SHRI RAM INSTITUTE OF TECHNOLOGY

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

CSE PULSE

News Letter 2020-21

BE SAFE FROM CORONA

Stay home stay safe. If you show symptoms of COVID-19, self isolate yourself, wear a mask around others and seek medical advice.

Stay positive. Avoid alarmist news. Be connected to friends and family. Have a hobby.

FUTURISTIC EDUCATION

WE WORK HARD TO ACHIEVE OUR GOALS

HOW ?

- Campus Placements
- Guest Lectures
- Events & Workshops
- FDP

Department of Computer Science & Engineering

VISION

Creating ethical leaders in the field of computational sciences by quality vocational education with an emphasis on comprehensive learning and excellence.

MISSION

M1. To provide qualitative education and generate new knowledge through effective teaching learning methodologies, resulting in careers as computer and IT professionals in the widely diversified fields of business, government and academia.

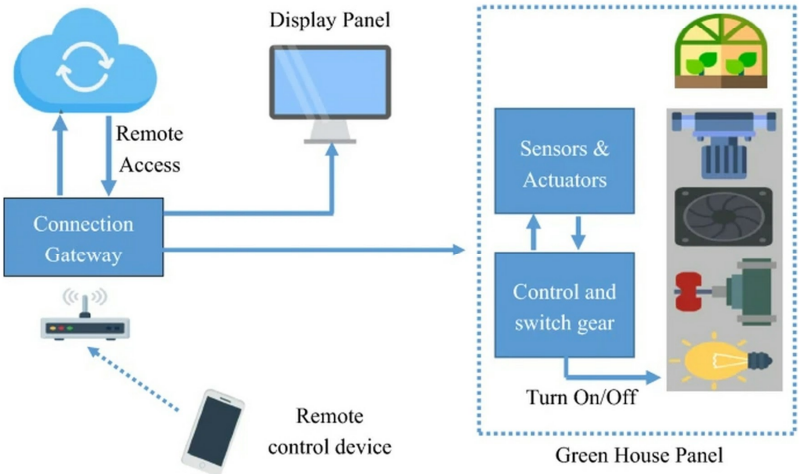
M2. To transform lives of the students by imparting ethical values, sustainable skills, creativity, and uniqueness in them, allowing them to become entrepreneurs and start businesses.

M3. To encourage students to learn about emerging technologies in order to continue higher education and lifelong learning

ARTICLE ON:

Internet of Things is a revolutionary approach for future technology enhancement

Internet of Things (IoT) is a new paradigm that has changed the traditional way of living into a high tech life style. Smart city, smart homes, pollution control, energy saving, smart transportation, smart industries are such transformations due to IoT. A lot of crucial research studies and investigations have been done in order to enhance the technology through IoT. However, there are still a lot of challenges and issues that need to be addressed to achieve the full potential of IoT. These challenges and issues must be considered from various aspects of IoT such as applications, challenges, enabling technologies, social and environmental impacts etc. The main goal of this review article is to provide a detailed discussion from both technological and social perspective. The article discusses different challenges and key issues of IoT, architecture and important application domains. Also, the article bring into light the existing literature and illustrated their contribution in different aspects of IoT. Moreover, the importance of big data and its analysis with respect to IoT has been discussed. This article would help the readers and researcher to understand the IoT and its applicability to the real world.



Recent advancements in IoT have drawn attention of researchers and developers worldwide. IoT developers and researchers are working together to extend the technology on large scale and to benefit the society to the highest possible level. However, improvements are possible only if we consider the various issues and shortcomings in the present technical approaches. In this survey article, we presented several issues and challenges that IoT developer must take into account to develop an improved model. Also, important application areas of IoT is also discussed where IoT developers and researchers are engaged. As IoT is not only providing services but also generates a huge amount of data. Hence, the importance of big data analytics is also discussed which can provide accurate decisions that could be utilized to develop an improved IoT system.

