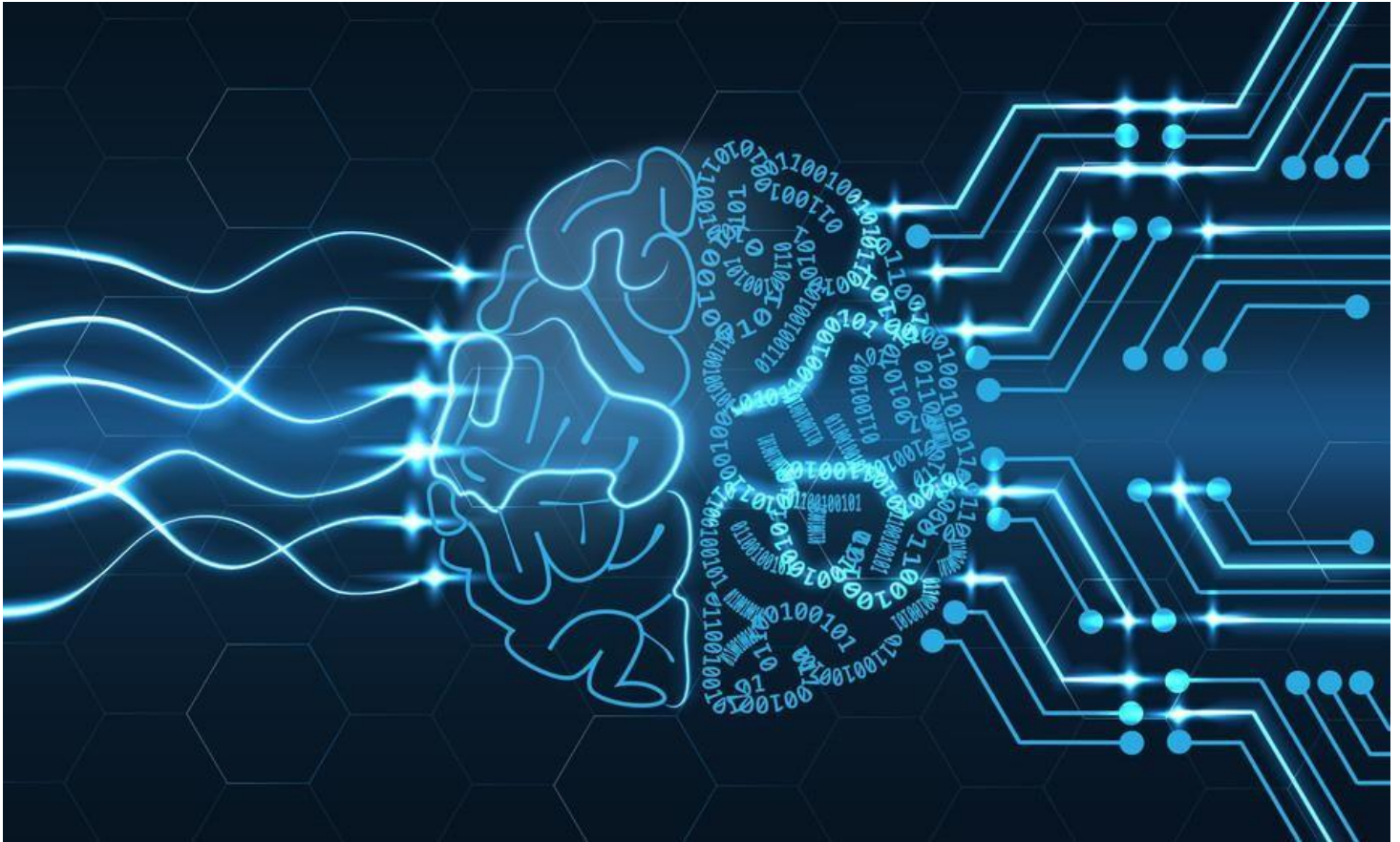# 'Boot' For Computer
Best of Outstanding Technology

Department of Computer Science & Engineering Institute of Engineering and Science

IPS Academy, Indore

2019-20

Part A

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Part B

HOD Message

Today we find that information technology has become overwhelmingly pervasive, while its parent, computing science, has become correspondingly hard to find. While many CS educational institutions have shifted focus from core CS. This is the single most important attribute of the education offered here. Our department has remained true to the vision on which it was founded.

There are several ways to present the canonical core of computer science. Over the years we have developed a distinct style and method that bridges the theory - practice divide while remaining grounded in the core. Technology changes rapidly, especially in the field of computing, whereas the science, if it changes at all, does so much more gradually. Our understanding is that persons who are clear and thorough about the fundamentals can adapt to rapid changes in technology relatively easily. We want the education imparted to our students to be the basis of a life time of learning.

Our Department has produced hundreds of professionals and has established a name for itself in the country and abroad. They have consistently excelled in the highly competitive industrial environment, Best Employer/ awards in top-ranking companies. I attribute this success to the winning combination of a dedicated faculty that works hard at imparting quality education, a well-planned syllabus and last but not the least, our students.

Learning is a continuous process and does not end with the acquisition of a degree, especially because steady and rapid advances in computing technologies shorten the life of tools and techniques prevalent today. Therefore we do not aim to make our students walking manuals of any language or package. Instead, they are given a strong foundation in computer science and problem-solving techniques and are made adaptable to changes.

We believe that this approach to teaching-learning, coupled with practical experience gained during Industrial Training in reputed organizations, equips our students to handle the challenges posed by the software industry.

Dr. Namrata Tapaswi
Professor & Head CSE Department
IPS Academy, Institute of Engineering & Science, Indore

Editorial

'BOOT' For Computer

Session 2018-19

E-Magazine Faculty Coordinator

Dr. Pratik Gite
Mr. Anil Panwar
Mr. Sumit Jain

E Magzine Student Editorial Board

[1] Aarushi Jain

[2] Utkarsh Shrotriya

[3] Ms. Rucita Atre

Programme Education Objectives

The educational objectives of the Computer Science & Engineering programs are as follows:

1. To prepare students for successful careers in software industry that meet the needs of Indian and multinational companies.

2. To develop the skills among students to analyze real world problem & implement with computer engineering solution and in multidisciplinary projects.

3. To provide students with solid foundation in mathematical, scientific and engineering fundamentals to solve engineering problems and required also to pursue higher studies.

4. To develop the ability to work with the core competence of computer science & engineering i.e. software engineering, hardware structure & networking concepts so that one can find feasible solution to real world problems

5. To inseminate in student's professional and ethical attitude, effective communication skills, team work skills, multidisciplinary approach, and an ability to relate engineering issues to broader social context.

6. To motivate students perseverance for lifelong learning and to introduce them to professional ethics and codes of professional practice

Programme Outcomes

An engineering program defines a set of specific program outcomes that relate to its educational objectives, including the items a-k listed below. We regularly review the courses in our curriculum to make sure that all these items are covered, and try to measure whether our students are successfully attaining the following goals:

PO1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3.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.

PO4. 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.

PO5. 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.

PO6. 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.

PO7. 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.

PO8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10. 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.

PO11. 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.

PO12. 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

CSE Department Information

Name and address of the department:

Department of Computer Science & Engineering
Institute of Engineering and Science, IPS Academy
Knowledge Village
Rajendra Nagar, A.B.Road, Indore (M.P) PIN-452012

Head of the Department

Dr. Namrata Tapaswi
HOD, Computer Science & Engineering
Phone: 0731- 4014853
e-mail: hod.compsc@ipsacademy.org

History of the department:

The Department of Computer Science & Engineering was established in the year 1999 offering Bachelor of Engineering (BE) with intake 60, it was increased to 120 in year 2012 and again intake was increased to 180 in year 2014. The programme is intended to educate students on the applications of scientific knowledge for practical purposes involving activities like modeling, analysis, design and other associated fields of core courses in Computer Science & Engineering education. It intends to equip graduates with profound theoretical knowledge and rich hands on experience.

Vision & Mission of the Department

Vision

Attaining global recognition in computer science and engineering education, research and training to meet the growing needs of the industry and society

Mission

Provide quality undergraduate and postgraduate education, in both the theoretical and applied foundations of computer science, and train students to effectively apply this education to solve real-world problems, thus amplifying their potential for lifelong high-quality careers.

Department Faculty Details

Dr. Namrata Tapaswi HOD & Professor	Mr.Jayesh Gangarade Associate Professor	Mr. Arvind Upadhyay Associate Professor	Mr.Neeraj Shrivastava Associate Professor
Mr. Sunil Nimawat Assistant Professor	Mr.Sourabh Jain Assistant Professor	Mr. Kamal Borana Assistant Professor	Mr.Sumit Devray Assistant Professor
Mr.Deepak Shukla Assistant Professor	Ms.Nisha Bhalse Assistant Professor	Ms.Shweta Gangrade Assistant Professor	Mr.Vijay Choudhary Assistant Professor

Mr.Yagyapal Yadav Assistant Professor	Mr.Neeraj Mehta Assistant Professor	Mr.Ved Kumar Gupta Assistant Professor	Ms.Anjali Verma Assistant Professor
Mr. Anil Panwar Assistant Professor	Ms.Barkha Sahu Assistant Professor	Ms.Vaishali Gupta Assistant Professor	Mr.Sudhir Kumar Patidar Assistant Professor
Mr.Pratik Jain Assistant Professor	Mr. Ajay Jaiswal Assistant Professor	Mr. Pankaj Pateriya Assistant Professor	Mr. Prateek Nahar Assistant Professor

Ms. Nitu Mathuriya Assistant Professor	Dr. Pratik Gite Assistant Professor	Ms. Priyanka Vijayvargiya Assistant Professor	Mr. Sunny Bagga Assistant Professor
Ms. Purnima Pandey Assistant Professor	Mr.Dharmendra Gupta Assistant Professor	Mr. Dharmendra Choukse Senior Programmer	Ms. Archana Aapte System Analyst
Mr. Mayur Rathi Assistant Professor	Mr. Sumit Jain Assistant Professor	Mr. Vishal Chabra Assistant Professor	Mr. Anshul Oza Assistant Professor

Ms. Shaifali Agrawal
Assistant Professor

Mr. Somil Neema
Assistant Professor

Ms. Neha Sharma
Assistant Professor

Ms. Ankita Chourasia
Assistant Professor

Departmental Events

(A)   Faculty Development Programs Organized.

S. No	DATE		Title/Topic	No of Participants	No of Days	Organized by Department
	From dd/mm/yyyy	**To** dd/mm/yyyy				
1	22/06/2020	27/06/2020	R	38	06	Computer Science & Engineering
2	22/06/2020	27/06/2020	Basic Computer Skill	09	06	Computer Science & Engineering
3	09/06/2020	13/06/2020	Linux	34	05	Computer Science & Engineering
4	24/04/2020	30/04/2020	RDBMS PostgreSQL	48	06	Computer Science & Engineering
5	15/01/2020	15/01/2020	Prezi	56	01	Computer Science & Engineering
6	23/12/2019	04/01/2020	Machine Learning	40	12	Computer Science & Engineering
7	02/12/2019	07/12/2019	Refresher Course PYTHON	37	06	Computer Science & Engineering
8	09/07/2019	13/07/2019	Angular 8 + Node JS	36	05	Computer Science & Engineering

(B) Seminar Organized
(C)

S. No	DATE		Title/Topic	No of Participants	No of Days	Organized by Department
	From dd/mm/yyyy	**To** dd/mm/yyyy				
1	29/04/2020	29/04/2020	IT Industry Culture	110	01	Computer Science & Engineering
2	19/10/2019	19/10/2019	Envisage-2019 Essentials Attributes of Good Software Professionals	2000	01	Computer Science & Engineering
3	24/09/2019	24/09/2019	Higher Education	49	01	C.S.E.

