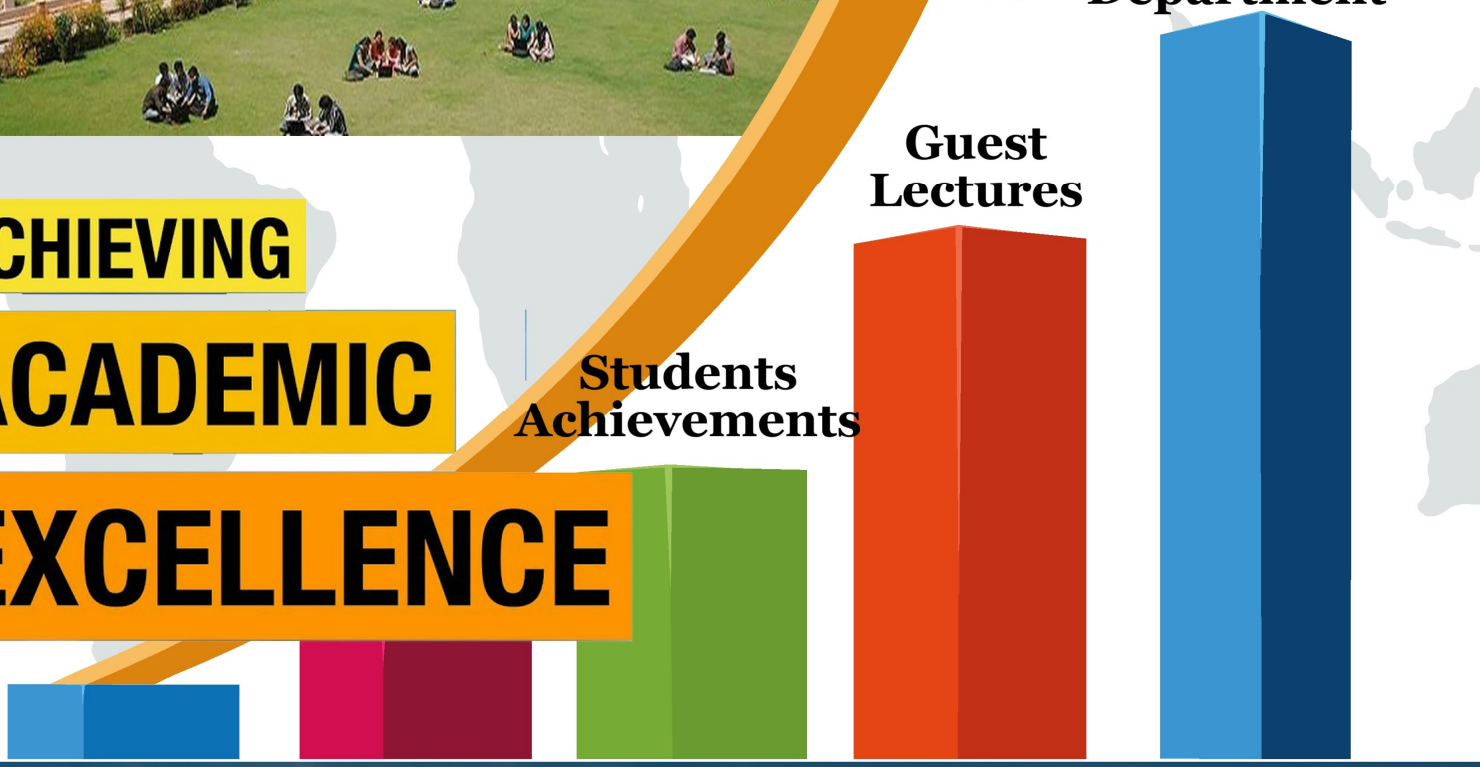
SHRI RAM INSTITTUTE OF TECHNOLOGY

Department of Computer Science & Engineering

NEWS LETTER **2019-20**

CONGRATULATIONS!

ACHIEVING ACADEMIC EXCELLENCE



~TOPICS OF INTEREST

CSE PULSE

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:

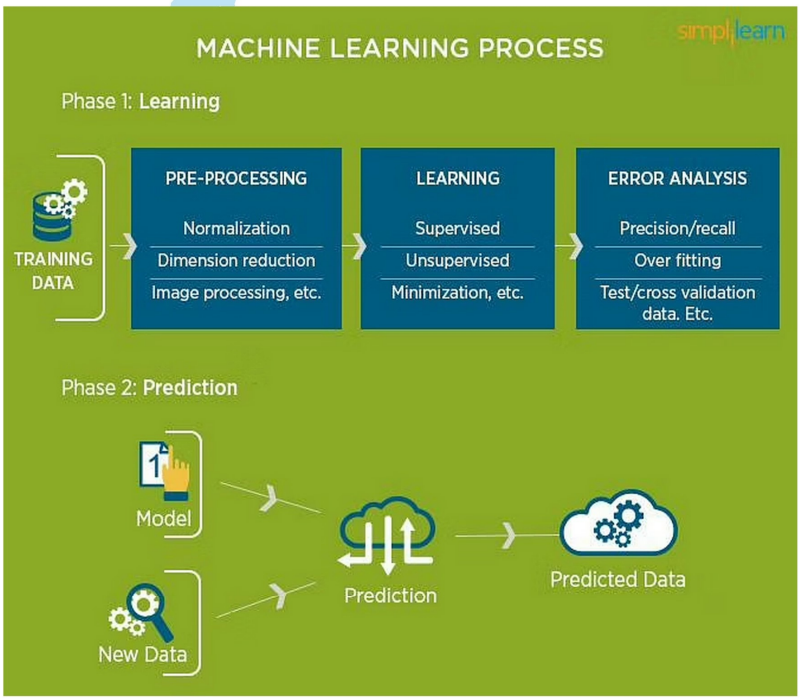
What Is Machine Learning and How Does It Work?

