MAGAZINE

2021-22

TECH KNIGHTS

INFORMATION SCIENCE & ENGINEERING

Srishyla Educational Trust (R), Bheemasamudra

GM INSTITUTE OF TECHNOLOGY

The Department of Information Science & Engineering started in the year 2001 with an annual intake of 60 and provides an outstanding learning environment complimented by excellence in teaching. Having established with a firm footing in the field of technical education, the department has grown by leaps and bounds over last two decades and the spirit is still continuing in every possible way to tailor, shape and build the finest technocrats.

The Department is equipped with all necessary infrastructure and laboratory facilities. Keeping in view of the vision of the institute, the department of ISE is working to achieve excellence in various aspects such as: students' performance, effective teacher-student relationship, imparting quality education to students, motivating faculty and students towards research and imbibing best human qualities in students.

The VTU recognised Research centre has been established in the year 2017, by the department to provide an opportunity for research aspirants. The department is imparting effective the Outcome Based Education(OBE) as per NBA norms. An effective Mentoring scheme carried out by Alumni of the department to guide their juniors regarding career guidance, Entrepreneurship skill and recent IT trends Customised and Fast track training for students from IT Trainers and free lancers to excel in app development and to evolve with applications of their creative ideas. GM NextGen Innovation Centre is established in the Department from the year 2019 to offer students with full-fledged training and opportunities for students to come up with ideas and projects using IoT. Internships and Industry visits at reputed organisations for exposing students to practical knowledge in order to motivate and strengthen their vision and skills.

Vision

To evolve as an Excellent Technological Education Centre of Information Science and Engineering to create competitive professional engineers for the advancement of society.

Mission

M1: To provide application specific training & practical experience for developing quality engineers in Information Science & Engineering.

M2: To Inculcate Creative Skills in students to become competent in the field of Information Science & Engineering.

M3: To Inculcate Professional, Social and Ethical values in students to perform better in diverse environment.

Program Educational Objectives

PEO1: To develop graduates who are proficient to solve wide range of computing related problems.

PEO2: To prepare graduates who have the necessary skills required for higher education & Entrepreneurship.

PEO3: To prepare graduates who have the ability to engage in lifelong learning.

Program Specific Outcomes

Graduates of Information Science & Engineering are:

1. Capable to design, develop & test the IT Solutions in real time.
2. Competent to apply knowledge to manage & monitor IT

Message from Principal's Desk

Dr. Y. Vijaya Kumar
Principal

We at GM Institute of Technology are committed to build the future of the youth as well as youth for the future. The Institute is established to nurture, and shape technical professionals and leaders to create an inclusive and sustainable society by inculcating all round skills to the youth. In the world, governed by technology, this institute has put its sincere efforts to keep pace with the rising demands of technology.

The Department of Information Science and Engineering has taken birth along with the institution in the academic year 2001- 2002 and constantly enriching positive support for co-curricular activities and campus placement activities which equips the students to manage and lead the varied opportunities and Challenges of the society. The Department Magazine Tech Knights 2021-22 reflects all the outcome based happenings of the ISE department of the present Academic Year.

Message from HOD's Desk

Dr. Sunil Kumar B. S.
Chief Editor

Dear Readers,

Greetings from ISE-GMIT….I am happy to share and wish to bring to your kind notice few developments in the department. The very objective from the department for the academic year watch to bring a culture of self learning and to expose the students to the competition in the world. Many innovative thoughts have been executed to benefit the students. Placement is supported by the special Aptitude training by Mr Sharath, Copper Age.

The most seeking initiative in the department; Sukalpa-Tech fest has been organized and conducted in a grand manner.

The program has record enrolment and overwhelmed response from the students of different parts of the state. Sukalpa has set a new standard in the department and at the institute level by its way of conduction and participants flourish the real flavor of technical events in all segments i.e., start from coding, Presentations, Marketing, Design thinking & Entrepreneur skill check. Industry connectivity is emphasized by conducting much Internship with Sookshmas, Siemens, BPA Labs and APCOG Pvt Ltd. Also an International Hackathon was conducted by the BPA Labs has become the most appreciated both by the organizers and Participants.. It's my pleasure to greet and thank all the editorial committee members for their effort in bringing out this edition successfully.

Message from Faculty Editor

Ms. Bhoomika S S
Asst. professor

We all have something that makes us feel alive, a passionate pursuit that adds a little extra meaning to life, an activity that gives us a sense of fulfilment of purpose. We must Chase down our passion like it's the last bus of the night. We can do anything as long as we have the passion, drive, focus, and the support.

I have the passion of presenting the things beautifully & in organized pattern.With the overwhelming motivation and guidance of the Department Head, Principal and the strong support of my beloved student committee members, I am very happy to present the Annual Magazine "Tech-Knights" which provides the aroma of departments progress **towards success** and quality enhancements.

I extend the hearty gratitude and special thanks to Mr. Prakash T K, the technical staff of ISE for his patience and prolonged support in designing and making this magazine more presentable. With the feel of contentment, I owe my words of gratitude to everyone for their whole hearted support and wishes.

