MALLA REDDY ENGINEERING COLLEGE FOR WOMEN

Autonomous Institution – UGC, Govt. of India

Accredited by NBA & NAAC with 'A' Grade

NIRF Indian Ranking, Accepted by MHRD, Govt. of India | Band – Excellent, National Ranking by ARIIA

Maisammaguda, Dhulapally, Secunderabad – 500 010, Telangana

A.Y : 2019-20   VOL.1

Under
Student Chapter IEEE, CSI & ISTE & Technical Association CYNOSURS

INFOSPARK

HALF YEARLY TECHNICAL MAGAZINE

DEPARTMENT OF
COMPUTER SCIENCE AND ENGINEERING

CSE

www.mallareddyecw.com

DEPARTMENT VISION

- Visualizing a great future for the intelligentsia by imparting state-of the art Technologies in the field of Engineering and Technology for the bright future and prosperity of the students.
- To offer world class training to the promising Engineers.

Vision

DEPARTMENT MISION

- To nurture high level of Decency, Dignity and Discipline in women to attain high intellectual abilities.
- To produce employable students at National and International levels by effective training programmes.
- To create pleasant academic environment for generating high level learning attitudes.

Mission

ABOUT THE DEPARTMENT

The Dept. of CSE with an intake of 240 in B.Tech Programme also offers M.Tech programmes in COMPUTER SCIENCE AND ENGINEERING & COMPUTER SCIENCE. The programmes ensure that the student effectively meets the highest benchmarks of competence required by the industry.

The Dept has state of the art laboratories with latest softwares like Windows 2008, Visual Studio 2012, Ecllipse, WinRunner, QTP, J2EE, .NET, Fedora & Weka Tool. The Dept established IEEE & ISTE student chapters and Dept. Technical Association-CYNOSURES under which it organizes National level Technical Symposium - FUTURE SASTRA and State level Technical Symposium MEDHA every academic year and Student Development Programmes like Workshop on Web Designing, Android & its Application, ADOBE PhotoShop, Ethical Hacking and HTML5.

The Department also organizes Pre-placement training programmes on C-Skills, Java Skills and Project Based training programmes on C, C++, JAVA and Web Technologies and also organizes Intra College Student Conferences on Network Security and Data Base Management Systems and Recent Advancements in Computer Science and also organizes regular student seminar sessions of two hours per week for I - IV B.Tech student to enhance their all round performance.

To provide value added certification courses to students, The Dept. established Micro Soft Innovation Center which offers Micro Soft Certification, CISCO Networking Academy which offers CISCO Certification and in association with ORACLE Corporation, India, It offers Java Certification. The Dept. also offers Business English Certification (BEC) with the help of Center for Development of Communication Skills.

PO'S

PO1	Engineering knowledge	An ability to apply knowledge of mathematics (including probability & statistics and Mathematical Foundation of Computer science and Engineering.
PO2	Problem analysis	An ability to design and conduct experiments, as well as to analyze and interpret data including hardware and software components.
PO3	Design / development of solutions	An ability to design a complex computing system or process to meet desired specifications and needs.
PO4	Conduct investigations of complex problems	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering actives with an understanding of the limitations.
PO5	Modern tool usage	An ability to use the techniques, skills and modern engineering tools necessary for engineering practice.
PO6	The engineer and society	An ability to understanding of professional, health, safety, legal,cultural and social responsibilities.
PO7	Environment and sustainability	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and demonstrate the knowledge need for sustainable development.
PO8	Ethics	Apply ethical principles, responsibility and norms of the engineering practice
PO9	Individual and team work	An ability to function on multi-disciplinary teams.
PO10	Communication	An ability to communicate and present effectively
PO11	Project management and finance	An ability to use the modern engineering tools, techniques, skills and management principles to do work as a member and leader in a team, to manage projects in multi-disciplinary environments
PO12	Life-long learning	A recognition of the need for, and an ability to engage in, to resolve contemporary issues and acquire lifelong learning

PSO'S

The graduates of the department will attain:

PSO1: The ability to analyze, design, code and test application specific or complex engineering problems in Cryptography and Network Security, Design and Analysis of Algorithm, Computer Networks, Data Mining, Cloud Computing, Mobile Computing, Cloud Computing, Internet of Things (IoT), Data Science, Artificial Intelligence, Machine Learning, Cyber Security, Block chain Technology, and Big Data by applying the knowledge of basic sciences, engineering mathematics and engineering fundamentals.