S. No	From dd/mm/yyyy	To dd/mm/yyyy	Title/Topic	No of Participants	No of Days	Organized by Department
4	19/09/2019	19/09/2019	Higher Education	97	01	Computer Science & Engineering
5	18/09/2019	18/09/2019	Placement & Career Guidance	50	01	Computer Science & Engineering
6	07/09/2019	07/09/2019	Entrepreneurship	108	01	Computer Science & Engineering
7	03/09/2019	03/09/2019	Programming in C/C++	112	01	Computer Science & Engineering
8	29/08/2019	29/08/2019	Programming in C/C++	116	01	Computer Science & Engineering
9	28/08/2019	28/08/2019	Programming in C/C++	164	01	Computer Science & Engineering
10	26/08/2019	26/08/2019	Programming in C/C++	107	01	Computer Science & Engineering
11	22/08/2019	22/08/2019	Programming in C/C++	64	01	Computer Science & Engineering

(C)   Workshop Organized

S. No	DATE		Title/Topic	No of Participants	No of Days	Organized by Department
	From dd/mm/yyyy	To dd/mm/yyyy				
1	29/02/2020	29/02/2020	C&C++	21	01	Computer Science & Engineering
2	02/12/2019	02/12/2019	World Computer Literacy Day Computer Awareness	65	01	Computer Science & Engineering
3	02/12/2019	02/12/2019	World Computer Literacy Day Computer Awareness	120	01	Computer Science & Engineering
4	18/09/2019	18/09/2019	python	125	01	Computer Science & Engineering
5	16/09/2019	18/09/2019	Entrepreneurship Awareness Camp	149	03	Computer Science & Engineering
6	12/09/2019	14/09/2019	Entrepreneurship Awareness Camp	134	03	Computer Science & Engineering

S. No	From dd/mm/yyyy	To dd/mm/yyyy	Topic	No of Participants	No of Days	Organized by Department
7	37/08/20 19	31/08/20 19	Ethical Hacking	56	01	Computer Science & Engineering
8	27/08/20 19	27/08/20 19	Ethical Hacking	165	01	Computer Science & Engineering
9	27/08/20 19	27/08/20 19	Ethical Hacking	111	01	Computer Science & Engineering
10	27/08/20 19	27/08/20 19	PYTHON	94	01	Computer Science & Engineering

(D) Expert Lectures Organized

S. No	From dd/mm/yyyy	To dd/mm/yyyy	Topic	Expert	No of Participants	No of Days	Organized by Department
1	25/09/20 19	25/09/20 19	Programming	Mr. Gourav Dodiya, Universal Informatics Indore	100	01	Computer Science & Engineering
2	20/09/20 19	20/09/20 19	Programming	Mr. Vilekh Adawadkar, Universal Informatics Indore	106	01	Computer Science & Engineering
3	18/09/20 19	18/09/20 19	Aptitude & English	Mr. Sandeep Atre, ChEdge Maker, Indore	105	01	Computer Science & Engineering
4	17/09/20 19	17/09/20 19	Aptitude & English	Mr. Sandeep Atre, ChEdge Maker, Indore	75	01	Computer Science & Engineering
5	11/09/20 19	11/09/20 19	Aptitude & English	Mr. Sandeep Atre, ChEdge Maker, Indore	114	01	Computer Science & Engineering
6	30/08/20 19	30/08/20 19	Programming in JAVA	Mr. Gaurav Agrawal, Programmers Point, Indore	52	01	Computer Science & Engineering

S. No.	From dd/mm/yyyy	To dd/mm/yyyy	Particulars		No of Participants	No of Days	Organized by Department
7	30/08/2019	30/08/2019	ORA	Mr. Divyansh Singh, Innovative Business Solution, Bhopal	142	01	Computer Science & Engineering
8	29/08/2019	29/08/2019	Programming in JAVA	Mr. Mayank Sharma, AMStech, Indore	99	01	Computer Science & Engineering
9	28/08/2019	28/08/2019	Programming in JAVA	Mr. Gaurav Agrawal, Programmers Point, Indore	114	01	Computer Science & Engineering
10	27/08/2019	27/08/2019	Programming Concepts	Mr. Abhishek Verma, Code Mantra, Indore	169	01	Computer Science & Engineering
11	26/08/2019	26/08/2019	Programming in JAVA	Mr. Gaurav Agrawal, Programmers Point, Indore	142	01	Computer Science & Engineering
12	24/08/2019	24/08/2019	Programming Skill	Mr. Gaurav Agrawal, Programmers Point, Indore	136	01	Computer Science & Engineering

(E) Industrial Visits Organized

S. No.	Date From dd/mm/yyyy	To dd/mm/yyyy	Particulars	No of Participants	No of Days	Organized by Department
1	18/09/2019	18/09/2019	Amstech Incorporation Pvt. Ltd., Indore	149	01	Computer Science & Engineering
2	13/09/2019	13/09/2019	Amstech Incorporation Pvt. Ltd., Indore	134	01	Computer Science & Engineering

(F)   Industrial Tours Organized

S. No.	DATE From dd/mm/yyyy	To dd/mm/yyyy	Particulars	No of Participants	No of Days	Organized by Department
1	09/08/2019	16/08/2019	Indore-Chandigarh-Manali C-DAC, A-34, Industrial Area, PHASE-VIII, Mohali	72	08	Computer Science & Engineering

(G)   Trainings Organized

S. No.	DATE		Title / Topic	No of Participants	No of Days	Organized by Department
	From dd/mm/yyyy	To dd/mm/yyyy				
1	17/06/2019	17/07/2019	Advanced JAVA	91	30	Computer Science & Engineering
2	17/06/2019	17/07/2019	Angular 8 + Node JS	62	30	Computer Science & Engineering
3	17/06/2019	17/07/2019	Internet of Things	20	30	Computer Science & Engineering
4	17/06/2019	09/07/2019	C & C++	10	20	Computer Science & Engineering
5	17/06/2019	09/07/2019	JAVA	25	20	Computer Science & Engineering

(H)   Other Events Organized

S. No.	Date		Title	Details	No of Participants	No of Days	Organized by Department
	From dd/mm/yyyy	To dd/mm/yyyy					
1	13/06/2020	13/06/2020	Webinar	JAVA 8	180	01	Computer Science & Engineering
2	15/04/2020	15/04/2020	Udaan'2020	Minor Project Competition Cum Exhibition	177	01	Computer Science & Engineering
3	14/04/2020	14/04/2020	Udaan'2020	Major Project Competition Cum Exhibition	179	01	Computer Science & Engineering
4	19/10/2019	19/10/2019	TECH-QUIZ-ME	Quiz	36	01	Computer Science & Engineering
5	19/10/2019	19/10/2019	FIFA	Game	56	01	Computer Science & Engineering
6	19/10/2019	19/10/2019	ONE REEL	Videography	13	01	Computer Science & Engineering

|						
7	19/10/2019	19/10/2019	Sarcastic Mind	Meme Creation	28	01	Computer Science & Engineering
8	19/10/2019	19/10/2019	Dazzle Coding	Coding Competion	98	01	Computer Science & Engineering
9	19/10/2019	19/10/2019	Web Pirates	Quiz	188	01	Computer Science & Engineering
10	19/10/2019	19/10/2019	Jyostick Junkies	Game	241	01	Computer Science & Engineering
11	19/10/2019	19/10/2019	ROBO RAGE	Robot race	35	01	Computer Science & Engineering

Membership of Professional Societies

Department of Computer science & engineering is having the membership of Computer society of India (CSI). Programs were organized under the banner of CSI in the Department.

Placements

Total numbers of placements offered in year 2019-20 are 174. Name of the company for placement are Infosys, Amdocs, Hidden brains Infotech, TCS, AVL Pvt. Ltd, Verdantis, Benfie Consultancy Pvt. Ltd., Best Peers, Byju's, Hidden brains Infotech, HSBC Software Technologies, Cash Karo, CIS, ClearTrail, Collabera, Process Master Technologies Pvt. Ltd, Global Shiksha Pvt. Ltd, I-Lead, InnoEye, Masu Tech, Jaro Education, Moneyites Global, NIIT Technologies, Relaince Jio, Yardi Software, Tudip, Zensar, Yash Technologies, World Pay, Newgen Software,Wipro Limited, Xorient Solutions Pvt. Ltd. etc.

PLACEMENT 2019-2020
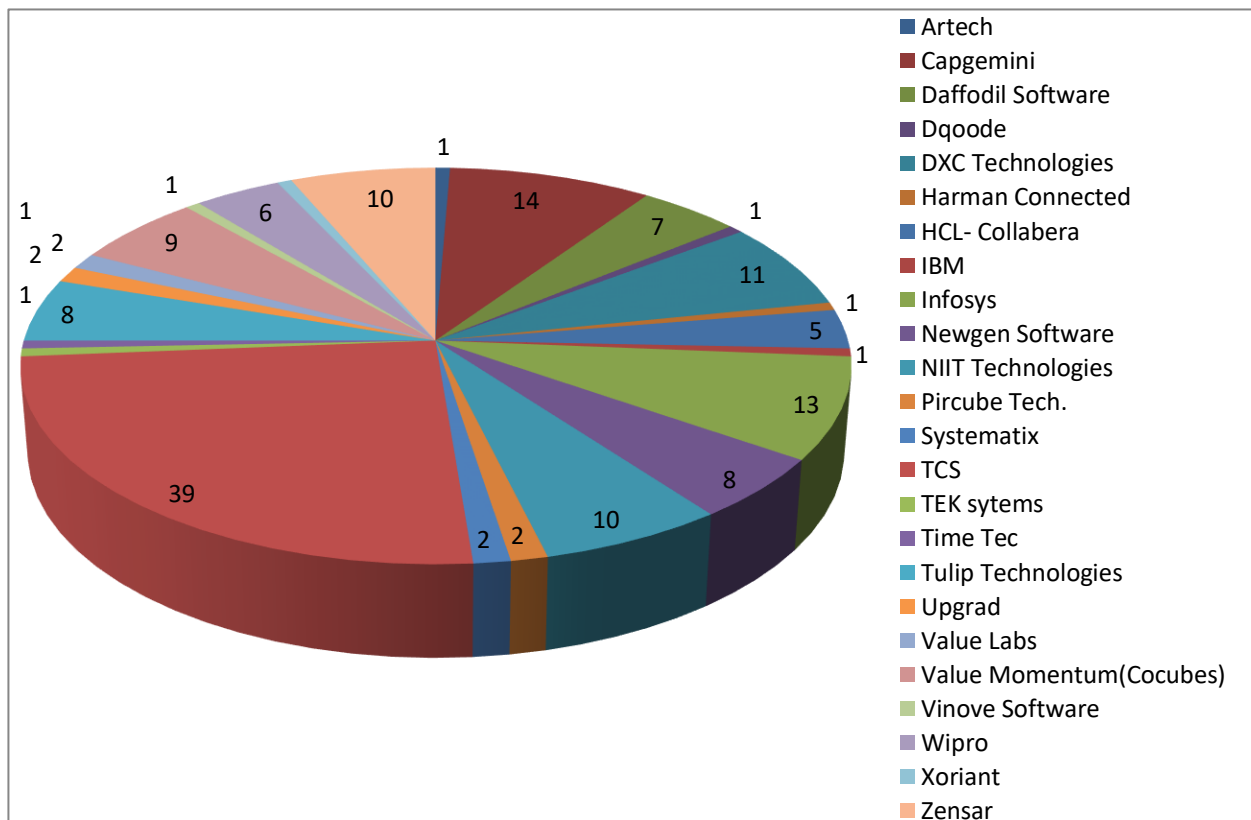
Sports Activities

Students had received winner & runner up awards in different sports activities (IPSA Level) like Cricket Competition(Girls), Basketball(Girls), Volleyball(Girls), Shotput(Girls), Table Tennis(Boys &Girls), Chess(Boys & Girls), LAN Game(Boys & Girls).