By. Poorvi Singh
(Student)

GUEST LECTURES

EXTRA CLASSES / TECHNICAL TALKS

Topic: Advanced Hashing Techniques

Subject: CS303 Data Structure
Date : 23-11-2020

Initiatives Taken to Address Curricular Gaps
The delivery of beyond syllabus content is to be done within the timeframe as prescribed in the University Academic Calendar. Few of the possible modes of delivery include
- Extra classes
- Guest lectures
- Technical talk

Dr. Nitesh Dubey
Professor
GNCGI Jabalpur

Topic: Strongly Connected Components

Subject: CS402 Analysis Design of Algorithm
Date : 17-05-2021

Initiatives Taken to Address Curricular Gaps
The delivery of beyond syllabus content is to be done within the timeframe as prescribed in the University Academic Calendar. Few of the possible modes of delivery include
- Extra classes
- Guest lectures
- Technical talk

Dr. Arun Upadhyay
Professor
Amity University Gwalior

Topic: Testing Tools

Subject: CS403 Software Engineering
Date : 18-05-2021

Initiatives Taken to Address Curricular Gaps
The delivery of beyond syllabus content is to be done within the timeframe as prescribed in the University Academic Calendar. Few of the possible modes of delivery include
- Extra classes
- Guest lectures
- Technical talk

Sushant Kumar
India Head
Tata Technology

Topic: Booting Process in OS

Subject: CS405 Operating Systems
Date : 19-05-2021

Initiatives Taken to Address Curricular Gaps
The delivery of beyond syllabus content is to be done within the timeframe as prescribed in the University Academic Calendar. Few of the possible modes of delivery include
- Extra classes
- Guest lectures
- Technical talk

Dr. Rajesh Dhoriya
Professor
NIT Raipur

Topic: Big Data Management

Subject: CS502 DBMS
Date : 21-11-2020

Initiatives Taken to Address Curricular Gaps
The delivery of beyond syllabus content is to be done within the timeframe as prescribed in the University Academic Calendar. Few of the possible modes of delivery include
- Extra classes
- Guest lectures
- Technical talk

Prof. Saurabh Singh
Professor
JEC Jabalpur

Topic: Introduction of Mining Rules

Subject: CS601 Machine Learning
Date : 17-05-2021

Initiatives Taken to Address Curricular Gaps
The delivery of beyond syllabus content is to be done within the timeframe as prescribed in the University Academic Calendar. Few of the possible modes of delivery include
- Extra classes
- Guest lectures
- Technical talk

Dr. R. K. Gupta
Professor
MITS Gwalior

Topic: Various Code Optimization Tech

Subject: CS603 (C) Compiler Design
Date : 18-05-2021

Initiatives Taken to Address Curricular Gaps
The delivery of beyond syllabus content is to be done within the timeframe as prescribed in the University Academic Calendar. Few of the possible modes of delivery include
- Extra classes
- Guest lectures
- Technical talk

Dr. Preeti Khanna
Professor
IIITDM Jabalpur

Topic: Categorization of Data Mining Rules

Subject: CS703 (B) DM&WH
Date : 22-11-2020

Initiatives Taken to Address Curricular Gaps
The delivery of beyond syllabus content is to be done within the timeframe as prescribed in the University Academic Calendar. Few of the possible modes of delivery include
- Extra classes
- Guest lectures
- Technical talk

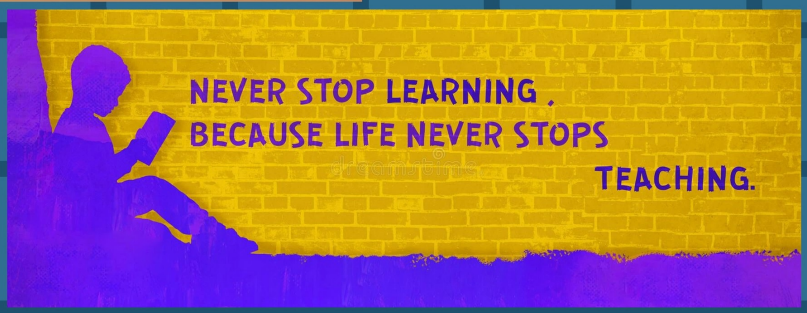
Dr. Vivek Badhe
Professor
JNKVV Jabalpur

Topic: New Security Issues in Cloud Computing

Subject: CS802 (B) Cloud Computing
Date : 27-05-2021

Initiatives Taken to Address Curricular Gaps
The delivery of beyond syllabus content is to be done within the timeframe as prescribed in the University Academic Calendar. Few of the possible modes of delivery include
- Extra classes
- Guest lectures
- Technical talk

Dr. Rajesh Shrivastava
Professor
Bennet University Noida



STUDENT'S ACHIEVEMENTS

SRIT

Our Students participate in various events all accross the globe and achieve their best.