Academics Record

Srishyla Educational Trust (R), Bheemasamudra

G.M. INSTITUTE OF TECHNOLOGY, DAVANGERE

DEPARTMEN T OF INFORMATION SCIENCE & ENGINEERING

CA LEN DAR OF EVEN TS

Academic Year: 2021– 2022 (Odd Semester) **III, V & VII**

Week No.	Month	Week Days							No. of Working Days	Dept / Inst Event	Date
		MON	TUE	WED	THU	FRI	SAT	SUN			
1.	Oct-2021					1	2	3	1	Institute	October 1st – Commencement of Odd Semester for III & IV Year Students
										Institute	October 2nd (Sat) Gandhi Jayanthi
2.		4	5	6	7	8	9	10	5	Institute	October 6th (Wed) Mahalaya Amavasya
3.		11	12	13	14	15	16	17	4	Institute	October 14th (Thu) Mahanavami / Ayudha Pooja, 15th (Fri) Vijaya Dasham
4.		18	19	20	21	22	23	24	4	Institute	October 18th – Commencement of Odd Semester for- V Year Students
										Institute	October 19th (Tue) Ed-Milad, 20th (Wed) Valmiki Jayanthi
										ISE	October 21st Brain storming session for Electing Forum Body Membe and sports team formation and practice matches for upcoming colle level sports
5.		25	26	27	28	29	30	31	6	ISE	October 29th Freshers Welcome
6.	Nov-Dec 2021	1	2	3	4	5	6	7	3	Institute	November 1st (Mon) Kannada Rajyotsava
										Institute	November 3rd (Wed) Naraka Chaturdashi
										Institute	November 5th (Fri) Deepavali Balipadyami
7.		8	9	10	11	12	13	14	6	ISE	November 11th Forum Exotic Inauguration Technical Talk by Alumn for 3rd, 5th and 7th Sem students
8.		15	16	17	18	19	20	21	6	Institute	November 15th, 16th & 17th I-IA for III & IV Year Students
										ISE	November 18th Invited Talk by Mr. Sharath Kumar, Founder and CEO CopperAge, Davangere for 3rd, 5th and 7th Sem students
9.		22	23	24	25	26	27	28	5	Institute	November 22nd (Mon) Kanakadasa Jayanthi
										ISE	November 25th Session on Project Synopsis and Literature Survey by Sunil Kumar B S for 7th Sem students & session on GitHub Repository for 3rd and 5th Sem Students by Amruth 7th Sem IS&E.
										ISE	November 26th Parents Meet
10.		29	30	1	2	3	4	5	6	ISE	December 2nd Musical Collage Competition for 3rd and 5th Sem Students
										Institute	December 2nd, 3rd & 4th I-IA for II Year Students
11.	Dec 2021-Jan 2022	6	7	8	9	10	11	12	6	ISE	December 9th Quiz Competition on C programming for 3rd Sem Students & LinkedIn Profile Creation snd Usage for 5th Sem Students by Harsha and Deepak of 7th Sem ISE
										ISE	December 9th & 10th Workshop on Machine Learning Using Python
12.		13	14	15	16	17	18	19	6	ISE	December 16th Paper collage event for 3rd sem under the banner of IS Forum Exotic
										Institute	December 16th, 17th & 18th II-IA for III & IV Year Students
13.		20	21	22	23	24	25	26	5	ISE	December 23rd Hands on Training on MS Excel for 5th Sem by Arushi S Agadi of 5th Sem ISE
										ISE	December 23rd, 24th and 25th 3 Day Workshop on " Lets Talk IoT "
										Institute	December 25th (Sat) Christmas Celebrations
14.		27	28	29	30	31	1	2	6	ISE	December 30th Idea Marathon Event will be conducted for 3rd and 5th Semester Students
15.	Jan-Feb 2022	3	4	5	6	7	8	9	6	ISE	January 6th and 7th 2 Day Workshop on " DBMS " Bootcamp
										Institute	January 6th, 7th & 8th II-IA for II Year Students
16.		10	11	12	13	14	15	16	5	ISE	January 11th and 12th SUKALPA - A Two Day State Level Tech Fest
										ISE	January 13th Indoor Games for 3rd Semester Students.
										Institute	January 14th (Fri) Makara Sankranthi
17.		17	18	19	20	21	22	23	6	ISE	January 20th Test Your IQ– Competition will be conducted for 3rd Semester Students
										Institute	January 20th, 21st & 22nd III -IA for III & IV Year Students
18.		24	25	26	27	28	29	30	5	ISE	January 27th Poster making competition on ADE course for 3rd Seme Students
										Institute	January 26th (Wed) Republic Day
19.		31	1	2	3	4	5	6	6		
20.	Feb-Mar 2022	7	8	9	10	11	12	13	6	Institute	February 10th – Last Working Day of Odd Semester for III & IV Year Students
21.		14	15	16	17	18	19	20	6	Institute	February 14th, 15th & 16th III -IA for II Year Students
										ISE	February 17th Role Play on academic topics for 3rd Sem Students
22.		21	22	23	24	25	26	27	6		
23.		28	1	2	3	4	5	6	5	Institute	March 1st (Tue) Maha Shivaratri
										ISE	March 3rd Symposium on Mini Project Development on ADE Lab
24.	Mar-2022	7	8	9	10	11	12	13	6		
25.		14	15	16	17	18	19	20	6		
26.		21	22	23	24	25			5	Institute	March 25th – Last Working Day of Odd Semester for- IV Year Students
Actual Teaching Days		21	21	19	20	18	19	0	118	No. of Actual Teaching Days / No. of Working Days	
									142		

Holidays	Student/Forum Activity	Commencement/ Last Working Day	Institute/I. A. Tests - Theory	FDP/Workshops