Faculty Members Achievements

(A)   **Special Awards**

Book Published

S. No.	Department	Name	Title of the Book	Name of Publication	Year of publish ISBN No.
1	CSE	Dr. Pratik Gite	Research Trends in MANET	VSRD Publication	2019 ISBN:978-93-87610-21-7
2	CSE	Dr. Pratik Gite	Network & Web Security	VSRD Publication	2019 ISBN:978-93-87610-16-3

Following faculty members have received SRIJAN-2019 Faculty Facilitation award .

S. No.	Department	Name	Sem	Subject Code	Subject Name
1.	CSE	Mr. Sunil Nimawat	IV	CS-405	Operating System
2.	CSE	Mr. Sudhir Kumar Patidar	IV	CS-405	Operating System
3.	CSE	Mr. Sumit Devray	IV	CS-405	Operating System
4.	CSE	Ms. Shweta Gangrade	IV	CS-403	Software Engineering
5.	CSE	Mr. Kamal Borana	IV	CS-403	Software Engineering
6.	CSE	Ms. Nitu Mathuriya	IV	CS-403	Software Engineering
7.	CSE	Mr. Sudhir Kumar Patidar	V	CS-5002	Operating System
8.	CSE	Mr. Sumit Devray	V	CS-5002	Operating System
9.	CSE	Ms. Priyanka Vijayvargiya	V	CS-5002	Operating System
10.	CSE	Mr. Arvind Upadhyay	V	CS-5001	Data Communication
11.	CSE	Dr. Pratik Gite	V	CS-5001	Data Communication
12.	CSE	Mr. Sourabh Jain	VI	CS-6003	Software Engineering & Project Management
13.	CSE	Mr. Dharmendra Gupta	VI	CS-6003	Software Engineering & Project Management
14.	CSE	Dr. Pratik Gite	VI	CS-6003	Software Engineering & Project Management
15.	CSE	Mr. Mayur Rathi	I	BT-205	Basic Computer Engineering

Following faculty members got SWAYAM / NPTEL Online Certification.

S. No.	Department	Name	Course	Score
1.	CSE	Mr. Mayur Rathi	Introduction to machine learning	73%
2.	CSE	Ms. Nisha Bhalse	Machine Learning	57%
3.	CSE	Mr. Pankaj Pateriya	Introduction to C Programming	92%
4.	CSE	Mr. Prateek Nahar	Introduction to C Programming	78%
5.	CSE	Mr. Prateek Nahar	Theory of Computation	58%
6.	CSE	Mr. Anshul Oza	Introduction to C Programming	84%
7	CSE	Mr. Sunny Bagga	Introduction to C Programming	93%
8	CSE	Mr. Sunil Nimawat	Theory of Computation	62%
9	CSE	Mr. Jayesh Gangrade	Python for Data Science	70%
10	CSE	Ms. Nisha Bhalse	Python for Data Science	56%
11	CSE	Mr. Sourabh Jain	Object Oriented Analysis and Design	75%
12	CSE	Mr. Mayur Rathi	Problem Solving Through Programming in C	88%
13	CSE	Mr. Sumit Jain	Problem Solving Through Programming in C	90%
14	CSE	Mr. Neeraj Mehta	Python for Data Science	53%
15	CSE	Mr. Vijay Choudhary	Python for Data Science	53%

16	CSE	Mr. Kamal Borana	Theory of Computation	54%
17	CSE	Mr.Neeraj Mehta	Programming data structures and algorithms using python	96%
18	CSE	Mr.Sourabh Jain	Software Testing	87%
19	CSE	Mr.Ved Kumar Gupta	Programming data structures and algorithms using python	96%
20	CSE	Mr.Prateek Nahar	Programming in Java	98%
21	CSE	Mr.Mayur Rathi	Programming, Data Structures And algorithm using python	100%
22	CSE	Mr.Sunny Bagga	Programming In JAVA	98%
23	CSE	Mr.Vishal Chhabra	Programming in JAVA	98%
24	CSE	Mr.Sumit Jain	Programming, Data Structures And algorithm using python	100%

Following faculty members participated in National Level Online Quiz.

S. No.	Department	Name	Date	Organized By	Title
1	CSE	Mr. Neeraj shrivastava Mr. Sunil Nimawat Mr.Ved Kumar Gupta Mr.Sudhir Kumar Patidar	25/5/2020	P.V.P.P. College of Engineering, Mumbai	National Level Quiz on NAAC

2	CSE	Mr. Sourabh Jain	26/5/2020	Gov.P.G. College Barnagar	Online Quiz on Covid 19
3	CSE	Mr.Ajay Jaiswal	24/05/2020	P.G. And research department Islamiah College	Research Methodology And teaching Aptitude
4	CSE	Mr.Sourabh Jain	15/5/2020	Anjuman College Of Engineering & Technology	Covid 19 Awareness Program
5	CSE	Mr. Neeraj shrivastava Mr.Sourabh Jain	14/05/2020	Pallavi Engineering College, Hydrabad	E-Quiz on Web Technologies
6	CSE	Ms.Shweta Gangrade	13/5/2020	Mandsaur University	Machine Learning
7	CSE	Mr.Ajay Jaiswal Mr. Neeraj Shrivastava Mr.Neeraj Mehta Mr.Sourabh Jain Mr.Ved Kumar Gupta Mr.Dharmedra Gupta	11/05/2020	Smt. Kamla and Shri Vekappa M.Aagdi College of Engineering Karnataka	Covid'19 Awareness Quiz
8	CSE	Ms.Nisha Bhalse Mr.Neeraj Mehta Ms.Shweta Gangrade Mr.Ved Kumar Gupta	28/04/2020	PCCOER ACM STUDENT'S CHAPTER COVID-19 AWARENESS	COVID-19 Awareness programme Quiz
9	CSE	Mr.Ved Kumar Gupta	20/05/2020	Bhartiya Vidhyapeeth College of engineering Lavale ,pune	Operating System

Following faculty members got Coursera Online Certification.

S. No.	Department	Name	Date	Online Platform	Title
1.	CSE	Mr.Jayesh Gangrade	30/06/2020	Coursera	Machine Learning

Following faculty members got UDEMY Online Certification.

S. No.	Department	Name	Date	Online Platform	Title
1.	CSE	Mr.Neeraj Mehta	06/04/2020	UDEMY	AWS Concept

Following faculty members got TCS iON Online Certification.

S. No.	Department	Name	Date	Online Platform	Title
1.	CSE	Mr.Neeraj Mehta	7/04/2020 to 16/4/2020	TCS ioN	Career Edge – Knockdown The Lockdown
2.	CSE	Mr.Ved Kumar Gupta	19/04/2020 to 02/05/2020	TCS ioN	Career Edge – Knockdown The Lockdown

Following faculty members got Sololearn Online Certification.

S. No.	Department	Name	Date	Online Platform	Title
1.	CSE	Mr.Ved Kumar Gupta	10/05/2020	Sololearn	HTML Fundamental Course

Following faculty members got Mathworks Online Certification.

S. No.	Department	Name	Date	Online Platform	Title
1.	CSE	Mr.Ved Kumar Gupta	09/06/2020	MathWorks	MATLAB Onramp
2.	CSE	Mr.Ved Kumar Gupta	13/6/2020	MathWorks	Machine Learning Onramp
3.	CSE	Mr.Ved Kumar Gupta	13/6/2020	MathWorks	Deep Learning Onramp

(B)   (i) Paper Published in Journals National

S. No.	Department	Name	Topic / Title of the Paper	Name of Journal (refereed)	Year of publish (with month)
NIL					

(ii) Paper Published in Journals International

S. No.	Department	Name	Topic / Title of the Paper	Name of Journal (refereed)	Year of publish (with month)
1	CSE	Mr. Dharmendra Gupta	Future Attraction of Digital Marketing Users: Review and Research Agenda	International Journal of Computer Architecture and Mobility	ISSN 2319-9229 Vol.8, Issue 5, May,2020
2	CSE	Mr. Prateek Nahar	Heart Disease Prediction by Machine Learning Techniques	International Journal of Research and Analytical Reviews	E-ISSN 2348-1269, P- ISSN 2349-5138, Volume.7, Issue 3, Page No pp.403-412, July 2020
3	CSE	Mr. Neeraj Shrivastava	Breast Tumor Detection in Digital Mammogram Based on Efficient Seed Region Growing Segmentation	IETE Journal of Research	ISSN: (Print) 0377-2063 (online) 0974-780X Jan- 2020

4	CSE	Mr. Jayesh Gangrade	Recognition of Indian Sign Language Using ORB with Bag of Visual Words by Kinect Sensor	IETE Journal of Research	ISSN: (online) 0974-780X Vol.65, Issue 3, pp 1-16 Mar -2020
5	CSE	Mr. Neeraj Shrivastava	Multi-stage System for Preprocessing Mammograms	IEIE Transactions on Smart Processing and Computing (SCOPUS)	ISSN: 2287-5255 Vol.9, Issue 2, pp 119-126 Apr-2020
6	CSE	Mr. Neeraj Shrivastava	Prevention and detection of black hole attack using quality of service routing in MANETS	International Journal for Research in Engg Application & Management	ISSN:2454-9150 Vol.6, Issue 6, pp 75-86 July- 2019
7	CSE	Mr. Arvind Upadhyay	A Survey on Cloud Resource Scheduling Technique	International Journal of Contemporary Technology and Management	ISSN (Online) 2278-8034 Vol.8, Issue 8, August 2019
8	CSE	Mr. Arvind Upadhyay	Cloud Resource Scheduling using genetic algorithm	International Journal of Contemporary Technology and Management	ISSN (Online) 2278-8034 Vol.8, Issue 8, August 2019
9	CSE	Dr.Namrata Tapaswi	Privacy Preserving Data Mining Technique to Recover Association Rules Using Homomorphic Encryption Technique	International Journal of Scientific Research and Engineering Development	ISSN:2581-7175 Vol.2, Issue 6, Nov-2019
10	CSE	Mr. Jayesh Gangrade	Real Time Sign Language Recognition Using Depth Sensor	Int. J. Computational Vision And Robotics	ISSN:(online)1752-914X (Print)1752-9131 Vol.9, Issue 4 pp 329-339 Aug-2019
11	CSE	Mr.Anshul Oza	Blockchain-based multi-organization taxonomy for smart	SN Applied Sciences	ISSN:e 2523-3971 Vol.2, Issue 440, pp 1-11

S. No.	Department	Name	Topic / Title of Paper	Journal	Details
			cities		FEB 2020
12	CSE	Dr.Pratik Gite	Implementation of K-Means Clustering in Big Data Environment	International Journal of Computer Sciences and Engineering	ISSN:2347-2693 Vol.7, Issue 11, pp 38-44 Nov 2019
13	CSE	Ms. Ankita Chourasia	Review on Healthcare data analysis based on unsupervised machine learning algorithms	International journal of current trends in engineering & technology	ISSN:2395-3152 Vol.6, Issue 01, pp 5-10 Feb 2020

(C)   (i) Paper Presented in Seminar / Conference National

S. No.	Department	Name	Topic / Title of Paper Seminar / conference	Date From dd/mm/yyyy	To dd/mm/yyyy	Details of Seminar / conference Proceeding and organized by
1	NIL					

(ii) Paper Presented in Seminar / Conference International

S. No.	Department	Name	Topic / Title of Paper Seminar / conference	Date From dd/mm/yyyy	To dd/mm/yyyy	Details of Seminar / conference Proceeding and organized by
1	CSE	Mr. Mayur Rathi	High Dimensional Data Processing in Privacy Preserving Data Mining	11/04/2020	11/04/2020	SRGOC, Banmore(Online)

(D)   Expert Lectures Delivered by Faculties

S. No	Department	Name	Date dd/mm/yyyy	Program	Lab-Session/ Lectures	Topic	No. of Students Participation
1	CSE	Dr. Namrata Tapaswi	16/09/2019	Enterpreneurship Awareness	Lecture	Entrepreneurship & Patent	149