EDUCATION IS OUR PASSPORT TO THE FUTURE, FOR TOMORROW BELONGS TO THE PEOPLE WHO PREPARE FOR IT TODAY

MALCOM X

S.NO.	NAME	VENUE	EVENT	ACHIEVEMENTS	DATE
1	PRADYUMNA RAJAK	Sai Ram Engineering College, Chennai	National Level CODE QUIZZARD 1.0(Virtual Quiz)	1ST POSITION	23 May 2021
2	SOURABH SONI	Sai Ram Engineering College, Chennai	National Level CODE QUIZZARD 1.0(Virtual Quiz)	3RD POSITION	23 May 2021
3	ARYAN PIDIHA	Sai Ram Engineering College, Chennai	National Level CODE QUIZZARD 1.0(Virtual Quiz)	Participated	23 May 2021
4	KRISHAN KANT SHARMA	Crescent Institute of Science & Technology, Vandalur, Tamil Nadu	Online Quiz Competition "Test your knowlwdge on Intellectual Property Rights"	PARTICIPATED	26 April 2021
5	MOHIT KUMAR	Crescent Institute of Science & Technology, Vandalur, Tamil Nadu	Online Quiz Competition "Test your knowlwdge on Intellectual Property Rights"	3RD POSITION	26 April 2021
6	MOHINI SONI	Malla Reddy Engineering College For WomenMaisammaguda, Telangana	MEDHA 2K21-PPT PRESENTATION	3rd position in Business Quiz competition	10th & 11th October 2020
7	KHUSHI BISEN	Malla Reddy Engineering College For WomenMaisammaguda, Telangana	MEDHA 2K21-PPT PRESENTATION	Best Speaker	10th & 11th October 2020
8	EKLAVYA PRASAD MAHATO	Malla Reddy Engineering College For WomenMaisammaguda, Telangana	MEDHA 2K21-PPT PRESENTATION	Participated	10th & 11th October 2020
9	ANKUR BIND	Malla Reddy Engineering College For WomenMaisammaguda, Telangana	MEDHA 2K21-PPT PRESENTATION	Participated	10th & 11th October 2020
10	ARYAN PIDIHA	Kalindi College	“Technophilia” 2020-21, "PAPER PRESENTATION	PARTICIPATED	6th October 2020
11	HARSH PANDEY	Kalindi College	“Technophilia” 2020-21, "PAPER PRESENTATION	PARTICIPATED	6th October 2020
12	AKSHAT MODI	Kalindi College,	“Technophilia” 2020-21, "PAPER PRESENTATION	3rd Best Paper	6th October 2020
13	CHANDAN SINGH	ADITYA GROUP OF INSTITIUTIONS, SATNA (M.P)	TECHNO QUIZ 2020, ONLINE QUIZ	PARTICIPATED	29th June to 6th July 2020
14	RITIK CHAKRAWARTY	ADITYA GROUP OF INSTITIUTIONS, SATNA (M.P)	TECHNO QUIZ 2020, ONLINE QUIZ	1ST POSITION	29th June to 6th July 2020
15	SAHIL NAIDU	ADITYA GROUP OF INSTITIUTIONS, SATNA (M.P)	TECHNO QUIZ 2020, ONLINE QUIZ	2nd POSITION	29th June to 6th July 2020

CAMPUS PLACEMENT RECORD

accenture High performance. Delivered. 4

cognizant 2

Capgemini 2

Deloitte. 1

amdocs 12

DXC TECHNOLOGY 1

HCL 3

ERICSSON 1

Atos GLOBAL 1

HSBC 1

IMPETUS 1

Infosys 5

Blitzpath Innovations Transform with Innovation 1

Persistent See Beyond, Rise Above 4

SrcomSoft 21

TATA CONSULTANCY SERVICES tcs 11

Tech Mahindra 1

WIPRO Applying Thought 2

XCEEDANCE 1

YARDI 1

TECHNO TASK Takes you to the next level... 16

ARTICLE ON:
Using deep learning to detect digitally encoded DNA trigger for Trojan malware in Bio□Cyber attacks

This article uses Deep Learning technologies to safeguard DNA sequencing against Bio-Cyber attacks. We consider a hybrid attack scenario where the payload is encoded into a DNA sequence to activate a Trojan malware implanted in a software tool used in the sequencing pipeline in order to allow the perpetrators to gain control over the resources used in that pipeline during sequence analysis. The scenario considered in the paper is based on perpetrators submitting synthetically engineered DNA samples that contain digitally encoded IP address and port number of the perpetrator's machine in the DNA. Genetic analysis of the sample's DNA will decode the address that is used by the software Trojan malware to activate and trigger a remote connection. This approach can open up to multiple perpetrators to create connections to hijack the DNA sequencing pipeline. As a way of hiding the data, the perpetrators can avoid detection by encoding the address to maximise similarity with genuine DNAs, which we showed previously. However, in this paper we show how Deep Learning can be used to successfully detect and identify the trigger encoded data, in order to protect a DNA sequencing pipeline from Trojan attacks. The result shows nearly up to 100% accuracy in detection in such a novel Trojan attack scenario even after applying fragmentation encryption and steganography on the encoded trigger data. In addition, feasibility of designing and synthesizing encoded DNA for such Trojan payloads is validated by a wet lab experiment.

