Identifying Injection Attacks by using Machine Learning Algorithms	Science, Technology and Development	September, 2020	0950-0707
12.	Mrs. D. Saritha	An Efficient Secure Key Agreement and Key Protection for Mobile Device User Authentication	The International journal of analytical and experimental modal analysis	July, 2020	0886-9367

S. No	Name of the Author	Title of Paper	Name of the Journal	Year of Publication	ISSN No.
13.	G. Sravani	Detection of Suicide Related Posts in Twitter Data Streams	Journal of Interdisciplinary Cycle Research	September, 2020	0022-1945
14.	S. Tamilselvan	Plant Leaf Disease Detection using Image Segmentation	Journal of Interdisciplinary Cycle Research	September, 2020	0022-1945
15.	C. Rama Mohan	Image Fusion and Restoration using Curvelet Transform with Sparse Representation	Science, Technology and Development	September, 2020	0950-0707
16.	C. Rama Mohan	Medical Image Fusion Method Based on NSCT with SR in Frequency Partition Domain	Science, Technology and Development	September, 2020	0950-0707
17.	C. Rama Mohan	Multifocus Image Fusion Based on Multiresolution and Modified Principal Component Analysis	ICTACT Journal on Image and Video Processing	November, 2020	0976-9102
18.	C. Rama Mohan	An Enhancement Process for Gray-Scale Images Resulted from Image Fusion Using Multiresolution and Laplacian Pyramid	ICTACT Journal on Image and Video Processing	November, 2020	0976-9102
19.	C. Rama Mohan	A Novel Image Quality Enhancement based on Frequency Partition and Normalization	Journal of Interdisciplinary Cycle Research	September, 2020	0022-1945
20.	C. Rama Mohan	Multi-Focus Image Fusion Method with QSHIFTN-DTCWT and Modified PCA in Frequency Partition Domain	ICTACT Journal on Image and Video Processing	August, 2020	0976-9102

## FACULTY PARTICIPATION IN CONFERENCES

S. No	Name of the Author(s)	Title	National / International	Name of the Conference	Year	Organized by
1.	C. Rama Mohan	Multi-focus Image Fusion based on Multiresolution and Modified Principal Component Analysis	International	International Conference on Signal, Communication and Embedded Systems (ICSCEs 2020)	Oct. 14-18, 2020	ICT Academy
2.	C. Rama Mohan	All-In-Focus Imaging using Multiresolution and Normalization	International	International Conference on Signal, Communication and Embedded Systems (ICSCEs 2020)	Oct. 14-18, 2020	ICT Academy
3.	C. Rama Mohan	An Enhancement Process for Gray-Scale Images Resulted from Image Fusion using Multiresolution and Laplacian Pyramid	International	International Conference on Signal, Communication and Embedded Systems (ICSCEs 2020)	Oct. 14-18, 2020	ICT Academy

## BOOK PUBLICATION

S.No	Author	Patent Title	National / International	Publication Date	Patent ID
1.	Dr. Rajendra Chadawalawada	A Proficient Method for Categorical Data Clustering	National Patent	17-09-20	202041035585



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