S. No.	Department	Name	Date	Event	Type	Topic	Count
				Camp			
2	CSE	Dr. Namrata Tapaswi	12/09/2019	Enterpreneurship Awareness Camp	Lecture	Entrepreneurship & Patent	134
3	CSE	Mr. Neeraj Mehta	02/12/2019	World Computer Literacy Day	Lecture	Computer Awareness	120
4	CSE	Mr. Ved Ku. Gupta	02/12/2019	World Computer Literacy Day	Lecture	Computer Awareness	120
5	CSE	Mr. Vijay Choudhary	02/12/2019	World Computer Literacy Day	Lecture	Computer Awareness	65
6	CSE	Dr. Namrata Tapaswi	15/01/2020	FDP on Prezi	Lecture	Prezi	56
7	CSE	Ms. Anjali Verma	22/06/2020 to 27/06/2020	Refresher Course	Lecture	Online plateform for teaching & Basic Internet	09
8	CSE	Ms. Neha Sharma	22/06/2020 to 27/06/2020	Refresher Course	Lecture	MS Word	09

(F) Seminars & Workshop Attended

S. No.	Department	Name	Date		Place of Seminar/ workshop	Topic of Seminar/ workshop
			From dd/mm/yyyy	**To** dd/mm/yyyy		
01	CSE	Mr. Sumit Jain	29/06/2020	01/07/2020	SAGE University, Indore	Workshop on "Django"
02	CSE	Dr. Vaishali Gupta	30/06/2020	30/06/2020	Bhagwan Parsuram Institute of Technology, New Delhi	Webinar on "Smart City: Big Data and Machine Learning"
03	CSE	Mr. Sumit Jain	27/06/2020	27/06/2020	Acropolis Institute of Technology &	Webinar on "Learning to Learn"

					Research, Indore	
04	CSE	Mr. Sunny Bagga	26/06/2020	28/06/2020	Quad Editing Services, Delhi	Online Workshop on "Data Management, Analysis and Interpretation(DMAI-2020)"
05	CSE	Ms. Nisha Bhalse Ms. Shefali Aggarwal	22/06/2020	26/06/2020	School of Information Technology, RGPV, Bhopal	Workshop on "The Growing Role of IOT in Latest Technological Trends"
06	CSE	Dr. Vaishali Gupta	15/06/2020	15/06/2020	Teerthankar Mahaveer University, Moradabad	Webinar on "Writing a Research Grant Proposal"
07	CSE	Dr. Namrata Tapaswi Mr. Jayesh Gangrade Mr. Arvind Upadhyay Mr. Sunil Nimawat Mr. Deepak Shukla Mr. Neeraj Mehta Ms. Barkha Sahu Ms. Shweta Gangrade Mr. Ved Ku. Gupta Mr. Pratik Jain Mr. Prateek Nahar Mr. Sumit Devray Mr. Sudhir Kumar Patidar Dr. Pratik Gite Mr. Ajay Jaiswal Mr. Sumit Jain Mr. Mayur Rathi Mr. Anshul Oza Mr. Dharmendra Gupta Mr. Vishal Chhabra Mr. Somil Neema Ms. Shefali Aggarwal Mr. Sunny Bagga	13/06/2020	13/06/2020	CSE Deptt., IPSA, IES	Webinar on "JAVA 8"
08	CSE	Dr. Vaishali Gupta	10/06/2020	14/06/2020	JSPM's	National

					Rajarshi Shahu College of Engineering, Pune	Webinar Series on "Current Trends in IT 2020"
09	CSE	Dr. Vaishali Gupta	10/06/2020	10/06/2020	Modern Group of Institution, Indore	National Webinar on "Building Resilience"
10	CSE	Ms. Shweta Gangrade Mr. Ajay Jaiswal Mr. Dharmendra Gupta Mr. Somil Neema Ms. Shefali Aggarwal Ms. Nisha Bhalse	08/06/2020	10/06/2020	Shri G.S. Institute of Technology & Science, Indore	Workshop on "The Growing Role of IOT in COVID-19 and Health Care"
11	CSE	Ms. Shefali Aggarwal	05/06/2020	05/06/2020	Shri G.S. Institute of Technology & Science, Indore	Webinar on "Large Scale Machine Learning Algorithms"
12	CSE	Mr. Somil Neema Ms. Shefali Aggarwal	03/06/2020	03/06/2020	Shri G.S. Institute of Technology & Science, Indore	Webinar on "Recent Research in Speech Processing"
13	CSE	Mr. Sudhir Kumar Patidar	01/06/2020	01/06/2020	Shri G.S. Institute of Technology & Science, Indore	Webinar on "Exponential Technology in Education"
14	CSE	Mr. Sunny Bagga	29/05/2020	31/05/2020	Quad Editing Services, Delhi	Online Workshop on "Best Practices of Research Paper Writing(BP RPW-2020)"
15	CSE	Mr. Ajay Jaiswal	25/05/2020	25/05/2020	Shivajirao Kadam Institute of	National Webinar on "Developing a Career in

					Technology & Management, Indore	Internet of Things"
16	CSE	Mr. Sudhir Kumar Patidar	24/05/2020	24/05/2020	Jawaharlal Institute of Technology, Borawan	Webinar on "E Learning/ ICT based Education"
17	CSE	Mr. Neeraj Mehta Mr. Ved Ku. Gupta	23/05/2020	23/05/2020	Er. Perumal Manimekalai College of Engineering, Hosur	Webinar on "Web Development and Future Job Opportunies"
18	CSE	Ms. Barkha Sahu Mr. Sudhir Kumar Patidar Mr. Dharmendra Gupta Mr. Somil Neema	19/05/2020	19/05/2020	SGSITS, Indore	Webinar on "Machine Learning"
19	CSE	Ms. Shefali Aggarwal	16/05/2020	16/05/2020	SGSITS, Indore	Webinar on "Cyber Security During Covid-19"
20	CSE	Mr. Neeraj Shrivastava Mr. Neeraj Mehta Mr. Sourabh Jain Mr. Ved Ku. Gupta	12/05/2020	12/05/2020	College of Engineering, Navi Mumbai	Online Faculty Program on "NBA"
21	CSE	Mr. Ajay Jaiswal	09/05/2020	10/05/2020	CITM,Indore	Online National Conference on "Covid-19: Post Lockdown Challenges & Opportunities"
22	CSE	Mr. Neeraj Shrivastava Mr. Ajay Jaiswal	08/05/2020	08/05/2020	Sri Aurobindo Institute of Technolo	Webinar on "Natural Resources and Their Management

					gy, Indore	strategies in Post Corona Period- Global and National Challenges"
23	CSE	Ms. Nisha Bhalse Mr. Neeraj Mehta Mr. Ved Ku. Gupta Mr. Ajay Jaiswal	05/05/2020	05/05/2020	Singhad Institute of Technolo gy, Lonavala	Webinar on "Online Teaching Learning Methods"
24	CSE	Mr. Neeraj Mehta Mr. Ved Ku. Gupta	02/05/2020	04/05/2020	Er. Perumal Manimek alai College of Engineeri ng, Hosur	Webinar on "Data Analytics"
25	CSE	Mr. Neeraj Shrivastava	30/04/2020	30/04/2020	SAIT, Indore	Webinar on "Cyber Security in Lockdown"
26	CSE	Mr. Neeraj Shrivastava	11/03/2020	15/03/2020	MANIT, Bhopal	Workshop on "Research Methodolog y"
27	CSE	Mr. Anil Panwar Ms. Barkha Sahu Ms. Shweta Gangrade Mr. Ved Ku. Gupta Mr. Pratik Jain Ms. Nitu Mathuriya Ms. Priyanka Vijayvargiya Mr. Dharmendra Choukse Mr. Sumit Devray Dr. Pratik Gite Mr. Mayur Rathi Ms. Shefali Aggarwal Ms. Neha Sharma Ms. Ankita Chourasia	29/02/2020	29/02/2020	CSE Deptt., IPSA, IES NMEICT	Workshop on "C & C++"
28	CSE	Dr. Namrata Tapaswi Mr. Jayesh Gangrade Mr. Arvind Upadhyay Mr. Neeraj Shrivastava Mr. Sunil Nimawat	19/10/2019	19/10/2019	CSE Deptt., IPSA, IES	Essential Attributes of Good Software Professional

		Mr. Deepak Shukla Ms. Nisha Bhalse Mr. Yagyapal Yadav Mr. Neeraj Mehta Mr. Anil Panwar Ms. Barkha Sahu Mr. Sourabh Jain Ms. Shweta Gangrade Mr. Vijay Choudhary Mr. Ved Ku. Gupta Ms. Anjali Verma Ms. Vaishali Gupta Mr. Pratik Jain Ms. Nitu Mathuriya Mr. Pankaj Pateriya Mr. Prateek Nahar Ms. Priyanka Vijayvargiya Mr. Dharmendra Choukse Mr. Sunny Bagga Mr. Sudhir Patidar Mr. Kamal Borana Mr. Sumit Devray Dr. Pratik Gite Ms. Archna Apte Mr. Sumit Jain Mr. Mayur Rathi Mr. Vishal Chhabra Mr. Anshul Oza Mr. Dharmendra Gupta Mr. Somil Neema Ms. Shefali Aggarwal Ms. Neha Sharma Ms. Ankita Chourasia				s
29	CSE	Mr. Neeraj Mehta	14/09/2019	14/09/2019	IIT Kanpur	Virtual Lab
30	CSE	Mr. Ved Kumar Gupta	14/09/2019	14/09/2019	IIT Kanpur	Virtual Lab
31	CSE	Mr. Sourabh Jain	19/08/2019	19/08/2019	Acropolis Institute of Technology & Research, Indore	Regional Orientation Session on IIC 2.0 and ARIIA 2020

(G) SDP/FDP Attended

S. No.	Depart ment	Name	Date		Organized By	Topic of Seminar/ Workshop
			From dd/mm/yyyy	To dd/mm/yyyy		

1	CSE	Dr. Namrata Tapaswi Mr. Jayesh Gangrade Mr. Arvind Upadhyay Mr. Neeraj Shrivastava Mr. Sunil Nimawat Mr. Deepak Shukla Ms. Nisha Bhalse Mr. Yagyapal Yadav Mr. Anil Panwar Ms. Barkha Sahu Mr. Sourabh Jain Ms. Shweta Gangrade Mr. Vijay Choudhary Mr. Ved Ku. Gupta Ms. Anjali Verma Dr. Vaishali Gupta Mr. Pratik Jain Ms. Nitu Mathuriya Mr. Prateek Nahar Ms. Priyanka Vijayvargiya Mr. Dharmendra Choukse Mr. Sudhir Kumar Patidar Mr. Kamal Borana Mr. Sumit Devray Mr. Sunny Bagga Dr. Pratik Gite Mr. Ajay Jaiswal Mr. Sumit Jain Mr. Mayur Rathi Mr. Vishal Chhabra Mr. Anshul Oza Mr. Dharmendra Gupta Mr. Somil Neema Ms. Shefali Aggarwal Ms. Neha Sharma Ms. Poonam Upadhyay	22/06/2020	27/06/2020	CSE Deptt., IPSA, IES Spoken Tutorial, IIT Bombay	Online FDP on "R"
2	CSE	Dr. Vaishali Gupta	15/06/2020	20/06/2020	Jaypee University of Information Technology, Waknaghat Solan, HP	Online FDP on "Transforming Education with Industry 4.0"
3	CSE	Mr. Sumit Jain	11/06/2020	13/06/2020	Shivajirao Kadam Institute of Technology &	Online FDP on "Python3.4.3"