PSO2: The ability to adapt for rapid changes in tools and technology with an understanding of societal and ecological issues, relevant to professional engineering practice through life-long learning.

PSO3: Excellent adaptability to function in multi-disciplinary work environment, good interpersonal skills as a leader in a team, in appreciation of professional ethics and societal responsibilities.

PEO'S

PEO1

PROFESSIONAL ENHANCEMENT: Provide the students with strong fundamental and advanced knowledge in Mathematics, Science and Engineering with respect to Computer Science and Engineering discipline with an emphasis to solve Engineering problems.

PEO2

CORE COMPETENCE: Prepare the students through well - designed curriculum to excel in various programmes in Computer Science and Engineering, to meet the needs of the industry and for higher education pursuit.

PEO3

TECHNICAL ACCOMPLISHMENTS: Train the students with intensive and extensive engineering knowledge and skill to analyze, design and create novel products and solutions in the field of Computer Science and Engineering.

PEO4

PROFESSIONALISM: To inculcate in students professional attitude, multidisciplinary approach, ethics, team work, communication, ability to relate computer engineering issues with societal needs and contribute towards nation building.

PEO5

LEARNING ENVIRONMENT: To provide students with an academic environment that inculcates the spirit of excellence, creativity, innovation, leadership, lifelong learning, ethical codes and guidelines to become a successful professional in Computer Science and Engineering.

MESSAGES

Founder Chairman's Message

MRECW has made tremendous progress in all areas and now crossing several milestones within a very short span of time and now I feel very happy to know that the students and faculty of the CSE Department of MRECW are bringing out the volume-1 of the Technical magazine INFOSPARK in A.Y 2019-20. As I understand this magazine is intended to bring out the inherent literary talents in the students and the teachers and also to inculcate leadership skills among them. I am confident that this issue will send a positive signal to the staff, students and the persons who are interestedin the educational and literary activities.

Ch. Malla Reddy
Founder Chairman, MRGI
Hon'ble Minister, Govt. of Telangana State

Principal's Message

I congratulate the department of CSE, MRECW for bringing out the first issue of the prestigious half yearly department technical Magazine INFOSPARK under A.Y: 2019-20, I am sure that the magazine will provide a platform to the students and faculty members to expand their technical knowledge and sharpen their hidden literary talent and will also strengthen the all round development of the students. I am hopeful that this small piece of literary work shall not only develop the taste for reading among students but also develop a sense of belonging to the institution as well. My congratulations to the editorial board who took the responsibility for the arduous task most effectively. I extend best wishes for the success of this endeavor.

Dr. Y. Madhavee Latha
Principal

HOD'S MESSAGE

INFOSPARK-2020,Our Department magazine show cases the various achievements and talents of students. The primary objective of the department has been to impart quality technical education to the students. We providing the students with most conductive academic environment and making them towards serving the society with advanced technologies. Our department provides training sessions, workshops, hands-on, webinars, Industrial visits, Internships and Personality development classes. I am privileged to offer my best wishes. I congratulate students who have contributed their articles in huge volume.

Dr.C.V.P.R.PRASAD
Professor and HOD

FACULTY ARTICLES

FARMER@IT

The core of IoT is the data you can draw from things and transmit over the internet. To optimize the farming process, IoT devices installed on a farm should collect and process data in a repetitive cycle that enables farmers to react quickly to emerging issues and changes in ambient conditions. Smart farming follows a cycle like this one: 1. Observation. Sensors record observational data from the crops, livestock, soil, or atmosphere. 2. Diagnostics. The sensor values are fed to a cloud-hosted IoT platform with predefined decision rules and models—also called "business logic"—that ascertain the condition of the examined object and identify any deficiencies or needs. 3. Decisions. After issues are revealed, the user, and/or machine learning-driven components of the IoT platform determine whether location-specific treatment is necessary and if so, which. 4. Action. After end-user evaluation and action, the cycle repeats from the beginning. Many believe that IoT can add value to all areas of farming, from growing crops to forestry.