Sd/-
IQAC

Sd/-
HOD

Academics Record

Srishyla Educational Trust (R), Bheemasamudra

G.M. INSTITUTE OF TECHNOLOGY, DAVANGERE

CALENDAR OF EVENTS

Ref : VTU/Aca/COE/2021-22/2

Academic Year : 2021– 2022 (Even Semester) Semesters : **VI & VIII**

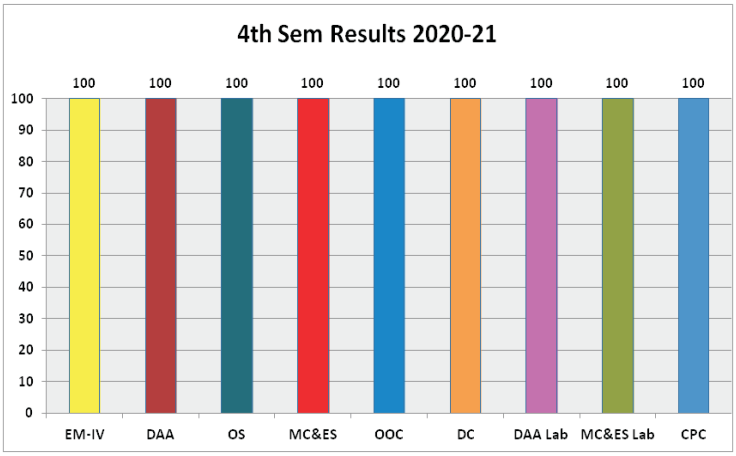
Week No.	Month	Week Days							No. of Working Days	Date	Institute / Department Events
		MON	TUE	WED	THU	FRI	SAT	SUN			
1.	April-May 2022	4	5	6	7	8	9	10	6	April 4th – Commencement of Even Semester for III & IV - Year Students	INSTITUTE
										April 7th & 8th	ISE-01
2.		11	12	13	14	15	16	17	4	April 14th(Thu) Dr. B. R. Ambedkar Jayanthi	GOVT. HOLIDAY
										April 15th(Fri) Good Friday	GOVT. HOLIDAY
										April 17th	NSS-01
3.		18	19	20	21	22	23	24	6	April 19th	EC-01
										April 22nd	BT-01
										April 24th Graduation Day	(INS-01)
4.		25	26	27	28	29	30	1	6	April 25th to 27th	ISE-02
										April 27th	CV-01
										April 28th to 30th	NSS-02
										May 1st (Sun) Labors Day	GOVT. HOLIDAY
5.		2	3	4	5	6	7	8	5	May 3rd (Tue) Basaveshwara Jayanthi	GOVT. HOLIDAY
										May 4th , May 5th	CV-02, ISE-03
										May 6th	BT-02
6.		9	10	11	12	13	14	15	6	May 9th, 10th & 11th	I - IA for III & IV Year (INS-02)
										May 12th & 13th	ISE-04
										May 12th to 14th	CV-03
										May 13th , May 13 & 14th	BT-03, SC-01
7.	May-June 2022	16	17	18	19	20	21	22	6	May 16th , May 16th to 18,	CV-04, CS-01
										May 20th	BT-04, CV-05
										May 20th & 21st	SC-02
8.		23	24	25	26	27	28	29	6	May 23rd	CV-06
										May 24th to 26th	ISE-05
										May 26th to 28th, May 28th	EC-02, NSS-03
										May 27th , May 27th & 28th, May 27th & 28th	BT-05, CS-02, SC-03
9.		30	31	1	2	3	4	5	6		
										June 2nd to 4th	EC-03
										June 3rd & 4th, June 4th, June 4th	SC-04, SC-05
										June 5th	NSS-04
10.	June-July 2022	6	7	8	9	10	11	12	6		
										June 9th, 10th & 11th	II - IA for III & IV Year (INS-03)
										June 11th & 12th	SC-06
11.		13	14	15	16	17	18	19	6	June 16th	CV-07
										June 17th	BT-06
										June 17th & 18th Mallika-2022	(INS-04)
12.		20	21	22	23	24	25	26	6		
										June 21st	NSS-05
										June 24th	BT-07, CV-08
13.		27	28	29	30	1	2	3	6	June 27th, 28th	III - IA for IV Year (INS-05)
										June 30th – Last Working Day for IV - Year Students	INSTITUTE
14.	July-2022	4	5	6	7	8	9	10	6		
										July 8th	BT-08
										July 10th (Sun) Bakrid	GOVT. HOLIDAY
15.		11	12	13	14	15	16		6	July 11th, 12th & 13th	III - IA for III Year (INS-06)
										July 15th	BT-09
										July 16th – Last Working Day for III - Year Students	INSTITUTE
Actual Teaching Days		12	11	13	13	13	14	0	76		
									87	No. of Actual Teaching Days / No. of Working Days	

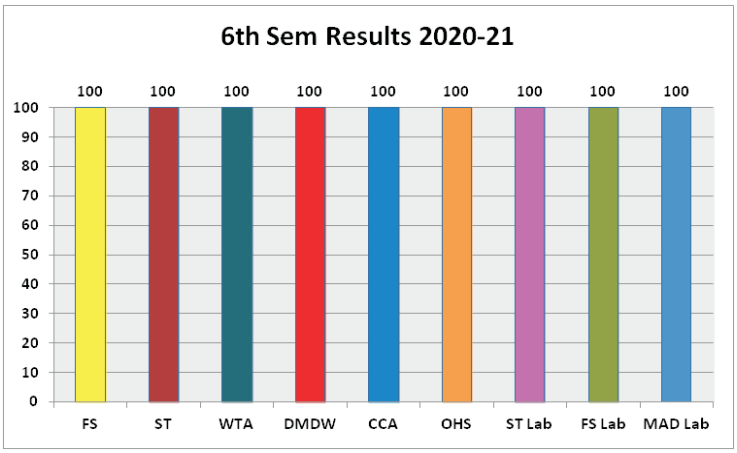
Govt. Holidays	Sundays	Student/Faculty Activity	Feedback / Mentorship	I. A. Tests - Theory	Commencement/Last Working Day of Semester

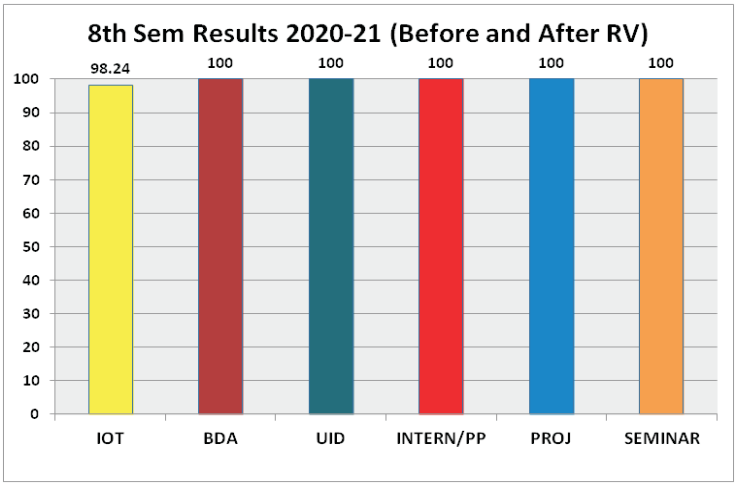
Course	Term Commencement	Last Working Day	VTU Practical Exams	VTU Theory Exams	Internship/Viva Voce / Project
B.E. VI SEM	04-04-2022	16-07-2022	18-07-2022 to 29-07-2022	01-08-2022 to 20-08-2022	----------
B.E. V, VIII SEM	04-04-2022	30-06-2022	----------	04-07-2022 to 20-07-2022	22-07-2022 to 30-07-2022

Prepared by :	Approved by:	Approved by:
Signature:	Signature:	Signature:
Designation: Dean Academic	Designation: IQAC	Designation: Principal

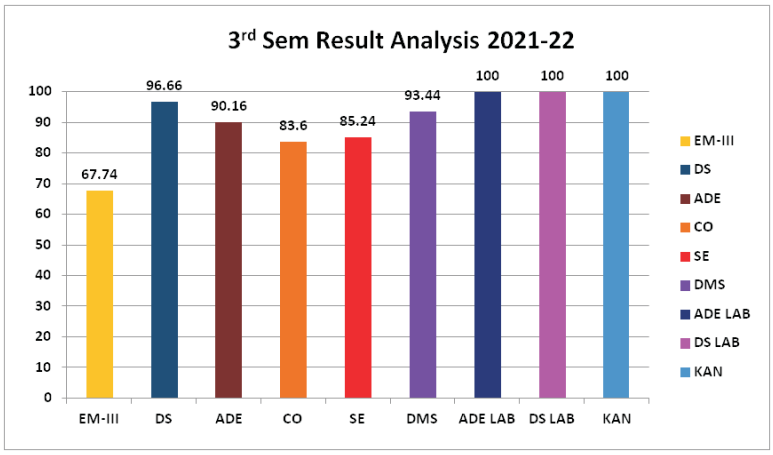
Academic Result Analysis of Even Sem 2020-21