					Management, Indore	
4	CSE	Dr. Namrata Tapaswi Mr. Jayesh Gangrade Mr. Arvind Upadhyay Mr. Sunil Nimawat Mr. Deepak Shukla Ms. Nisha Bhalse Mr. Yagyapal Yadav Mr. Anil Panwar Ms. Barkha Sahu Mr. Sourabh Jain Ms. Shweta Gangrade Mr. Vijay Choudhary Mr. Ved Ku. Gupta Ms. Anjali Verma Mr. Pratik Jain Ms. Nitu Mathuriya Mr. Prateek Nahar Ms. Priyanka Vijayvargiya Mr. Dharmendra Choukse Mr. Sunny Bagga Mr. Sudhir Kumar Patidar Mr. Kamal Borana Mr. Sumit Devray Dr. Pratik Gite Mr. Ajay Jaiswal Mr. Sumit Jain Mr. Mayur Rathi Mr. Vishal Chhabra Mr. Anshul Oza Mr. Dharmendra Gupta Mr. Somil Neema Ms. Shefali Aggarwal Ms. Neha Sharma Ms. Poonam Upadhyay	09/06/2020	13/06/2020	CSE Deptt., IPSA, IES Spoken Tutorial, IIT Bombay	Online Refresher Course Cum FDP on "Linux"
5	CSE	Mr. Neeraj Mehta Mr. Ved Ku. Gupta	04/06/2020	08/06/2020	Sir M Visvesyaraya Institute of Technology, Bangalore	Online STTP on "MATLAB for ALL"
6	CSE	Ms. Shweta Gagrade Mr. Sunny Bagga Mr. Kamal Borana	04/06/2020	04/06/2020	Mandsaur University, Mandsaur	Online FDP on "Machine Learning for Biomedical Data Processing"

7	CSE	Mr. Neeraj Shrivastava Mr. Sunil Nimawat Mr. Yagyapal Yadav Mr. Neeraj Mehta Mr. Sourabh Jain Mr. Ved Ku. Gupta Mr. Sudhir Kumar Patidar Mr. Sunny Bagga Mr. Dharmendra Gupta Ms. Shefali Aggarwal	26/05/2020	30/05/2020	Government College of Engineering, Karad	Online FDP on "Signal, Image & Video Processing: A Practical Approach(SIVPAP A-2020)"
8	CSE	Mr. Somil Neema Ms. Shefali Aggarwal	25/05/2020	29/05/2020	Punjab Engineering College	Online FDP on "Cyber Security"
9	CSE	Mr. Vishal Chhabra	19/05/2020	19/05/2020	IIST, Indore	FDP on "Effective Research Planning and Technical Writing for Engineers"
10	CSE	Mr. Vishal Chhabra	18/05/2020	20/05/2020	IIST, Indore	FDP on "Efficacy and Futuristic Approaches of Digital Pedagogy in the Wake of Covid-19"
11	CSE	Mr. Neeraj Shrivastava Mr. Sunil Nimawat Ms. Nisha Bhalse Mr. Yagyapal Yadav Mr. Neeraj Mehta Mr. Sourabh Jain Mr. Ved Ku. Gupta Ms. Nitu Mathuriya Mr. Sudhir Kumar Patidar Mr. Sunny Bagga Mr. Ajay Jaiswal Mr. Dharmendra Gupta Ms. Shefali Aggarwal	16/05/2020	20/05/2020	Rajkiya Engineering College, Azamgarh & Government College of Engineering, Karad	Online FDP on "Machine Learning and Deep Learning Applications in Engineering & Science(MLDLAE S-2020)"
12	CSE	Mr. Somil Neema Ms. Shefali Aggarwal	11/05/2020	15/05/2020	Punjab Engineering College	Online FDP on "Block Chain"
13	CSE	Mr. Neeraj Shrivastava Mr. Sunil Nimawat Mr. Neeraj Mehta Mr. Ved Ku. Gupta	11/05/2020	15/05/2020	Government College of Engineering, Karad	Online FDP on "Outcome Based Education: A Step Towards Excellence"
14	CSE	Mr. Somil Neema	04/05/2020	08/05/2020	Punjab	Online FDP on

		Ms. Shefali Aggarwal			Engineering College	"Data Science"
15	CSE	Dr. Namrata Tapaswi Mr. Dharmendra Gupta Mr. Sudhir Kumar Patidar Ms. Anjali Verma Ms. Barkha Sahu Mr. Neeraj Shrivastava Ms. Nitu Mathuria Mr. Pratik Jain Ms. Neha Sharma Mr. Yagyapal Yadav Ms. Nisha Bhalse Mr. Anil Panwar Mr. Ajay Jaiswal Mr. Deepak Shukla Ms. Shweta Gangrade Mr. Sunny Bagga Mr. Jayesh Gangrade Mr. Pankaj Pateriya Dr.Vaishali Gupta Mr. Ved Kumar Gupta Mr. Mayur Rathi Dr. Pratik Gite Mr. Arvind Upadhyay Mr. Sourabh Jain Mr. Sumit Devray Mr. Anshul Oza Mr. Sumit Jain Ms. Poonam Upadhyay Mr. Kamal Borana Mr. Dharmendra Choukse Mr. Vijay Choudhary Ms. Priyanka Vijayvargiya Mr. Sunil Nimawat Mr. Neeraj Mehta Ms. Ankita Chourasia Mr. Somil Neema Ms.Shefali Aggarwal Mr. Prateek Nahar Mr. Vishal Chabra	24/04/2020	30/04/2020	CSE Deptt., IPSA, IES Spoken Tutorial, IIT Bombay	Online FDP on "RDBMS PostgreSQL"
16	CSE	Dr. Namrata Tapaswi Mr. Jayesh Gangrade Mr. Arvind Upadhyay Mr. Neeraj Shrivastava Mr. Sunil Nimawat	15/01/2019	15/01/2019	CSE Deptt., IPSA, IES	Prezi

		Mr. Deepak Shukla Ms. Nisha Bhalse Mr. Yagyapal Yadav Mr. Neeraj Mehta Mr. Anil Panwar Ms. Barkha Sahu Mr. Sourabh Jain Ms. Shweta Gangrade Mr. Vijay Choudhary Mr. Ved Ku. Gupta Ms. Anjali Verma Ms. Vaishali Gupta Mr. Pratik Jain Ms. Nitu Mathuriya Mr. Pankaj Pateriya Mr. Prateek Nahar Ms. Priyanka Vijayvargiya Mr. Dharmendra Choukse Mr. Sunny Bagga Mr. Sudhir Patidar Mr. Kamal Borana Mr. Sumit Devray Dr. Pratik Gite Ms. Archna Apte Mr. Sumit Jain Mr. Mayur Rathi Mr. Vishal Chhabra Mr. Anshul Oza Mr. Dharmendra Gupta Mr. Somil Neema Ms. Shefali Aggarwal Ms. Neha Sharma Ms. Ankita Chourasia				
17	CSE	Ms. Shefali Aggarwal	26/12/2019	30/12/2019	SGSITS, Indore	FDP on Database & Algorithms
18	CSE	Dr. Namrata Tapaswi Mr. Jayesh Gangrade Mr. Arvind Upadhyay Mr. Neeraj Shrivastava Mr. Sunil Nimawat Mr. Deepak Shukla Ms. Nisha Bhalse Mr. Yagyapal Yadav Mr. Neeraj Mehta Mr. Anil Panwar Ms. Barkha Sahu Mr. Sourabh Jain Ms. Shweta Gangrade	23/12/2019	04/01/2020	CSE Deptt., IPSA, IES	Machine Learning

		Mr. Vijay Choudhary Mr. Ved Ku. Gupta Ms. Anjali Verma Ms. Vaishali Gupta Mr. Pratik Jain Ms. Nitu Mathuriya Mr. Pankaj Pateriya Mr. Prateek Nahar Ms. Priyanka Vijayvargiya Mr. Dharmendra Choukse Mr. Sunny Bagga Mr. Sudhir Patidar Mr. Kamal Borana Mr. Sumit Devray Dr. Pratik Gite Ms. Archna Apte Mr. Sumit Jain Mr. Mayur Rathi Mr. Vishal Chhabra Mr. Anshul Oza Mr. Dharmendra Gupta Mr. Somil Neema Ms. Shefali Aggarwal Ms. Neha Sharma Ms. Ankita Chourasia				
19	CSE	Dr. Namrata Tapaswi Mr. Jayesh Gangrade Mr. Arvind Upadhyay Mr. Neeraj Shrivastava Mr. Sunil Nimawat Mr. Deepak Shukla Ms. Nisha Bhalse Mr. Yagyapal Yadav Mr. Neeraj Mehta Mr. Anil Panwar Ms. Barkha Sahu Mr. Sourabh Jain Ms. Shweta Gangrade Mr. Vijay Choudhary Mr. Ved Ku. Gupta Ms. Anjali Verma Ms. Vaishali Gupta Mr. Pratik Jain Ms. Nitu Mathuriya Mr. Pankaj Pateriya Mr. Prateek Nahar Ms. Priyanka Vijayvargiya	02/12/2019	07/12/2019	CSE Deptt., IPSA, IES	PYTHON

		Mr. Dharmendra Choukse Mr. Sunny Bagga Mr. Sudhir Patidar Mr. Kamal Borana Mr. Sumit Devray Dr. Pratik Gite Ms. Archna Apte Mr. Sumit Jain Mr. Mayur Rathi Mr. Vishal Chhabra Mr. Anshul Oza Mr. Dharmendra Gupta Mr. Somil Neema Ms. Shefali Aggarwal Ms. Neha Sharma Ms. Ankita Chourasia				
20	CSE	Mr. Sourabh Jain	26/11/2019	30/11/2019	School of Information Technology, RGPV, Bhopal	Data Analytics with Machine Learning using Python
21	CSE	Mr. Ved Ku. Gupta	26/11/2019	30/11/2019	School of Information Technology, RGPV, Bhopal	Data Analytics with Machine Learning using Python
22	CSE	Mr. Ved Ku. Gupta	12/10/2019	12/10/2019	CSE Deptt., IPSA, IES IIT, Bombay	Workshop on R
23	CSE	Dr. Namrata Tapaswi Mr. Jayesh Gangrade Mr. Arvind Upadhyay Mr. Neeraj Shrivastava Mr. Sunil Nimawat Mr. Deepak Shukla Ms. Nisha Bhalse Mr. Yagyapal Yadav Mr. Neeraj Mehta Mr. Anil Panwar Ms. Barkha Sahu Mr. Sourabh Jain Ms. Shweta Gangrade Mr. Vijay Choudhary Mr. Ved Ku. Gupta Ms. Anjali Verma Ms. Vaishali Gupta Mr. Pratik Jain Ms. Nitu Mathuriya Mr. Pankaj Pateriya Mr. Prateek Nahar	09/07/2019	13/07/2019	CSE Deptt., IPSA, IES	Angular 8 + Node JS

		Ms. Priyanka Vijayvargiya Mr. Dharmendra Choukse Mr. Sunny Bagga Mr. Sudhir Patidar Mr. Kamal Borana Mr. Sumit Devray Dr. Pratik Gite Ms. Archna Apte Mr. Sumit Jain Mr. Mayur Rathi Mr. Vishal Chhabra Mr. Anshul Oza Mr. Dharmendra Gupta			

Student Achievements

(A)   Special Award

➢ **Ms. Shweta Sharma & Ms. Aakruti Mishra** participated as a Speaker in the Technical Conference on the occasion of 5th Inception Day of NHIDCL on **July 18, 2019.**

➢ **Ms. Aarushi Jain** got prize for Best Lecture Delivered at IWWA Indore Centre at NIT Patna in the 52nd Annual Convention, **10-12 Jan 2020**.

➢ **Ms. Prachi Lodha** awarded **Student of the Year** award for the session 2019-20 during **Swaranjali 2K20.**

➢ **Ms. Aishwarya Zamindar** awarded **Face of the Crowd** award for the session 2019-20 during **Swaranjali 2K20.**

(B)   Chancellor Scholarship received from Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal (M.P.)