Mr. B V S P PAVAN KUMAR
Associate Professor

AMAZON ALEXA

The launch of the Amazon Echo and its voice service, Alexa, brought virtual assistants out of our smartphones and into our homes and offices. While the Echo is a solid product, Alexa as a voice platform is where the real value is. After starting off with 100 things Echo devices could do, the number of available Alexa Skills now tops 30,000. CES 2017 showed how eager tech companies are to integrate Alexa, as the Amazon virtual assistant was everywhere at CES, despite the fact that neither the Echo or Alexa had booth space on the show floor. As such, the interest in developing tools for the platform has skyrocketed, with many developers eager to jump into the ecosystem. To help developers and companies better understand how to get started working with Alexa and its related services, we've pulled together the most important details and resources.As noted, Alexa is a service that allows for a user interface to leverage a human voice command to perform tasks. The Amazon Echo is one of the primary ways through which these tasks are accessed, which is often set up through a companion app, but the Alexa Voice Service (AVS) can be integrated into a host of other products as long as they have a microphone and speaker. Amazon also offers the Amazon Lex service, which allows developers to build conversational bots using the same technology Alexa is based on. Terren Peterson, an Alexa Champion and the vice president of platform engineering for retail and direct bank at Capital One, said that many people see Alexa as simply a talking speaker. However, Peterson said that the real value of working with Alexa isn't just the ability to talk back to the speaker, but "the ability to be able to change things with your voice." Users interact with Alexa through voice commands called "Skills," which are created by developers to enable a specific experience through the Alexa Skills Kit (ASK). Currently, developers can create three types of Skills: Smart Home Skills for home automation, Flash Briefing Skills for information and news, and Custom Skills for any other kind of request.

Ms. KHOND SMITAROHIDAS
Associate Professor

THE LATEST 5G: WHAT YOU NEED TO KNOW

Dig deeper, though, and things start to get complicated. For starters, to get 5G today, you will need a new handset and a new data plan. You will also have to wade through a plethora of services, frequencies, and geeky acronyms.But faster phones are only a small part of what 5G promises. A wireless 5G connection could one day replace your current home or business Internet service, for example. Enterprises will deploy private 5G networks in combination with a new generation of Wi-Fi to connect people and machines in new ways. Countless devices on the Internet of Things will connect over 5G. And the open architecture of 5G will let companies build new, yet-to-be-imagined services on top of the network.The standards for 5G define three classes of service in different radio frequency ranges: low band (below 1 GHz), medium band (1 GHz to 6 GHz), and high band (24 GHz-plus).The higher the frequency, the faster the data transmission on it. But higher frequencies are also harder to implement reliably. High-frequency signals do not penetrate objects like walls and are more vulnerable to distortion.The higher the frequency, the more cells a carrier needs in an area to provide service. Therefore, the early classes of service are mostly in the low bands, which can be implemented on existing cellular infrastructure.

P.Srinidhi
18RH1A05H6

CYBER SECURITY

Cyber security is the practice of defending computers, servers, mobile devices, electronic systems, networks, and data from malicious attacks. It's also known as information technology security or electronic information security. The term applies in a variety of contexts, from business to mobile computing, and can be divided into a few common categories.The global cyber threat continues to evolve at a rapid pace, with a rising number of data breaches each year. A report by RiskBased Security revealed that a shocking 7.9 billion records have been exposed by data breaches in the first nine months of 2019 alone. This figure is more than double (112%) the number of records exposed in the same period in 2018.The importance of system monitoring is echoed in the "10 steps to cyber security", guidance provided by the U.K. government's National Cyber Security Centre. In Australia, TheAustralian Cyber Security Centre(ACSC) regularly publishes guidance on how organizations can counter the latest cyber-security threats. Malware means malicious software. One of the most common cyber threats, malware is software that a cybercriminal or hacker has created to disrupt or damage a legitimate user's computer. Often spread via an unsolicited email attachment or legitimate-looking download, malware may be used by cybercriminals to make money or in politically motivated cyber-attacks.

P. Shailaja
18RH1A05H7

CAPTCHA

CAPTCHA stands for the Completely Automated Public Turing test to tell Computers and Humans Apart. CAPTCHAs are tools you can use to differentiate between real users and automated users, such as bots. CAPTCHAs provide challenges that are difficult for computers to perform but relatively easy for humans.CAPTCHAs work by providing information to a user for interpretation. Traditional CAPTCHAs provided distorted or overlapping letters and numbers that a user then has to submit via a form field. The distortion of the letters made it difficult for bots to interpret the text and prevented access until the characters were verified.This CAPTCHA type relies on a human's ability to generalize and recognize novel patterns based on variable past experience. In contrast, bots can often only follow set patterns or input randomized characters. This limitation makes it unlikely that bots will correctly guess the right combination.Since CAPTCHA was introduced, bots that use machine learning have been developed. These bots are better able to identify traditional CAPTCHAs with algorithms trained in pattern recognition.