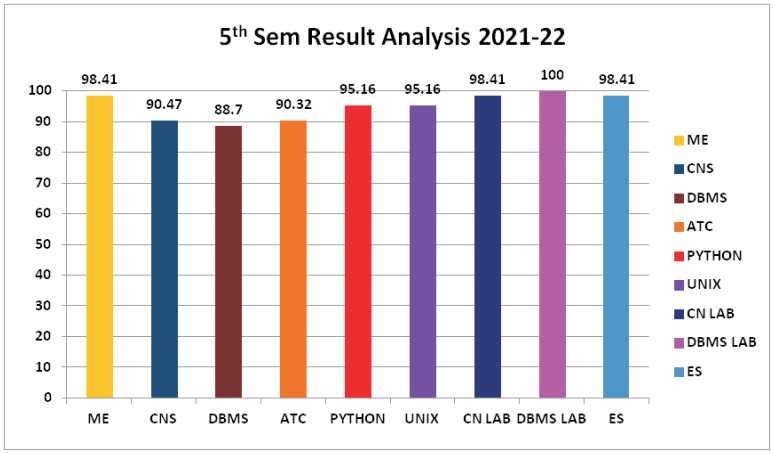


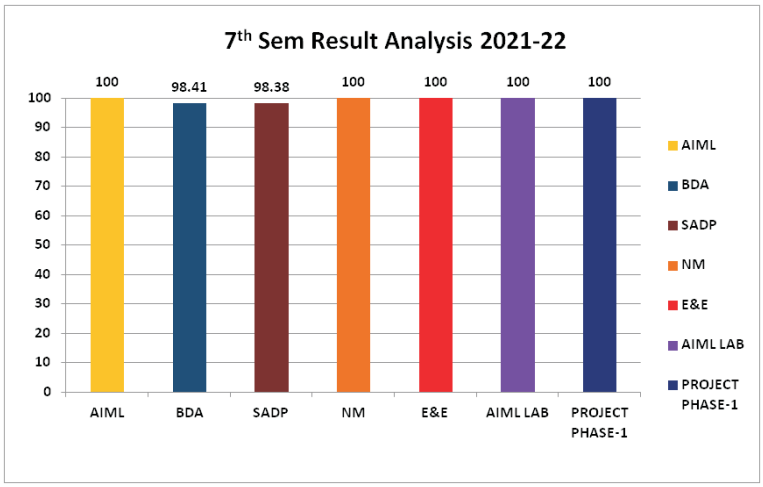




Academic Result Analysis of odd Sem 2021-22







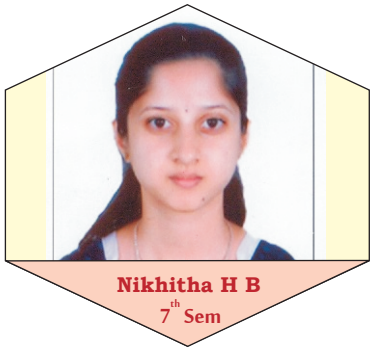
CONGRATULATIONS!

Icons of ISE

Academic Toppers

CONGRATULATIONS!

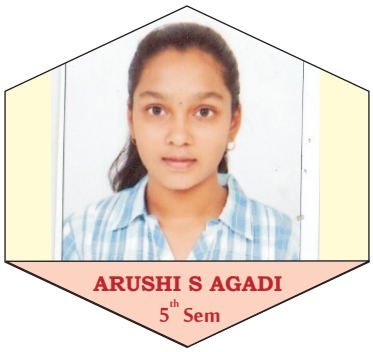
Academic Year 2021-22



Nikhitha H B
7th Sem

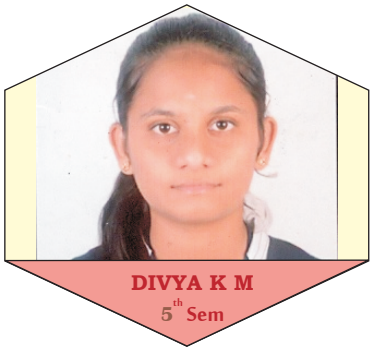
AISHWARYA S YELI
7th Sem

THANUSHA H
7th Sem



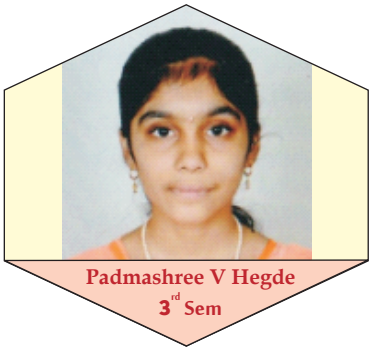
ARUSHI S AGADI
5th Sem

VINAY H N
5th Sem



DIVYA K M
5th Sem

JEEVITHA M J
3rd Sem

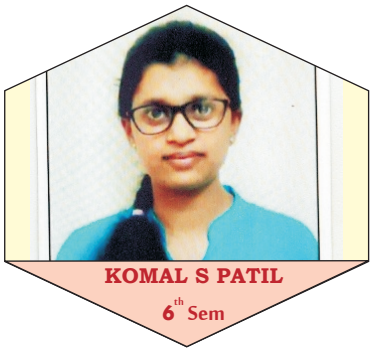


Padmashreee V Hegde
3rd Sem

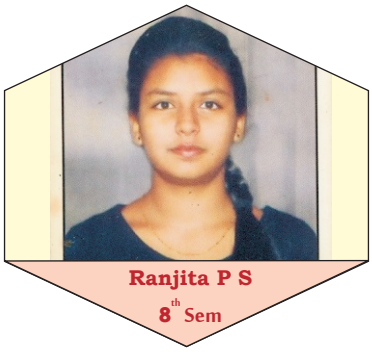
Aishwarya Varma B M
8th Sem

SHREYA V UPADHYAYA
3rd Sem

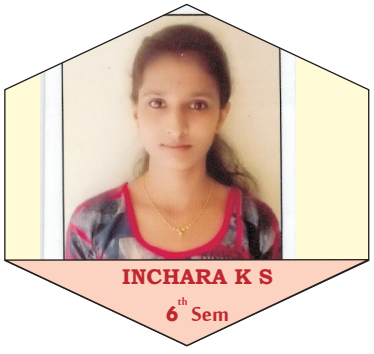
Gururaj A Dalawai
8th Sem



KOMAL S PATIL
6th Sem



Ranjita P S
8th Sem



INCHARA K S
6th Sem

FACULTY OF ISE

HOD

Dr. Sunil Kumar B S

Mrs. Neelambike S

ISE family

Mr. Tejasvi Kattimani T.R

Mrs. Nasreen Taj M.B

Mr. Imran Khan

Mr. Firoz Khan

Technical Staff

Prakash T. K.