S.No.	Name	Year/Sem	Percentage	Branch
1.	Ankita Arora	III	-	Computer Science & Engineering
2.	Isha Mehta	II	-	Computer Science & Engineering

(C)   Academic Awards

S. No.	Branch	Student Name	Date dd/mm/yyyy	Organize Place	Name of Events	Awards
1	CSE	Jainish Jain	15/04/2020	15/04/2020	UDAAN-2020 Minor Project Competition Cum Exhibition	Winner
2	CSE	Isha Mehta	15/04/2020	15/04/2020	UDAAN-2020 Minor Project Competition Cum Exhibition	Winner

3	CSE	Utkarsh Shrotriya Sagar Pratap Singh	15/04/2020	15/04/2020	UDAAN-2020 Minor Project Competition Cum Exhibition	Runner-Up
4	CSE	Arushi Jain Ariha Jain	15/04/2020	15/04/2020	UDAAN-2020 Minor Project Competition Cum Exhibition	Runner-Up
5	CSE	Aayush Sonatra Amrut Bhokardankar Harsh Pradhan Harshita Rathore	14/04/2020	CSE, IES IPSA	UDAAN-2020 Major Project Competition Cum Exhibition	Winner
6	CSE	Danish Ansari Kanchan Gupta Prasoon Gupta	14/04/2020	CSE, IES IPSA	UDAAN-2020 Major Project Competition Cum Exhibition	Runner-Up
7	CSE	Ankit Patidar Arbaj Mansoori Aushutosh Kumar	19/10/2019	IES IPSA	Envisage 2019 Tech Quiz	Runner-Up
8	CSE	Vaishali Rajput	15/11/2019	Cummins India Foundation	2019 Cummins Scholarship Program	Selected
9	CSE	Jaymanyoo S. Chouhan	19/10/2019	IES IPSA	Envisage 2019 Tech Quiz	Runner-Up
10	CSE	Khushboo Patidar Mouli Shrivastava	19/10/2019	IES IPSA	Envisage 2019 Web Pirates	Winner

11	CSE	Manish Patidar Harshit Soni	19/10/2019	IES IPSA	Envisage 2019 Web Pirates	Runner-Up

(D)   (i) Paper Published in Journals National

S. No.	Department	Name	Topic / Title of the Paper	Name of Journal (refereed)	Year of publish (with month)
1	--NIL--				

(ii) Paper Published in Journals International

S. No.	Department	Name	Topic / Title of the Paper	Name of Journal (refereed)	Year of publish (with month)
1	CSE	Ms. Pooja Kothari	Heart Disease Prediction by Machine Learning Techniques	IJRAR	July-2020

(E)   (i) Paper Presented in Seminar / Conference National

S. No.	Department	Name	Topic / Title of Paper Seminar / conference	Date From dd/mm/yyyy	To dd/mm/yyyy	Details of Seminar / conference Proceeding and organized by
1	NIL					

(ii) Paper Presented in Seminar / Conference International

S. No.	Department	Name	Topic / Title of Paper Seminar / conference	Date From dd/mm/yyyy	To dd/mm/yyyy	Details of Seminar / conference Proceeding and organized by
1						

(F)   Workshop Attended

S. No.	Department	Name	Date dd/mm/yyyy	Details of Workshop	Topic
1	CSE	IV & III YR	13/06/2020	Webinar	JAVA 8
2	CSE	III YR	29/04/2020	Seminar	IT Industry Culture
3	CSE	All Students	19/10/2019	National Seminar	Essential Attributes of Good Software Professionals

4	CSE	III YR	25/09/2019	Expert Lecture	Programming
5	CSE	III YR	24/09/2019	Seminar	Higher Education
6	CSE	II YR	20/09/2019	Expert Lecture	Programming
7	CSE	II YR	19/09/2019	Seminar	Higher Education
8	CSE	III YR	18/09/2019	Seminar	Placement & Career Guidance
9	CSE	II YR	18/09/2019	Expert Lecture	Aptitude & English
5	CSE	III YR	17/09/2019	Expert Lecture	Aptitude & English
6	CSE	II YR	18/09/2019	Workshop	Python
7	CSE	II YR	16/09/2019 TO 18/09/2019	Workshop	Entrepreneurship Awareness Camp
8	CSE	II YR	12/09/2019 TO 14/09/2019	Workshop	Entrepreneurship Awareness Camp
9	CSE	I YR	11/09/2019	Expert Lecture	Aptitude & English
10	CSE	I YR	07/09/2019	Seminar	Entrepreneurship
11	CSE	I YR	03/09/2019	Seminar	Programming in C/C++
12	CSE	I YR	31/08/2019	Workshop	Ethical Hacking
13	CSE	III YR	30/08/2019	Expert Lecture	Programming in JAVA
14	CSE	I YR	30/08/2019	Expert Lecture	ORA
15	CSE	III YR	29/08/2019	Expert Lecture	Programming in JAVA
16	CSE	I YR	29/08/2019	Seminar	Programming Skills
17	CSE	II YR	28/08/2019	Seminar	Programming in C/C++
18	CSE	II YR	28/08/2019	Expert Lecture	Programming in JAVA
19	CSE	II YR	27/08/2019	Workshop	Ethical Hacking
20	CSE	II YR	27/08/2019	Workshop	Ethical Hacking
21	CSE	I YR	27/08/2019	Expert Lecture	Programming Concepts
22	CSE	III YR	27/08/2019	Workshop	PYTHON
23	CSE	II Yr	26/08/2019	Seminar	Programming in C/C++
24	CSE	II YR	26/08/2019	Expert Lecture	Programming in JAVA
25	CSE	I YR	24/08/2019	Expert Lecture	Programming Skills
26	CSE	I YR	22/08/2019	Seminar	Programming in C/C++
27	CSE	IV YR	17/06/2019 TO 17/07/2019	Industrial Training	Advanced JAVA
28	CSE	IV YR	17/06/2019 TO 17/07/2019	Industrial Training	Angular 8 + Node JS
29	CSE	IV YR	17/06/2019 TO 17/07/2019	Industrial Training	Internet of Things

2. CULTURAL

List of students shining in cultural activities

S. No.	Name	Year	Branch	Event	Place	Date dd/mm/yyyy	Acquired Position
1	Nikhil Gour	II	CSE	Poetry	IES IPSA	27/02/2020	Winner
2	Muskan Kashyap	II	CSE	Fast & Furious	IES IPSA	28/02/2020	Winner
3	Khushi Kala						
4	Hrishika Saxena						
5	Aarohi Bapat						
6	Naman Rajole	II	CS&IT	Voice of IES	IES IPSA	28/02/2020	Runner-Up
7	Anushka Rajput	I	CSE	Voice of IES	IES IPSA	28/02/2020	Runeer-Up
8	Madhia Sheikh	II	CSE	Retro Dress Show	IES IPSA	29/02/2020	Winner
9	Suhani Goswami	IV	CSE	Retro Dress Show	IES IPSA	29/02/2020	Runeer-Up
10	Gourav Swami	III	CSE	Vision 2050	IES IPSA	28/02/2020	Runner-Up
11	Aditi Malviya	III	CSE	Face Painting	IES IPSA	28/02/2020	Winner
12	Srishti Nagariya	III	CSE	Face Painting	IES IPSA	28/02/2020	Runner-Up
13	Arush jain	III	CSE	PhotoGraphy Exhibition	IES IPSA	27/02/2020	Winner
14	Ayush Gurjar	II	CS&IT	Poster and Slogan Exhibition	IES IPSA	27/02/2020	Runeer-Up
15	Muskan Patidar	II	CSE	Poster and Slogan Exhibition	IES IPSA	27/02/2020	Runeer-Up
16	Aditya Saxena	II	CSE	IES Got Talent	IES IPSA	27/02/2020	Runeer-Up

WINNER'S LIST

S. No.	Event Name	Winner 1st	Winner 2nd
1	Anand Mela	-	-
2	Treasure Hunt	-	-
3	Dance Group(Classical)	✓	✓
4	Dance Solo(Classical)	✓	✓
5	Dance Group(Western)	✓	✓
6	Dance Solo(Western)	✓	-

SPECIAL AWARDS

S. No.	Name	Year	Branch	Achievement
1				

3. SPORTS

WINNERS OF SPORTS

S. No.	Games	Winner	Runner Up
1	Basket Ball (Boys)	-	-
2	Basket Ball (Girls)	✓	-
3	Badminton (Boys)	-	✓
4	Badminton (Girls)	-	-
5	Carom (Boys & Girls)	-	✓
7	Chess (Boys & Girls)	-	✓
9	Cricket (Boys)	-	✓
10	Cricket (Girls)	✓	-
11	FootBall (Boys)	-	✓
12	Table Tennis (Boys)	-	✓
13	Table Tennis (Girls)	✓	-
14	Volley Ball (Boys)	✓	-
15	Volley Ball (Girls)	✓	-
16	Shot Put (Boys)	-	✓
17	Shot Put (Girls)	✓	-
18	Lan Gaming (Boys & Girls)	✓	-
19	Kabbadi	-	-

INDIVIDUAL SPORTS ACHIEVERS

S. No	Name	Name of Sport's	Department	Month/ Year	National/ State level	Remark
1	Abhijeet Pal	M.P. State Karate Championship -2020	CSE	Jan/2020	State	Winner

4. Result Analysis

Merit Scholar & Gold Medal

LIST OF STUDENTS WHO IS GETTING FIRST & SECOND POSITION

(Academics)

(UG)

S. No	Name of Student	Branch	Sem / Year	Position	Percentage
1	Farah Deeba	CSE	VIII/IV	I	9.16
2	Ipshita Khare	CSE	VIII/IV	II	8.99
3	Farah Deeba	CSE	VII/IV	I	9.07
4	Ipshita Khare	CSE	VII/IV	II	8.89

5	Rajat Pal	CSE	VI/III	I	8.90
6	Isha Mehta	CSE	VI/III	II	8.67
7	Rajat Pal	CSE	V/III	I	8.82
8	Akarsh Jain	CSE	V/III	II	8.43
9	Rishika Jain	CSE	IV/II	I	9.07
10	Kratika Jain	CSE	IV/II	II	9.06
11	Rishika Jain	CSE	III/II	I	8.82
12	Saksham Agrawal	CSE	III/II	II	8.74
13	Atharva Barde	CS&IT	IV/II	I	8.47
14	Mohd. Usmaan Khan	CS&IT	IV/II	II	8.46
15	Atharva Barde	CS&IT	III/II	I	8.26
16	Mohd. Usmaan Khan	CS&IT	III/II	II	8.08
17	Yash Keshri	CST	IV/II	I	8.59
18	Asmita Sethiya	CST	IV/II	II	8.45
19	Yash Keshri	CST	III/II	I	8.41
20	Shweta	CST	III/II	II	8.20
21	Harshita Rohira	CES	IV/II	I	8.90
22	Sourabh Jain	CES	IV/II	II	8.34
23	Harshita Rohira	CES	III/II	I	8.59
24	Praveen	CES	III/II	II	8.00
25	Teenu Sharma	CSE	II/I	I	9.67
26	Ayushi Bisen	CSE	II/I	II	9.64
27	Ayushi Bisen	CSE	I/I	I	9.33
28	Teenu Sharma	CSE	I/I	II	9.19
29	Jaydeep Sahu	CS&IT	II/I	I	9.12
30	Shreya Gour	CS&IT	II/I	II	9.03
31	Jaydeep Sahu	CS&IT	I/I	I	8.95
32	Palak Pal	CS&IT	I/I	II	8.67

LIST OF STUDENTS WHO IS GETTING FIRST & SECOND POSITION

(PG)

S. No	Name of Student	Branch	Sem / Year	Position	Percentage
1	Pooja Kothari	CSE	IV/II	I	8.85
2	NA	CSE	IV/II	II	NA
3	Pooja Kothari	CSE	III/II	I	8.57
4	Swastik Shukla	CSE	III/II	II	6.81
5	Chamandeep Vimal	CSE	II/I	I	8.10
6	Vashnavi Karma	CSE	II/I	II	8.01
7	Vashnavi Karma	CSE	I/I	I	7.38
8	Chamandeep Vimal	CSE	I/I	II	7.19

1. Web Mining and Web Search Personalization

Abstract

Information on the web is increasing at an enormous speed. Every user has a distinct background and a specific goal when searching for information on the web. Present search engines produce results that are best suited to given query. But these engines are unaware of user's individual preferences which in turn can vary with individual interest and these interests most of the time change with individual working environment time. Web services technology is widely used as a solution of information by all users. Now a days, the user rely on web for the information need but the currently available search engines though using sophisticated document indexing algorithms, quite often gives a long list of results, much of which are not always relevant to the user's requirement. Since a user has a specific goal when searching for information, personalized search may provide the results that accurately satisfy user's specific goal and intent for the search. Personalization of web search is to retrieve information according to user's interests which may be inferred from user's actions, browsed documents or past query history etc. This paper conducts a survey of how personalization (if applied) can give useful knowledge to the user. Several user personalization approaches and techniques developed for the information retrieval domain are illustrated in this paper.