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SRIDEVI MATA
18RH5A0513

BLUE EYES

The blue eyes technology works on Artificial Intelligence. It aims to give human abilities to a computer. A research team of IBM has come up with this technology to make a computer understand and sense human feelings and behavior. The aim of the blue eyes technology is to give human power or abilities to a computer so that the machine can naturally interact with human beings as humans interact with each other, through speech, facial expressions and touch. All human beings have some perceptual capabilities, the ability to understand each other's emotional level or feelings from their facial expressions. Blue eyes technology aims at creating a computer that has the abilities to understand the perceptual powers of the human being by recognizing their facial expressions and react accordingly to them. All these perceptual capabilities are embedded in the gadgets using the Blue Eyes Technology. This shows how far science and technology can progress and develop. The Blue eyes technology identifies human emotions using image processing techniques by extracting eye portion from the captured image and compares it with the stored images in the database. This high-end technology facilitates the computers to talk, listen and feel our presence with various tools of artificial intelligence like face recognition, fingerprint, and video calls etc., This technology is used to simplify life by providing user-friendly facilities. It also helps in reducing the gap between the computer and human.

P.kavya
19RH5A0516

ROBOTIC PROCESS AUTOMATION

Robotic process automation (RPA) is a software technology that makes it easy to build, deploy, and manage software robots that emulate humans actions interacting with digital systems and software. Just like people, software robots can do things like understand what's on a screen, complete the right keystrokes, navigate systems, identify and extract data, and perform a wide range of defined actions. But software robots can do it faster and more consistently than people, without the need to get up and stretch or take a coffee break.Today, RPA is driving new efficiencies and freeing people from repetitive tedium across a broad swath of industries and process. Enterprises in industries ranging from financial services to healthcare to manufacturing to the public sector to retail and far beyond have implemented RPA in areas as diverse as finance, compliance, legal, customer service, operations, and IT. And that's just for starters.When you combine RPA's quantifiable value with its ease of implementation relative to other enterprise technology, it's easy to see why RPA adoption has been accelerating worldwide.RPA can help many different types of industries address their specific operational issues in new and powerful ways.

19RH1A0502
BANDARI JOSHNA

AQUA COMMUNICATION SYSTEM USING MODEM

Wireless communication technology is nothing new to us in this era and the idea of wireless undersea communication seems pretty interesting and new. The researchers have been designing methods for wireless information transmission underwater and a lot of progress has been made in recent years by the scientists. It is built using sensor networks by using the application of seismic monitoring which may include underwater construction, pipeline, and leak monitoring, biological data collection, or underwater robot communication. The sensor networks usually consist of many battery-powered nodes, densely deployed in an area for close observation and long-term monitoring. The submerged acoustic channel presents solid challenges to the plan of information communication systems. Other than extreme multi-path reflections, there can be bended engendering ways due to uneven temperature dissemination and different impedances, such as bubbles and clamor from man-made objects. The modem hardware is split into three main portions: a wake-up receiver, a data receiver, and a single transmitter. underwater acoustic networks will find application in more complex, heterogeneous systems for ocean observation.

Bella Vennela
18RH1A0515

GOOGLETULIP

Google Tulip is a great initiative for the growth of agricultural sector where we can understand the signals from the roots of plants and we can communicate with them according to their requirements.Google Tulip is a machine learning technology to improve profitability in the agricultural sector. Over the years, humankind has created lots of effective ways to communicate with each other. But using technology in the plant kingdom is an innovation worth acknowledging. Scientists found that plants use their roots to send signals to neighbouring plants, as a means to maintain their security and well being. Decoding the language of plants and flowers has been a very difficult and long-drawn challenge for the research scientists, but not anymore. Using artificial intelligence we can now communicate with plants. This is one of the greatest advancements in the world of artificial intelligence. Google Home can understand tulips, allowing translation between Tulips and various human languages.The ability to communicate with tulips comes with great environmental and societal benefits. Now Tulips are having a way to indicate to the humans that they are in need of water, light or simply some more space. Their needs are expressedmoreclearly, they areable tolivea happierandhealthier life. Google Tulip was basically developed and tested in the Netherlands, which provided the perfect testing ground for the tulips. Statistics reveal that the Netherlands produce nearly 12.5 billion flowers per year.