Mr. Amith Shekhar C

Mr. Vishwanath V K

Praveen V. A.

Mrs. Soumya Yathihalli

Ms. Bhoomika S

Sathyanarayana N. M.

STUDENTS STRENGTH 2021-22

II YEAR - 62

III YEAR - 68

IV YEAR - 63

TOTAL = 193

FACULTY STRENGTH = 10

STUDENT-FACULTY RATIO = 1:18

Project Batches selected for VTU Funding for the Academic Year 2021-22

1. **Project Tittle:** Deep Learning for Smartphone - Based Malaria Parasite Detection in Thick Blood Smears
   Guided by: Mr. Firoz Khan
   Project Associates: Chandrika S R, Diksha M M, Soniya B S, Kallesh S S
   Sanctioned Amount: 5000
2. **Project Tittle:** Cotton Leaf Disease detection using Deep Learning
   Guided by: Dr. Neelambike S
   Project Associates: Aishwarya Varma B M, Bhoomika V, Deeksha M P, Prajwal T M
   Sanctioned Amount: 5000

KSCST Sponsored Projects

1. **Project Tittle:** Malware Detection and Prevention Using Machine Learning
   Guided by: Mr.Amith Shekar C
   Project Associates: Mr. Nagachandan P, Ms. Sanjana V G, Ms.Vaishnavi R Surve, Mr. Vinay K S
   Sanctioned Amount: 6000
2. **Project Tittle:** Design of Hybrid Cryptography based on Vigenere Cipher and Polybius Cipher
   Guided by: Mr.Vishwanath V K
   Project Associates Ms. Hima R Ms. Kavya D S Ms. Ranjita P S Ms. Sputhi R
   Sanctioned Amount: 4000

STATE LEVEL COMPETITION

Innovative Product Design

Paper Presentation

Engineer's Eye

List of Students Placed in Academic Year 2021-22

JANSY K S
4GM18IS020

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Junaid Ahmed Khan
4GM18IS022

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

KALLESH S S
4GM18IS022

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Kavya D S
4GM18IS014

6D Technologies
Smart Ideas, Delivered

Kiran Gowda
4GM18IS025

Capgemini

wipro

Kruthik P Jain
4GM18IS027

Robosoft
EMOTION ENGINEERING & DESIGN

EY
Building a better working world

Navyakeerthi M
4GM18IS029

wipro

Nehal V
4GM18IS030

wipro

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Nidhi R S
4GM18IS031

wipro

Infosys®

Pavan S Raikar
4GM18IS036

Skolar

Pooja K M
4GM18IS037

wipro

Poornima S Patil
4GM18IS038

wipro

Prakruthi R D
4GM18IS039

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Shiva M N
4GM17IS046

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Priyanka C
4GM18IS040

GLOBAL QUEST
TECHNOLOGIES

Rajeshree K B
4GM18IS043

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Skolar

Ranjita P S
4GM18IS044

TATA
CONSULTANCY SERVICES

wipro

Sahana B
4GM18IS047

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Sahana H Patil
4GM18IS048

wipro

Capgemini

Sahana M H
4GM17IS036

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Sanjana V G
4GM18IS050

Capgemini

wipro

TATA
CONSULTANCY SERVICES

Sarah Kounien
4GM18IS046

GLOBAL QUEST
TECHNOLOGIES

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Shifa Fathima
4GM17IS045

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Skolar

Vinaya S L
4GM18IS061

wipro

Capgemini

Infosys®

Soniya B S
4GM18IS052

HCL

SLK

EY
Building a better working world

wipro

Vaishnavi R Surve
4GM18IS057

Capgemini

Soumya R M
4GM17IS052

wipro

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

THANUSHA H
4GM18IS056

wipro

Spurthi R

wipro

Sumera H

Infosys®

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

Varsha K S
4GM18IS059

FOCUS EDUMATICS
ACCELERATING TRANSFORMATION

52 Placed

MoU's LIST

Sl. No.	Company Name	MoU Date
1.	New Age Innovation Network	12th Sep 2022
2.	Sookshmas E-learning Pvt. Ltd. Bengaluru	14th Feb 2020
3.	ATS Infotech Pvt. Ltd.	8th Jan 2020
4.	Advanced Electronics Systems, Bengaluru	3rd Dec 2019
5.	BPA Labs Prague, Czech Republic	29th Sep 2020
6.	Xtrans Soltions, Bengaluru	3rd Dec 2019
7.	SAP	8th Aug 2019
8.	Idea Carve Technologies Pvt Ltd	7th Jan 2019
9.	Redhat	3rd Jan 2019
10.	Gem Ventures LLP (Bhimart)	11th Aug 2018
11.	Indian Aviation Trade	23rd Jan 2018
12.	Grasim Industries Limited	26th Oct 2017

Forum Inauguration

Parents Meet

Parents Meet

List of Forum Activities Conducted in 2021-22

21-10-2021 Brain storming session for Electing Forum Body Members and sports team formation

02-12-2021 Musical Collage Competition

09-12-2021 LinkedIn Profile

30-12-2021 Idea Marathon Event

13-01-2022 Indoor Games

21-04-2022 Pre Placement Test

19-05-2022 Group Discussion

26-05-2022 Rangoli Competition, Mehendi Competition

26-05-2022 Face Painting Competition

09-06-2022 CODES

24-06-2022 Invited Talk

Forum Valedictory

Exotic - A strong & active forum conducts various useful events every week, which helps in all round development of students in the Perspective of technical stability, communication skills & Placement assistance.