Machine Learning is, undoubtedly, one of the most exciting subsets of Artificial Intelligence. It completes the task of learning from data with specific inputs to the machine. It's important to understand what makes Machine Learning work and, thus, how it can be used in the future.

The Machine Learning process starts with inputting training data into the selected algorithm. Training data being known or unknown data to develop the final Machine Learning algorithm. The type of training data input does impact the algorithm, and that concept will be covered further momentarily.

New input data is fed into the machine learning algorithm to test whether the algorithm works correctly. The prediction and results are then checked against each other.

If the prediction and results don't match, the algorithm is re-trained multiple times until the data scientist gets the desired outcome. This enables the machine learning algorithm to continually learn on its own and produce the optimal answer, gradually increasing in accuracy over time.



To better answer the question :what is machine learning" and understand the uses of Machine Learning, consider some of the applications of Machine Learning: the self-driving Google car, cyber fraud detection, and online recommendation engines from Facebook, Netflix, and Amazon. Machines make all these things possible by filtering useful pieces of information and piecing them together based on patterns to get accurate results.

The rapid evolution in Machine Learning (ML) has caused a subsequent rise in the use cases, demands, and the sheer importance of ML in modern life. Big Data has also become a well-used buzzword in the last few years. This is, in part, due to the increased sophistication of Machine Learning, which enables the analysis of large chunks of Big Data. Machine Learning has also changed the way data extraction and interpretation are done by automating generic methods/algorithms, thereby replacing traditional statistical techniques.

By.Shrishti
(Student)

Guest Lectures / Techinal Talk / Extra Classes

The Department of Computer Science and Engineering has a great ecosystem of meritorious students, competent faculty and high end infrastructure for creating a conducive environment for academics and research. This facilitates the nurturing of students for holistic development.

Topic: Advanced Hashing Techniques

Subject: CS303 Data Structure
Date : 14-11-2019

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: CS4004 Analysis Design of Algorithm
Date : 06-05-2020

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. Arun Upadhyay
Professor
Amity University Gwalior

Topic: Booting Process in OS

Subject: CS5002 Operating Systems
Date : 15-11-2019

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: CS5003 DBMS
Date : 16-11-2019

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: Testing Tools

Subject: CS6003 Software Engineering
Date : 8-06-2020

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

Sushant Kumar
India Head
Tata Technology

Topic: New Security Issues in Cloud Computing

Subject: CS8002 Cloud Computing
Date : 11-06-2020

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. Rajesh Shrivastava
Professor
Bennet University Noida

CAMPUS PLACEMENTS

Department of Computer Science & Engineering

CHECKOUT OUR LATEST CAMPUS PLACEMENT RECORDS

SN	COMPANY NAME	NO OF PLACEMENT
1.	ACCENTURE	1
2.	CAPGEMINI	3
3.	C-CORE	2
4.	CLOUD GARAGE	1
5.	COGNIZANT	3
6.	DELOITTE	3
7.	DXC	2
8.	EDGEVERVE INFOSYS	1
9.	GAMMATACK	1
10.	HCL	7
11.	HEALTHIFYME WELLNESS PRIVATE LIMITED	1
12.	HEXAWARE	1
13.	HSBC	3
14.	IBM	1
15.	INFOCEPT	2
16.	INFOSYS	12
17.	JIO	3
18.	MARLABS	1
19.	PERSISTENT	5
20.	RECTITUDE CONUTING ERVICE PVT MT	1
21.	SRCOMSOFT	8
22.	SYSTEMATIX	4
23.	TCS	8
24.	TECH MAHINDRA	1
25.	TECHNO TASK	5
26.	TESTYANTRA SOFWARE SOLUTION	1
27.	WIPRO	1