G.Samhitha
18RH1A05A9

DIGITAL RUPEE

Digital currency or rupee is an electronic form of money, that can be used in contactless transactions. The Central Bank Digital Currency (CBDC) will be a digital currency issued by the central bank, i.e. the Reserve Bank of India (RBI) and it will be based on Block Chain and other technologies. One of the main reasons why the RBI is going to launch a digital rupee is that India doesn't want to miss the virtual currency bandwagon.

A digital rupee will be fundamentally different from private cryptocurrencies like Bitcoin because it will be backed by the state and will have an intrinsic value. The government has called Bitcoin and other cryptocurrencies virtual assets, which means they will not be legal tender and digital rupee will be counted as currency in circulation.

A large part of transactions in India's economy are still carried out using untreacable cash, this can be replaced by digital rupee.

Thus it can be concluded that the digital rupee will replace physical cash. It is an online tokenand has no physical presence and it is a perfect replacement of cash for an economy.

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B.sushma

19RH1A0540

DATA ANALYTICS

Data Analytics has a key role in improving your business as it is used to gather hidden insights, generate reports, perform market analysis, and improve business requirements.Gather Hidden Insights – Hidden insights from data are gathered and then analyzed with respect to business requirements.Generate Reports – Reports are generated from the data and are passed on to the respective teams and individuals to deal with further actions for a high rise in business.Perform Market Analysis – Market Analysis can be performed to understand the strengths and weaknesses of competitors.Improve Business Requirement – Analysis of Data allows improving Business to customer requirements and experience.Python is an open-source, object-oriented programming language that is easy to read, write, and maintain Microsoft Excel is one of the most widely used tools for data analytics Data analysts translate numbers into plain English.Can delivers value to their companies by taking information about specific topics &then interpreting, analyzing, & presenting findings in comprehensive reports. So, if you have the capability to collect data from various sources, analyze the data, gather hidden insights, and generate reports, then you can become a Data Analyst.

D.Divyasri
19RH1A05C2

3D printing technology in education

3D printing technology is to create products in a short time by printing three-dimensional digital files. It is similar to the way paper is printed in two dimensions, but it is different since it targets 3D products. The technology was developed to shorten the time to make prototypes. In general, it takes weeks for a company to produce a prototype after planning and designing the product. However, if the company uses 3D printing technology to produce prototypes, it can complete prototypes in just a few hours. It can also save a lot of money in producing prototypes. In fact, 3D printing technology was created 30 years ago. However, the technology was not popularized due to patent issues. Currently, the patents for 3D printing technology have expired. Therefore, 3D printing technology could be utilized in various fields. In practice, 3D printing technology is especially frequently used when cooking food. Also, it is widely used to produce small products such as ornaments. In particular, as 3D printing technology becomes important in the future, many educational institutions will be interested in 3D printing technology.

MEENI TARUNI
(19RH1A05B0)

BLOCKCHAIN TECHNOLOGY

Though the Blockchain Technology was invented in 1991, it was popularized by a person (or group of people) using the name Satoshi Nakamoto in 2008 to serve as the public transaction ledger of the cryptocurrency bitcoin, based on work by Stuart Haber, W. Scott Stornetta, and Dave Bayer. The identity of Satoshi Nakamoto remains unknown to date. A blockchain is a digital record of transactions. The name comes from its structure, in which individual records, called blocks, are linked together in single list, called a chain. Blockchains are used for recording transactions made with cryptocurrencies, such as Bitcoin, and have many other applications.Blockchain is the technology that underpins the cryptocurrency Bitcoin, but Bitcoin is not the only version of a blockchain distributed ledger system in the market. There are several other cryptocurrencies with their own blockchain and distributed ledger architectures.The blockchain is a chain of data blocks. Each block can be thought of as a page in a ledger. The individual blocks are composed of several components. Generally as block contains Hash, Data, Previous Hash. Hashing is the process of converting a given key into another value. The result of a hash function is known as a hash value or simply, a hash. A good hash function uses a one way hashing algorithm, or in other words, the hash cannot be converted back into the original key.Blockchain uses SHA 256 Hashing.Immutability, Provenance, Single Source of Truth, Standardization, Smart Contract are the properties of blockchain. Banking, Supply Chain Management, Luxury Goods/Limited Edition,Healthcare, Shared Economy- Private Transport and Ridesharing, Government Services are some of the Applications.