Introduction

Web mining is the most important and new development in the technology territories of information mining. The WWW had turned into a well-known device of transmitting the knowledge. Given the fact that the Web is abundant with data, it is problematic to assemble and understand this information because it is inherently difficult to spread on the web. An inquiry that typically goes to our minds encompassing the information mining techniques is whether it can be grasped independently, historically inaccessible information from the vast number of records information on the Web. In Web mining techniques, the third-age information mining device.

In addition to its attributes, this system determines the interaction between separate Web sites, the distribution of data on the Web and the removal of data from the Web according to the data present in the WWW is dynamic in nature and the data association is structurally mind boggling. Data

mining is classified as Web Mining with the WWW mix. It is a field of data mining that uses the calculations of example disclosure to derive interesting information from electronic data files.

Web Mining is a tool for finding interesting WWW information, such as Web Logs, Website Page Interfaces and Client Click Stream Information. Web data includes both heterogeneous data and the diverse design of data storage. It manages three related data categories: I Web Content Mining, (ii) Web Framework Mining, and (iii) Mining for Web Use.

Web Mining is the technique of mining useful patterns. Due to the tremendous improvement of online applications and internet business environments, the Web became the largest information processing medium on the earth The value of online applications generates an over-burden of data on database servers. For discovery networks, web mining is prevalent and essential mining is divided into the following four: (i) Discovery of resources (ii) Choice of information and pre-processing (iii) Generalization and (iv) Analysis.

Ruchita Atre (0808CS19ME05)

2. Face Recognition through CNN

Abstract

Face recognition can be used in several applications such as in surveillance, identification in login system and personalized technology. The challenge of the face detection system is the non-frontal face position and the use of accessories that cover the face area, even conventional detection systems that rely on facial features are difficult to get high accuracy. The proposed system can overcome these problems and work for multiple faces. The deep learning system can recognize facial features with complex backgrounds. The CNN (Convolution Neural Network) architecture with shallow layers to produce light computing then the system can work real-time. Multiple layer detection on the last feature map is used to detect varied face sizes. The system result shows sequential images of face localization.

Introduction

Face detection – also called facial detection – is an artificial intelligence (AI) based computer technology used to find and identify human faces in digital images. Face detection technology can be applied to various fields – including security, biometrics, law enforcement, entertainment and personal safety – to provide surveillance and tracking of people in real time.

Face detection has progressed from rudimentary computer vision techniques to advances in machine learning (ML) to increasingly sophisticated artificial neural networks (ANN) and related technologies; the result has been continuous performance improvements. It now plays an important role as the first step in many key applications – including face tracking, face analysis and facial recognition. Face detection has a significant effect on how sequential operations will perform in the application.

In face analysis, face detection helps identify which parts of an image or video should be focused on to determine age, gender and emotions using facial expressions. In a facial recognition system – which maps an individual's facial features mathematically and stores the data as a face print – face detection data is required for the algorithms that discern which parts of an image or video are needed to generate a face print. Once identified, the new face print can be compared with stored face prints to determine if there is a match.

How Face Detection Works

Face detection applications use algorithms and ML to find human faces within larger images, which often incorporate other non-face objects such as landscapes, buildings and other human body parts like feet or hands. Face detection algorithms typically start by searching for human eyes – one of the easiest features to detect. The algorithm might then attempt to detect eyebrows, the mouth, nose, nostrils and the iris. Once the algorithm concludes that it has found a facial region, it applies additional tests to confirm that it has, in fact, detected a face. To help ensure accuracy, the algorithms need to be trained on large data sets incorporating hundreds of thousands of positive and negative images. The training improves the algorithms' ability to determine whether there are faces in an image and where they are.

To help ensure accuracy, the algorithms need to be trained on large data sets incorporating hundreds of thousands of positive and negative images. The training improves the algorithms' ability to determine whether there are faces in an image and where they are. The methods used in face detection can be knowledge-based, feature-based, template matching or appearance-based. Each has advantages and disadvantages:

- **Knowledge-based**, or rule-based methods, describe a face based on rules. The challenge of this approach is the difficulty of coming up with well-defined rules.
- **Feature invariant methods** – which use features such as a person's eyes or nose to detect a face – can be negatively affected by noise and light.
- **Template-matching methods** are based on comparing images with standard face patterns or features that have been stored previously and correlating the two to detect a face. Unfortunately these methods do not address variations in pose, scale and shape.
- **Appearance-based methods** employ statistical analysis and machine learning to find the relevant characteristics of face images. This method, also used in feature extraction for face recognition, is divided into sub-methods.

Chamandeep Vimal (0808CS19ME01)

3. MALWARE Detection in Smart Devices

Abstract

The Smartphone's are highly prone to spreading the malware due to intrinsic feebleness that permits an application to access the internal resources when the user grants the permissions knowingly or unknowingly.

Android is an open source Linux-based mobile operating system distributed by Google. According to the latest statistics, android powers hundreds of thousands mobile devices over 190 countries. Google Play is the official android centralized market place maintained by Google, where any independent application developer can submit his/her android app and make it available to the users.

The growing popularity of this android ecosystem also is becoming a worthy target for security and privacy violations. Highly sensitive and confidential information such as text messages, private and business contacts, calendar data, etc may be leaked through an application. Sensors such as GPS present in the phones allow applications to provide context-sensitive user experience, they also create additional privacy concerns it can exploit the data for tracking or monitoring Shorthand for malicious software, malware typically consists of code developed by cyber attackers, designed to cause extensive damage to data and systems or to gain unauthorized access to a network.

The people of different ages are using Smartphone's and varied applications in their day to day life. But most of the applications are not secure as they use our data for many predictive purposes and show searched products from websites and mobile applications. In this paper, we propose the detection system for android malicious application using static analysis along with malicious feature similarity.

Introduction

There are many operating systems present in the smart phone market but android leads them. Android platform was launched by Google and Open Handset Alliance in September 23, 2008 and since then it got an overnight popularity because of its user friendliness and ease of

developing and publishing applications in android market.

Smartphone's have gained popularity with the presence of feature-rich apps which provide services like social networking, online banking, online gaming, and location based services, in addition to the conventional services like phone calls and messaging. As android has largest share in smart phone market, numbers of attacks on android platform are also very large as compare to other platforms.

One reason for the increase in number of android malware is that any developer can develop his application and publish it in android market. Though official android market Google PlayStore is still very much secure as compare to other third party markets. Most of the malware come when users unknowingly install applications from third party application stores and many applications in these unofficial stores are the repackaged version of original applications that are present in Google Play Store.

A report shows that there is tremendous growth in smart phone sales, with 82% Android smart phone users. Rising popularity has made them susceptible to malware attacks. The year 2013 recorded 1, 45,000 new malware samples, with 97% of them targeted towards Android platform. This indicates that android is evidently the major target, with nearly 5000-6000 malware samples attacking them every 14 seconds, and the figure touched 3.5 million malicious samples in 2017 and is expected to rise to 25 million by 2019.

The increase in the number of Android malware attacks is mainly from three major sources: (a) App markets, an easy distribution gateway for malware developers; (b) Users, driveby-downloads, and (c) Developers, weak code. Android has been the favored target for the majority mobile malware. This phenomenon forces security researchers to come up with smarter methods to defend smart phone against the malicious attacks. Hackers have rapidly devised many attack methods to get private and financial information from users' Smartphone's.

The malicious attacks on smart phones include traditional voice phishing, pharming, SMiShing, Android malwares and so on. As malicious attacks on smart phones vary and evolve quickly, it has become a crucial challenge to protect smart phones from the attack in a timely manner. Especially, SMiShing app has become a crucial threat on smart phones since it can be easily

rampant via URLs embedded in SMS messages and emails. In addition, the feature of Android OS, which allows users to install applications from unauthorized third-party marketplaces, amplifies these threats.

Imran Khan (0808CS19ME03)

4. Wireless Sensor Network

Abstract

This paper aims to describe the characteristics of Wireless Sensor Networks (WSNs), challenges in designing a resource-constrained and vulnerable network and address security management as the main issue. The work begins with discussion on the attacks on WSNs. As part of protection against the attacks faced by WSNs, key management, the primary requirement of any security practice, is detailed out. This paper also deals with the existing security schemes covering various routing protocols. The paper also touches security issues concerning heterogeneous networks.

Introduction

A sensor node is a tiny device with basic components like, a sensing subsystem for athering data from the surrounding environment, a processing subsystem for inexpensive local computation and storage, a communication subsystem for Transmission and a power subsystem as the source of energy.

The sensing components may be sensing temperature, humidity or light etc.the processing components process the measured data and communicating components communicate with base station or sink or other nodes by sending messages and delivering data as per requirement of the application. Wireless Sensor Networks (WSNs) consist of numerous such sensor nodes that set up a network among themselves in an adhoc manner. Wireless sensor networks are generally deployed in inhospitable terrain.

Thus there are several challenging issues that need to be dealt with. These include unattended operation, undeterred for energy and communication, dynamic environment and adhoc deployment, among many others. Among these issues, security and energy reign at the top. This work deals with the issue of security in WSNs. The nature of deployment of WSNs depends upon application and as per application requirement; the challenging issues are deal with.

For example, defense or military related application may put the issue of security as the first and

foremost requirement whereas any environmental application, like pollution monitoring, may not have security as its highest requirement, but may instead require data freshness. Again, an application's requirement of security may vary from application to application. This paper tries to provide an insight into the various aspects and implementation of security practices.

Nandini Chouhan (0808CS19ME04)

5. Vehicular Ad-hoc Network

Abstract

This paper focuses on studying the studying the Vehicular ad hoc networks (VANETs) and current protocols which are used in VANETs. Vehicular Ad hoc Network (VANET) is a subset of Mobile Ad hoc Networks (MANET), which forms wireless networks between vehicles and where each vehicle acts as a router to communicate with other vehicle. Our research involves creating a new algorithm for a new proposed protocol. Our proposed protocol provides better reliability and on comparison and analysis with other protocols on the basis of average end to end delay and packet delivery ratio our protocol is performing better than other current protocols.

Introduction

Vehicular Ad hoc network is one of the promising research areas in wireless networks. VANETs integrate the features of Ad hoc network, Wireless and cellular technology to achieve intelligent transport systems by communicating between vehicle to vehicle or vehicle to RSUs. This is mainly due to DSRC (Dedicated Short Range Communications) standardization which enables vehicles and road side units to form VANETs. The Vehicle Ad hoc network is defined as a fast moving outdoor communication network, also known as SOTIS (self-organizing traffic information system).