Events @ ISE

2021-2022

Highlights of ISE 2021-21

A bird's View

Two KSCST Sponsored Projects

Two VTU Sponsored Projects

Five Workshops Organized

10 Journal Publications

4 Conference Presentations

52 Placed

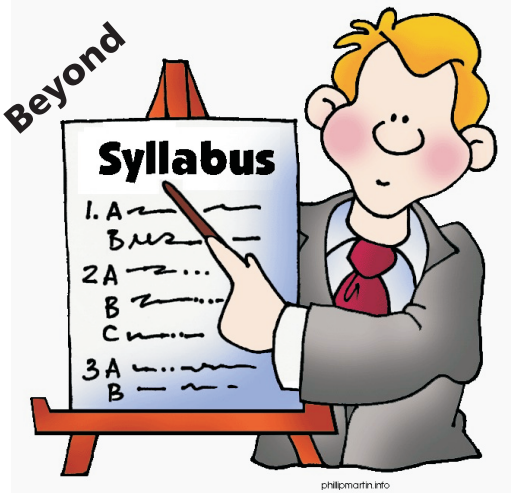
2 Internships Conducted

ISE

TOWARDS SUCCESS

Best Practices and Supportive Co-curricular Activities like Role Plays, Chart Presentations, Case studies, Quiz & other ICT enabled Activities are effectively carried out to provide in depth knowledge & interest towards the subjects

Workshops



Two Day Symposium on **"Mini Project for ADE Lab"** in association with GM NextGen Innovation Centre.

3rd & 4th March, 2022

Student Enhancement Program on **"Let's Talk IoT"**

23 Dec to 25 Dec 2021.

Two Day Workshop on **"DBMS Bootcamp"**

6th & 7th, Jan 2022

Two day bridge course on **"POP to OOP"** in collaboration with Sookshmas E-Learning Pvt. Ltd. Bengaluru and IQAC-GMIT

21st & 22nd Jun 2022.

Two days Technical Training Program on **"Think Python"** in collaboration with IQAC-GMIT and Bhimart, Bengaluru

3rd & 4th June,2022.

"Sukalpa" - A State level Tech Fest

"AN INVESTMENT IN KNOWLEDGE PAYS THE BEST INTEREST"

Sukalpa: A State level technical fest conducted on 11th and 12th of Jan 2022, where every student got an opportunity to present his/her innovative skills and talents. Sukalpa invited the participants from various Engineering colleges all over the State. This also provided an opportunity to exhibit ideas by participants on a unique and massive platform in the form of well-integrated and intriguing presentations. It successfully explored the inquisitiveness of young minds by giving their incredulous ideas a definitive direction.

Sukalpa was organized in association with ISTE and in collaboration with Sookshmas E-Learning Pvt Ltd, Bengaluru and BPA Labs Czech Republic. The event obtained the overwhelming response by around 130 teams' registration where more than 250 participants from in and around the city took part in the competitions. The event had a sparkling start with the welcome dance by final year students of ISE – A flash mob which attracted every invitee and students over there. Followed by the inaugural ceremony with the gracious presence of the chief guest Dr. Sharvani G S, Associate Professor, Department of CSE, RVCE, Bengaluru.

Sukalpa included four events of diversified expertise such as Code Heist, Anavarana, Tech Wizards and Sagacity.
Code Heist: A coding competition intended to encourage students in coding and logical thinking. The event is based on simple C programming concepts.
Anavarana: A technical paper presentation in view of betterment of society and mankind. There are many ways to contribute to the society. Each step towards its advancement makes a difference.

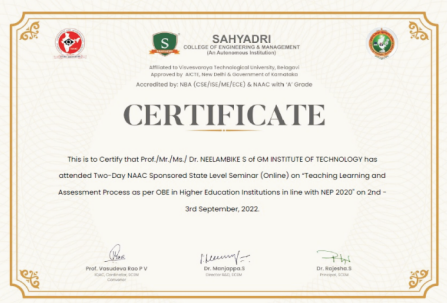
Tech Wizards: An event in which participants come up with ideas for new applications whether web, mobile or desktop app. This event will focus on skills such as system design and product management.

Sagacity: An event is planned to gauge and reward their IQ through a series of enjoyable rounds. It just demands the presence of mind, Audio visual observations, and the basic details regarding celebrities, logos, taglines, puzzles / model building, and treasure hunts.
All the planned events were effectively conducted with hard efforts and involvement of student coordinators. The participants of other colleges heartily appreciated the conduction mannerism and the coordinators.

Faculty Development Programme

1. Dr. Neelambike S, Asst Professor of IS&E, has successfully participated in IP Awareness/Training program under **"Intellectual Property Awareness"** on may 23rd 2022 organized by Intellectual Property Office, India.

2. Amith Shekhar C, Asst Professor of IS&E, attended a Three Days Virtual Faculty Development Program on **"Data Science & Networking"** organized by the Department of Electronics and Communication Engineering, Rajeev Institute of Technology, Hassan from 25th to 27th August 2022.



3. Dr. Neelambike S, Asst Professor of IS&E, attended Two Day NAAC Sponsored State Level Seminar on **"Teaching Learning and Assessment Process as per OBE in higher Education Institutions in line with NEP 2020"** on 2nd & 3rd September 2022

4. Ms. Bhoomika S S, Asst Professor of IS&E, attended Two Day NAAC Sponsored State Level Seminar on **"Teaching Learning and Assessment Process as per OBE in higher Education Institutions in line with NEP 2020"** on 2nd and 3rd SEP 2022

Certificate by Students

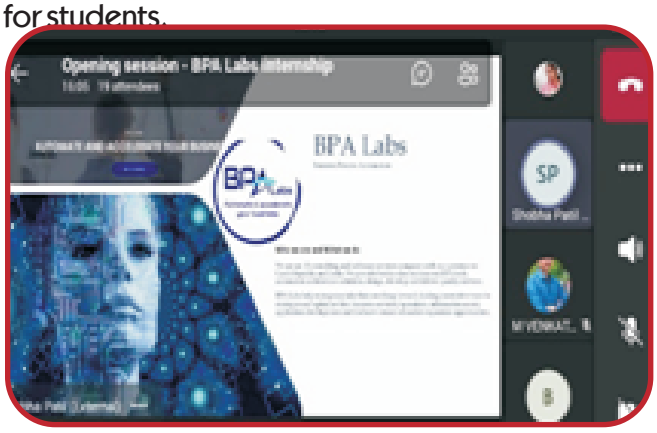
AWS Cloud Beginners Certification

Dept. of IS&E, 6th Semester around 15 students had actively took part in AWS Cloud Beginner's Certification Program conducted by reknowned online education platform Edureka and has achieved 'A' grade in their course completion examination.