Samatha
19RH1A05D1

LICKABLE TELEVISION

The lickable television concept developed in Japan will allow viewers to taste food right from the screen. The lickable TV comes with a supposedly hygienic film that is laid over the screen on which flavors are sprayed. The device is called "Taste the TV" and was developed by a Japanese professor. The lickable television is developed by Meiji University professor Homei Miyashita who says that the television was built to help people experience food flavors from across the world while sitting in the comfort of their own home. The professor who works with a team of 30 students has developed multiple flavor related products including a fork that is supposed to help make the food taste better. He has also offered technology firms to use his spraying technique and develop products that can make toasted bread taste like a slice of pizza or chocolate. While this is just the prototype, this technology when commercially available can provide a unique sensory experience to its users. It can be used by culinary shows to teach students from across the world remotely.

H.Nikitha

19RH1A05D8

RECURRENT NEURAL NETWORKS(RNN)

A Recurrent Neural Network is a type of artificial neural network commonly used in speech recognition and natural language processing. Recurrent Neural Network recognize data's sequential characteristics and use patterns to predict next likely scenario. A recurrent neural network is an extension of a conventional feedforward neural network, which is able to handlea variable-length sequence input. The reason that RNN can handle time series is that RNN hasa recurrent hidden state whose activation at each time is dependent on that of the previoustime. Long short-term memory units are one type of RNN, which make each recurrent unit to adaptively capture dependencies of different time scales. LSTMs have cell and forget gate to modulate the flow of information. Recurrent neural networks leverage backpropagation through time algorithm to determine the gradients, which is slightly different from traditional backpropagation as it is specific to sequence data. The principles of BPTT are the same as traditional backpropagation, where the model trains itself by calculating errors from its output layer to its input layer. Recurrent neural networks are particularly good in the processing sequence of data, like music, audio, video, speech recognition, that is predicting the pattern in time series.A single time step of the input is provided to the network. Then calculate its current state using set of current input and the previous state. Once all the time steps are completed the final current state is used to calculate the output. The output is then compared to the actual output that is the target output and the error is generated. The error is then back- propagated to the network to update the weights and hence the network is trained.

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.   M . Laasya Reddy
                                                       19RH1A05H2

3D TELEVISION

3D television (**3DTV**) is television that conveys depth perception to the viewer by employing techniques such as stereoscopic display, multi-view display, 2D-plus-depth, or any other form of 3D display. Most modern 3D television sets use an active shutter 3D system or a polarized 3D system, and some are autostereoscopic without the need of glasses. As of 2017, most 3D TV sets and services are no longer available.

The future of 3D television is also emerging as time progresses. New technology like WindowWalls (wall-size displays) and Visible light communication are being implemented into 3D television as the demand for 3D TV increases. Scott Birnbaum, vice president of Samsung's LCD business, said that the demand for 3D TV would skyrocket in the next couple of years, fueled by televised sports (but this did not happen). One might be able to obtain information directly onto their television due to new technologies like the Visible Light Communication that allows for this to happen because the LED lights transmit information by flickering at high frequencies.

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K. Sreeja Rani
19RH1A05G3

IMPORTANT WEBSITES

www.ieee.org/india

www.engineering.careers360

https://www.coursera.org/in

https://www.udemy.com/

www.mathworks.in/products/matlab/

https://archive.org/details/texts

https://www.codecademy.com/

https://www.cse.org/

https://www.scribd.com/books

https://books.google.co.in/

MathGV.com/

http://www.engineeringchallenges.org/

https://www.lumosity.com/en/

http://elevateapp.com/

http://www.tryengineering.org/

http://www.engineergirl.org/

http://www.discoverengineering.org/

http://www.eng-tips.com/

http://efymag.com

http://efymagonline.com/

www.dspguide.com

https://www.engineer4free.com/

www.howstuffworks.com

http://nptel.iitm.ac.in

http://www.opencircuitdesign.com/

http://www.futuresinengineering.com/

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