In VANET, the moving vehicles can constitute a network communication by exchanging the speed and position information for another. Each node in the network has the ability to find the path, which adopted the multi-hop to deliver the information sent out from the source node finally to the destination node place through a series of forwarding. The network communication is made up of two parts: vehicle to vehicle (V2V) communication and vehicle to infrastructure (V2I) communication. VANET routing is classified into:-

1. Unicast: Vehicle to Vehicle communication

2. Multicast: Vehicle to multicast members through multi hop communication

3. Geocast: A subset of Multicast with communication targeted in a specific geographical location

4. Broadcast: Vehicle to all the vehicles in the coverage area.

The existing VANET routing protocol can be roughly divided into three categories:

•   TBR, topology-based routing,

•   PBR, position-based routing,

•   Hybrid routing
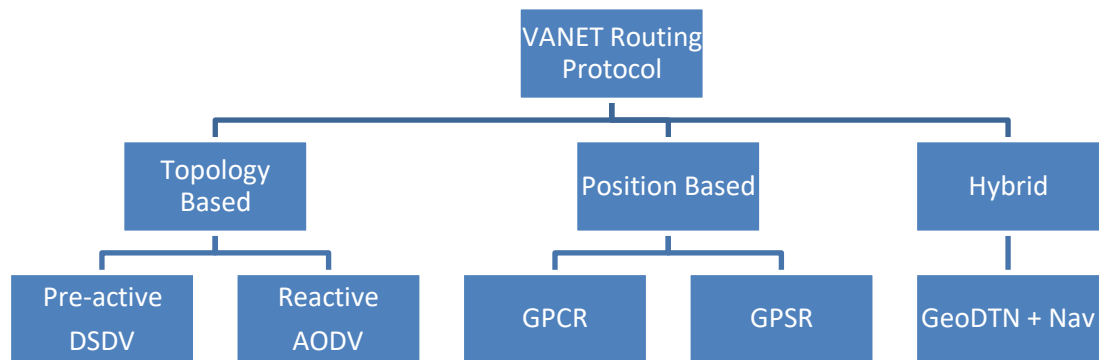
Figure 1 VANET Routing Protocol

Communication in VANET:

Information dissemination is very important in a VANET environment. Routing plays a vital role in information dissemination. By using Network coding we can improve the reliability of routing protocol in VANET. Communication networks nowadays share identical fundamentals of operation. Whether or not it's packets over the net, or signals in a very phone network, data is transported within the same means as cars share a road or fluids share pipes. That is, freelance information streams could share network resources, however the knowledge itself is separate. Routing, information storage, error management, and usually all network functions area unit supported this assumption. Network secret writing may be a recent field in scientific theory that breaks with this assumption. Rather than merely forwarding information, nodes could recombine many input packets into one or many output packets.

Linear network cryptography, in general, is comparable to the present example, with the distinction that the xor operation is replaced by a linear combination of the information, understood as numbers over some finite field. This enables for means far larger degree of flexibility within the way packets are often combined. Additionally to the outturn advantages proved during this example, network cryptography is additionally all right suited to environments wherever solely partial or unsure data out there for higher cognitive process. Like erasure cryptography, sure-fire reception of data doesn't rely upon receiving specific packet content however rather on receiving an adequate variety of freelance packets.

If we tend to linearly mix packets of length L, the ensuing encoded packet additionally has size L. In distinction to concatenation, every encoded packet contains solely a fraction of the data contained in original packets. One will think about linear network cryptography as a variety of data spreading. This encompasses a profit in several cases

Random network cryptography may be a straightforward nonetheless powerful secret writing theme, that in broadcast transmission schemes permits near best outturn employing a decentralized rule. Nodes transmit random linear combos of the packets they receive, with coefficients chosen from a Galois field.

Conclusion:

In this paper, we have study the various routing protocols to improve efficiency of VANET and how network coding is useful in VANET for many different purpose. Right now whatever work is done, does not support robust reliability means messages are lost due to frequently dis-connectivity. So with the help of random linear network coding, we will incorporate above mechanism to improve reliability of VANET routing protocol.

Utkarsh Shrotriya (0808CS171166)

6. Intrusion Detection System

Abstract

The intrusion detection systems are classified as Network based or Host based attacks. The network based attack may be either misuse or anomaly based attacks. The network based attacks are detected from the interconnection of computer systems. The host based attacks are detected only from a single computer system and is easy to prevent the attacks. Data mining can help improve intrusion detection by adding a level of focus to anomaly detection.

It helps in to classify the attacks to measure the effectiveness of the system. In this paper, one scenario of false positive is considered. The false positive is the case in which the normal data is detected as attack. We are focusing on this problem with the help of an example & proposing one solution for the same problem. The KDD CUP 1999 data set is used. The result of experiment shows that if a class has higher number of counts then this class is considered as an anomaly class. But if the true person is crossing the threshold value of count it will be count as anomaly.

To detect the true person & to remove false positive, one solution is proposed. A cluster is a collection of data objects that are similar to one another within the same cluster and are dissimilar to the objects in other cluster. There are basically three categories of IDS.

Signature Based Detection Systems (SBIDS) based on the known signature. This type of detection is more effective against known attacks, and it depends on the continuance updating signature. The main drawback of SBIDS is, it is unable to detect the unknown attacks and novel attacks, but the detection rate is higher than anomaly intrusion detection rates. **Anomaly Based Detection System** (ABIDS) has attracted many researchers due to its capability of detecting novel attack. Novel attack detection is technique for identification of unidentified attack that the machine learning system is not aware during training. ABIDS has two main advantages over SBIDS, First is the ability to detect unknown and "zero day" attack. This is done by comparing the normal activity with that of deviation from them. Second one is the normal activity profile are customized for system, network and therefore making it very difficult for an attacker to know with certainty what activities it can carry out without getting detected. The efficiency of the system depends on how well it is implemented and tested on all protocols. The major drawback of anomaly detection is defining its rule set.

Conclusion:

In case of encountering with three wrong attempts they are blocked by that bank's website for next 24 hours. In this paper, the solution is given for the particular problem. So if this solution is followed by system the problem of false positive can be reduced. Another important thing happen is that now the time taken to find anomaly reduces to 3.2 seconds from 3.78 seconds. It is very important to find the intrusion as early as possible. Eliminating the count attribute give us way to improve efficiency of Intrusion detection system. In the current scenario, many people suffer from these when they have to open account with the help of internet banking & because of having more accounts they have more password in their memory.

Vaishnavi Karma (0808CS19ME06)

7. Big Data Analytics

Abstract

Big data is the term for any collection of datasets so large and complex that it becomes difficult to process using traditional data processing applications. The challenges include analysis, capture, curation, search, sharing, storage, transfer, visualization, and privacy violations. Big data is a set of techniques and technologies that require new forms of integration to uncover large hidden values from large datasets that are diverse, complex, and of a massive scale. Big data environment is used to acquire, organize and analyze the various types of data. Data that is so large in volume, so diverse in variety or moving with such velocity is called Big data. Analyzing Big Data is a challenging task as it involves large distributed file systems which should be fault tolerant, flexible and scalable. The technologies used by big data application to handle the massive data are Hadoop, Map Reduce, Apache Hive, No SQL and HPCC. First, we present the definition of big data and discuss big data challenges. Next, we present a systematic framework to decompose big data systems into four sequential modules, namely data generation, data acquisition, data storage, and data analytics. These four modules form a big data value chain. Following that, we present a detailed survey of Materials and methods used in research and industry communities. In addition, we present the prevalent Hadoop framework for addressing big data. Finally, we outline Big data system architecture and present key challenges of research directions for big data system.

Introduction

Big data is a largest buzz phrases in domain of IT, new technologies of personal communication driving the big data new trend and internet population grew day by day but it never reach by 100%. The need of big data generated from the large companies like facebook, yahoo, Google, YouTube etc for the purpose of analysis of enormous amount of data which is in unstructured form or even in structured form. Google contains the large amount of information. So; there is the need of Big Data Analytics that is the processing of the complex and massive datasets This data is different from structured data in terms of five parameters –variety, volume, value, veracity and velocity (5V's). The five V's (volume, variety, velocity, value, veracity) are the

challenges of big data management are:

1. Volume: Data is ever-growing day by day of alltypes ever MB, PB, YB, ZB, KB, TB of information. The data results into large files. Excessive volume of data is main issue of storage. This main issue is resolved by reducing storage cost. Data volumes are expected to grow 50 times by 2020.

2. Variety: Data sources are extremely heterogeneous. The files comes in various formats and of any type, it may be structured or unstructured such as text, audio, videos, log files and more. The varieties are endless, and the data enters the network without having been quantified or qualified in any way.

3. Velocity: The data comes at high speed.Sometimes 1 minute is too late so big data is time sensitive. Some organisations data velocity is main challenge. The social media messages and credit card transactions done in millisecond and data generated by this putting in to databases.

4. Value: It is a most important v in big data. Value is main buzz for big data because it is important for businesses, IT infrastructure system to store large amount of values in database.

5. Veracity: The increase in the range of valuestypical of a large data set. When we dealing with high volume, velocity and variety of data, the all of data are not going 100% correct, there will be dirty data. Big data and analytics technologies work with these types of data. Huge volume of data (both structured and unstructured) is management by organization, administration and governance. Unstructured data is a data that is not present in a database. Unstructured data may be text, verbal data or in another form. Textual unstructured data is like power point presentation, email messages, word documents, and instant massages. Data in another format can be.jpg images, .png images and audio files.

Conclusion

In this paper we have surveyed various technologies to handle the big data and there architectures. In this paper we have also discussed the challenges of Big data (volume, variety,

velocity, value, veracity) and various advantages and a disadvantage of these technologies. This paper discussed an architecture using Hadoop HDFS distributed data storage, real-time NoSQL databases, and MapReduce distributed data processing over a cluster of commodity servers. The main goal of our paper was to make a survey of various big data handling techniques those handle a massive amount of data from different sources and improves overall performance of systems.

Aditya Namjoshi (0808CS171001)

8. Artificial Intelligence

Abstract:

Artificial intelligence (AI) is a field of computer science that explores computational models of problem solving, where the problems to be solved are of the complexity of problems solved by human beings. Artificial Intelligence is the study of how to make computers do things which, at the moment, people do better. It is the intelligence of machines and the branch of computer science that aims to create it. The study and design of intelligent agents is also called as Artificial Intelligence. The central problems of AI include such traits as reasoning, knowledge, planning, learning, communication, perception and the ability to move and manipulate objects. This paper intends to study the techniques developed in artificial intelligence (AI) from the standpoint of their applications in all fields related to engineering. In particular, it focuses on techniques developed (or that are being developed) in artificial intelligence that can be deployed in solving problems associated with distinct processes. This paper highlights a comparative study between approaches and its applications.

Introduction:

The ability of problem solving demonstrates intelligence. Consider a mouse trying to search/reach the piece of cheese placed at right top corner of the image the mouse can find more than one solutions to this problem. We can say that the mouse is intelligent enough to find a solution to the problem. Hence the ability of problem solving demonstrates intelligence. Intelligence is the computational part of the ability to achieve goals in the world, varying kinds and degrees of intelligence occur in people, many animals and some machines. Artificial Intelligence, or AI for short, is a combination of computer science, physiology, and philosophy. AI is a broad topic, consisting of different fields, from machine vision to expert systems. The element that the fields of AI have in common is the creation of machines that can "think". One of the most challenging approaches facing experts is building systems that mimic the behaviour of the human brain, made up of billions of neurons, and arguably the most complex matter in the universe.

Conclusion:

First, we should be prepared for a change. Our conservative ways stand in the way of progress. AI is a new step that is very helpful to the society. Machines can do jobs that require detailed instructions followed and mental alertness. AI with its learning capabilities can accomplish those tasks but only if the worlds conservatives are ready to change and allow this to be a possibility. It makes us think about how early man finally accepted the wheel as a good invention, not something taking away from its heritage or tradition.

Secondly, we must be prepared to learn about the capabilities of AI. The more use we get out of the machines the less work is required by us. In turn less injuries and stress to human beings. Human beings are a species that learn by trying, and we must be prepared to give AI a chance seeing AI as a blessing, not an inhibition. Finally, we need to be prepared for the worst of AI. Something as revolutionary as AI is sure to have many kinks to work out.

There are so many things that can go wrong with a new system so we must be as prepared as we can be for this new technology. However, even though the fear of the machines are there, their capabilities are infinite Whatever we teach AI, they will suggest in the future if a positive outcome arrives from it. AI are like children that need to be taught to be kind, well mannered, and intelligent. If they are to make important decisions, they should be wise. We as citizens need to make sure AI programmers are keeping things on the level. We should be sure they are doing the job correctly, so that no future accidents occur.

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