By. Monika Thakur
(Student - 5th Sem)

ARTICLE ON:
THE EFFECTS OF COMPUTER AND INFORMATION TECHNOLOGY ON EDUCATION

In the society of ours, is it true really that computers and information technology have contributed immensely to the way we learn? After observing and reading various educational paraphernalia and scanning the environment research has shown that the educational systems have greatly been impacted by computers and information technology. With the growth of technology, the ways we learn have been improved tremendously. Innovative technologies have contributed to the innovation of learning in the education arena and outside. The traditional ways of conveying instructions to learners have been augmented with the use of computers information technologies. The educational system of our institutions is mandated today to using computer technologies to teach. All subjects, be it History, Physics, Chemistry, Biology, English, Aviation, Real Estate, Economics, Political Science, Engineering, Business and the subject of Computer Science itself are being taught with the usage of computer technologies. It has come to past that traditional modes of conveying instructions and teaching are now opaque or in the dark perspectives. By using computers and information technologies in educating the populace, they allow us to convey instructions and ideas to people. It is found that globalization of technology entities comprising the learning processes is the configuration of computers in the facts. In education, computers are now being used to project information to people in the classrooms, churches, conference halls, homes, on the street and anywhere or any place education takes place. One can learn anywhere or anyplace, therefore the use of technology is a vigorous way of making things simple, ease and readily available.

By. Neha Patel
(Student -6th Sem)

ARTICLE ON:
Wireless Communication in Data Centers: A Survey

Data centers (DCs) is becoming increasingly an integral part of the computing infrastructures of most enterprises. Therefore, the concept of DC networks (DCNs) is receiving an increased attention in the network research community. Most DCNs deployed today can be classified as wired DCNs as copper and optical fiber cables are used for intra- and inter-rack connections in the network. Despite recent advances, wired DCNs face two inevitable problems; cabling complexity and hotspots. To address these problems, recent research works suggest the incorporation of wireless communication technology into DCNs. Wireless links can be used to either augment conventional wired DCNs, or to realize a pure wireless DCN.

As the design spectrum of DCs broadens, so does the need for a clear classification to differentiate various design options. In this paper, we analyze the free space optical (FSO) communication and the 60 GHz radio frequency (RF), the two key candidate technologies for implementing wireless links in DCNs. We present a generic classification scheme that can be used to classify current and future DCNs based on the communication technology used in the network. The proposed classification is then used to review and summarize major research in this area. We also discuss open questions and future research directions in the area of wireless DCs.

By.Shamil Tiwari
(Student - 3rd Sem)

ARTICLE ON:
Security,Trust and Privacy for Cloud, Fog and Internet of Things

Internet ofings (IoT) is a promising networking scenario in the cyber world, bridging physical devices and virtual objects. By considering the limited capacity of smart things, cloud computingisgenerally applied to store andprocess the massive data collected by the IoT. Furthermore, fog computing is described as an extension and a complement to cloud computing. It utilizes fog nodes to perform storage, computation, and communication locally.e merging of cloud/fog computing and IoTcan be seen as the best of two worlds by concurrently offering ubiquitous sensing services and powerful processing capabilities.

Despite the advantages of cloud/fog-assisted IoT, it is unwise to neglect the significance of security and privacy in this highly heterogeneous and interconnected system. Various solutions have recently been put forward independently for cloud, fog, or IoT environments to deal with security threats to IoTdevices and sensitive data. However, a few crucial features, such as heterogeneity and scalability, have not been appropriately considered in these solutions. is Special Issue aims to compile recent research efforts dedicated to studying the security and privacy of rapidly increasing cloud/fog-assisted IoT applications. A summary of all the accepted papers is provided as follows.

By. Gayatri Gamini
(Student -8th Sem)

Editorial Board for A.Y. 2020-2021

COMMITTEE

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Student Editor	**Gayatri Gamini**
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