HARD WORK PAYS OFF

STUDENT'S ACHIEVEMENTS

S.No.	NAME	VENUE	EVENT	ACHIEVEMENTS
1	KHUSHI BISEN	Jabalpur Engineering College, Jabalpur	AUREOLE 2020, Techno Cultural Fest	3rd position Technical Quiz
2	LAXMI SINGH	Global Nature Care Sangathan's Group of Institutions, Faculty of Engineering and Management	Srijan-2020, Mobile App Development, Srijan-2020, GNCSGI, Jabalpur	1st Position
3	VIKRAM SINGH	Global Nature Care Sangathan's Group of Institutions, Faculty of Engineering and Management	Srijan-2020, Mobile App Development, Srijan-2020, GNCSGI, Jabalpur 2nd Position 03-Mar-2020	2nd Position
4	GOURAV CHOURASIYA	Global Nature Care Sangathan's Group of Institutions, Faculty of Engineering and Management	Srijan-2020, Mobile App Development, Srijan-2020, GNCSGI, Jabalpur 3rd Position 03-Mar-2020.	3rd Position
5	AKSHAT MODI	Gyan Ganga Group Of Institutions, jabalpur	GYANOTSAV 2020, Trivia Quiz	PARTICIPATED
6	KHUSHI BISEN	Gyan Ganga Group Of Institutions, jabalpur	GYANOTSAV 2020, Trivia Quiz	PARTICIPATED
7	KRISHNA SONI	Gyan Ganga Group Of Institutions, jabalpur	GYANOTSAV 2020, Trivia Quiz	PARTICIPATED
8	RITIK CHAKRAWARTY	isec2020iiit jabalpur	PAPER PRESENTATION	PARTICIPATED
9	MOHINI SONI	isec2020iiit jabalpur	PAPER PRESENTATION	PARTICIPATED
10	ARYAN PIDIHA	INDIAN INSTITUTE OF INFORMATION TECHNOLOGY, DESIGN & MANUFACTURING, JABALPUR	INVICTA 2020 techno-cultural design fest	3rd position in programming contest
11	SUJOY BOSE	AAWAHAN JEC JBP	CRICKET TOURNAMENT	1ST POSITION
12	HARSH PANDEY	AAWAHAN JEC JBP	CRICKET TOURNAMENT	1ST POSITION
13	CHANDAN SINGH	AAWAHAN JEC JBP	Softball Championship	3RD POSITION

ARTICLE ON:
A lightweight DDoS detection scheme under SDN context

Software-defined networking (SDN), a novel network paradigm, separates the control plane and data plane into different network equipment to realize the flexible control of network traffic. Its excellent programmability and global view present many new opportunities. DDoS detection under the SDN context is an important and challenging research field. Some previous works attempted to collect and analyze statistics related to flows, usually recorded in switches, to address DDoS threats. In contrast, other works applied machine learning-based solutions to identify DDoS and achieved promising results. Generally, most previous works need to periodically request flow rules or packets to obtain flow statistics or features to detect stealthy exceptions. Nevertheless, the request for flow rules is very time-consuming and CPU-consuming; moreover may congest the communication channel between the controller and the switches.

Therefore, we present FORT, a lightweight DDoS detection scheme, which spreads the rule-based detection algorithm at edge switches and determines whether to start it by periodically retrieving the ports state. A time-series algorithm, ARIMA, is utilized to determine the port statistics adaptively, and an SVM algorithm is applied to detect whether a DDoS attack does occur. Representative experiments demonstrate that FORT can significantly reduce the controller load and provide a reliable detection accuracy. Referring to the false alarm rate of 1.24% in the comparison scheme, the false alarm rate of this scheme is only 0.039%, which significantly reduces the probability of false alarm. Besides, by introducing the alarm mechanism, this scheme can reduce the load of the southbound channel by more than 60% in the normal state.

By.Poorvi Singh
(Student - 5th Sem)

ARTICLE ON:
Why we need any sort of data structure?

Nowadays, with the development of new processors, computer systems, handling a large number of data records with our normal computers is not a complex or exhaustive task. But, when it comes to certain unpredictive conditions based on a few criteria like data size, retrieval speed, and multi-thread processing we should focus on implementing a proper data structure for the given scenario.

The simple definition for the data structure is that “different ways of storing data on your computer” or “the systematic way of representing and organizing your data”. Importantly, any data structure should be able to use efficiently for any given task. for instance, search, transform data, edit, update, etc.Every data structure comprises its interface that the operations that support by the given data structure. Similarly, there should be a correct implementation of the data structure based on the correct interface. Ideally, a data structure should come with a correctly defined interface and descriptive implementation.

Imagine that you are implementing a simple text search based on a big text corpus with more than millions of records. If you are trying to process data objects parallelly and if your execution time should not exceed sub milliseconds. The properly designed data structure will help you to achieve those types of tasks in an efficient manner.

By. Khushboo Lodhi
(Student -7th Sem)

Editorial Board for A.Y. 2019-2020

Faculty Editor	**Mr. Brajesh Patel**
Student Editor	**Lavpreet Singh**
Faculty Members	**Mr.Nagendra Singh, Mr. Deepak Kurmi, Ms. Sweta Kriplani**
Students Members	**Shrishti Modi, Poorvi Singh, Abhay, Manas Parey**