INTERNSHIPS 2021-22

1. IoT Internship By ALS : The Department has conducted a session on "Iot Based Mini Project Development" as a part IoT Internship on 29th September, 2021 for final year students in association with ALS, Bengaluru. The Session was handled by Ravindra Moditaya, Consultant ALS Bengaluru & Chidambar Kulkarni, Assistant Manager ALS Bengaluru. About 20 Participants from IS&E Department has attended this session. This session is coordinated by Mr. Naveen RCM & Mr.Imran Khan.

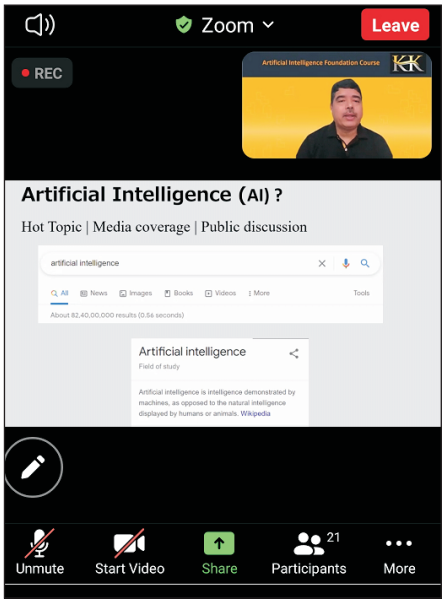
"YOU DON'T HAVE TO BE GREAT TO START,BUT YOU HAVE TO START TO BE GREAT" Intership is such life starting opportunities for students.

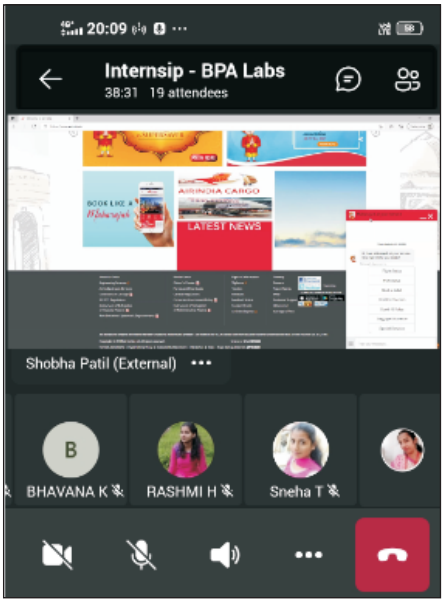


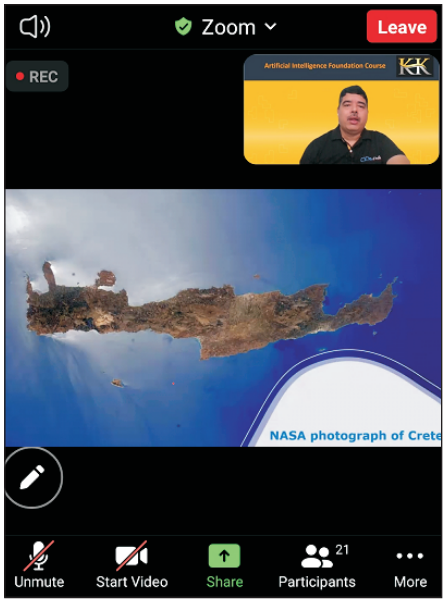
2. BPA Labs Internship:

a. Opening Session BPA Labs Internship:

The Opening Session BPA Labs Internship was handled by Mrs. Shobha Patil the session and taken introduction of all interns and gave certain tips on how to introduce at the last. The session conducted on 18th September,2021.







b. A session on "Artificial Intelligence Foundation Course" was conducted on 25th September,2021. The session was handled by Dr. Kamal K from IIT, Kharagpur.

c. Mrs.Shobha Patil and Ms.Leena handled the session on "AI & ML" and discussed about introduction to AI and ML and shown some websites and gave some real time examples of AI&ML. The session conducted on 21st September, 2021.

d. A session on "Machine Learning Foundation Course" was conducted on 26th September, 2021.

The session was handled by Dr. Kamal K from IIT, Kharagpur.

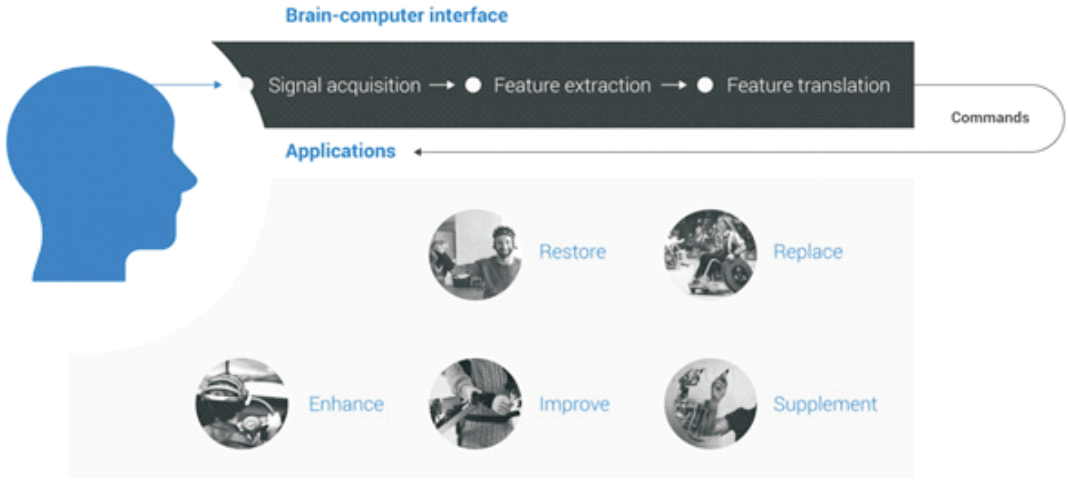
Article Section

Brain–computer interface:

A brain–computer interface, sometimes called a brain–machine interface, is a direct communication pathway between the brain's electrical activity and an external device, most commonly a computer or robotic limb. BCIs are often directed at researching, mapping, assisting, augmenting, or repairing human cognitive or sensory-motor functions.

The basic setup of a BCI system includes three components:

1. Specific electrodes to record electric, magnetic, or metabolic brain activity.
2. A processing pipeline to interpret those signals, extracting relevant features from them, decoding patterns of interest, and outputting commands.



There are a wide variety of devices that can be controlled using brain commands, and they can be used in five ways: to replace, restore, enhance, supplement or improve some human function.

Techniques to measure brain activity

The first component of BCI technology is a method to record the human brain signals. It could be considered the most relevant, since it determines aspects like the cost, the potential areas of application and the population that can use it. The activity of the brain can be measured with sensors implanted inside the body (invasive BCIs) or with external sensors (non-invasive BCIs)

1. Invasive recordings allow measuring the electrical activity of neural populations with very high temporal and spatial resolution, meaning that we can know very precisely when and where a certain pattern of neural activity occurred. However, they require very expensive equipment and a complex set-up that involves surgery, with non-negligible postsurgical potential risks associated. For this reason, most of the BCI research in this field has been conducted with animals, although the number of research laboratories in the world using implantable BCIs with humans (mostly patients with motor impairment) is growing.
2. Non-invasive sensors allow recording electric activity (with electroencephalography, EEG), magnetic activity (with magnetoencephalography, MEG), or metabolic activity (with functional near-infrared spectroscopy, fNIRS).

By: Mr. Imran Khan, Asst. Professor, IS&E

Why Artificial Intelligence is Must for Cybersecurity

With the rapid development of artificial intelligence (AI), there is no doubt that this technology is starting to have a profound impact on our lives. One of the most controversial topics surrounding AI is whether or not it will eventually lead to large-scale job losses.

There are certainly some jobs that AI is already starting to take over. For example, many retail stores are now using self-checkout kiosks instead of human cashiers. And there are many other examples of tasks that can now be performed by AI-powered software, such as customer service, data entry, and even legal research.

But what about the advantages of AI? How can artificial intelligence protect us from devastating cyber attacks? Some cybersecurity companies are already taking advantage of AI for good.

What is Cybersecurity?

Cybersecurity is the practice of protecting electronic information by mitigating information risks and vulnerabilities. Information risks can include unauthorized access, disclosure, interception, or destruction of data, etc. Data can include but is not limited to, the confidential information of businesses, banks, or individual users.

In cybersecurity, vulnerabilities are weaknesses in systems or devices that can be exploited by attackers to gain unauthorized access to data or servers. Common vulnerabilities include insecure software design, 0-days, configuration errors, and poor user management practices. Attackers can exploit these vulnerabilities to gain access to sensitive data or systems, often without the knowledge of the victim/target.

There are many different types of cybersecurity threats, including viruses, worms, Trojans, phishing attacks, ransomware, insiders, SQL injection attacks, denial-of-service attacks (DDoS attacks), etc.

What is artificial intelligence?

In computing, artificial intelligence (AI) is the ability of a machine to accurately simulate human intelligence. This means that AI computers can learn and understand complex tasks, make decisions, and carry out human-like actions.

While AI has been around for centuries in various forms, it has only recently become a staple in mainstream computing. This is due in part to the rapid advancement of technology, which has allowed AI to become more sophisticated and capable than ever before.

There are many different types of AI, each with its own strengths and weaknesses. Some of the most popular types of AI include machine learning, natural language processing, and computer vision. Cybersecurity and Artificial Intelligence

When it comes to cybersecurity, artificial intelligence (AI) is increasingly being seen as a valuable tool. By automating the process of identifying and responding to threats, AI can help organizations improve their security posture and better protect their data.

In addition to threat detection, AI can also be used for incident response and forensics. By understanding the patterns of past attacks, AI can help analysts predict future attacks and take steps to prevent them. And by analyzing large amounts of data more quickly than humans could, AI can help investigators identify the root cause of an attack more rapidly.

Some additional use of AI in cybersecurity include the following:

1. Encrypted traffic analysis 2.Providing recommendations 3. Recognition of voice, language, and speech 4. Automation of software vulnerability search 5. Detection of fake photos and substituted pictures. 6. Detection of malicious code and malicious activity in corporate networksStatistics on AI use in cybersecurity

Overall, AI provides a number of advantages for businesses, both in terms of cost savings and efficiency gains. As technology continues to evolve, we can expect even more innovative applications of AI in the business world.

As technology becomes more and more advanced, it's no surprise that cybersecurity and artificial intelligence are two of the most talked-about topics in the tech world. And for good reason – they're both incredibly important.

Conclusion

In conclusion, artificial intelligence is not a silver bullet for cybersecurity, but it can be a powerful addition to an organization's security arsenal. When used correctly, AI can help organizations improve their security posture and better protect their data.

By: Mr. Firoz Khan, Asst. Professor, IS&E

Machine Learning Approaches to Classify Medications Based On Mechanisms

A crucial part of drug development is the mechanism of action. It can assist scientists in the drug discovery process. This research presents a machine learning approach for predicting a drug's mechanism of action. Binary Relevance K Nearest Neighbors (Type A and Type B), Multilabel K-Nearest Neighbors, and a proprietary neural network are the machine learning models employed in this paper. The mean column-wise log loss is used to evaluate these machine learning models. With a log loss of 0.01706, the custom neural network model had the best accuracy. The Flask framework is used to integrate this neural network model into a web application. A user can upload a custom testing features dataset that includes gene expression and cell viability. The top drug classes will be displayed on the online application, along with scatter plots for each medication.

By: Dr. Neelambike S, Associate Professor, IS&E

Patent

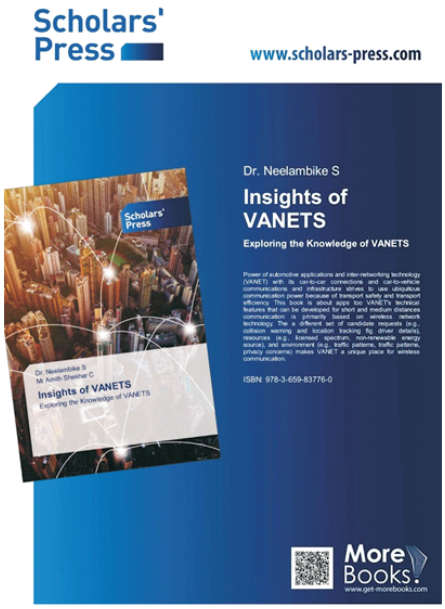
Dr. Neelambike S published a Patent titled **"Apparatus and Method for Filling a pit"** in collaboration with the Civil Engineering Department.

This Patent invention provides an apparatus and method for filling a pit with concrete. The dimensions of the pit are found by image processing of images of the pit from at least two different points. The volume of the pit is computed and a robotic arm equipped with a concrete filling nozzle is controlled by a computer under supervision of an operator. Uniform filling of the required amount of concrete is achieved.

Book Publication

Insight of VANET

Dr. Neelambike S and Amith Shekhar C published a book titled **"Insight of VANET"** in Scholar Press, which has been translated into six languages: German, Spanish, French, Italian, Portuguese, and Russian on 26, January, 2022.



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