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DEPARTMENT OF INFORMATION SCIENCE & ENGINEERING

Support of

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HOD, DEPT OF ISE

EDITOR'S COLUMN

It gives us an immense pleasure to introduce this Newsletter of Information science and engineering named "**SCIENTIA**" it is the Latin word for knowledge. By presenting this Newsletter we wish to provide you the same. The department of information Science & Engineering is composed of an Undergraduate program in information science and engineering with an intake of 120. Our Placement and result records are very impressive. The high quality research work being pursued by the faculty and students is very evident from the large number of research papers being published in referred journals. I thank all the students and faculties for their contribution

AN EPITOME OF KNOWLEDGE

EDITOR
MRS. SRIDEVI K.N
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Assistant Professor, Dept Of ISE
TUSHAR
Student, Dept Of ISE

ABOUT THE DEPARTMENT

The department of information science and Engineering(ISE) is a centre of Excellence providing in-depth technical knowledge and imparting Grassroots thinking in the field of information technology. The Department constantly thrives to nourish the true spirit & wisdom of information technology, into the younge aspirants. The department with its cohesive team of faculty members, offers a sound program at the UG and aims to output Engineers of Innovative Technology.

VISION OF THE DEPARTMENT

To produce graduates with strong fundamentals in information technology to face challenges of global IT needs with ethical values.

MISSION OF THE DEPARTMENT

M1: To impart theoretical foundation and programing skills for the design and development of software systems.

M2: To produce information technologists to excel in professional,career,leadership,and entrepreneurship.

M3: To inculcate multi-disciplinary research ambience among them to transform their knowledge useful to the society.

PROGRAM EDUCATION OBJESTIVES(PEO'S)

After 3-4 years of Graduation, the ISE Graduates will be able to:

PEO1: Develop new strategies to solve engineering problems related to Information Technology.

PEO2: Pursue career in the IT industry, academia, engineering management and Research.

PEO3: Provide graduates a platform for life-long learning in innovative technologies.

PROGRAM SPECIFIC OUTCOMES (PSO'S)

After the successful completion of the program, the graduates will be able to:

PSO1: Design and develop computing systems inculcating the best practices for hardware implementation and software programming.

PSO2: Ability to provide discerning solutions based on the expertise in networking, database administration, distributed applications development and entrepreneur practices to the various societal needs.

WORKSHOPS CONDUCTED

Department of Information Science & Engineering organized a **"Three - day workshop on "IoT with cloud and AI/ML "**, from 28th May to 30th 2022 with an intention to enlighten the information students to know the IoT with cloud and AI/ML. Workshop was conducted by industry expert

DAY 1

Topics Covered: IoT with cloud and AI/ML

Speakers: Mayur Patil and Praveen Hanchinal

SESSION 1:

Mayur Patil delivered the lecture in a detailed and simple manner along with working model simulations. The use cases regarding cloud computing and the way companies such as wipro are implementing this new technology was informative

SESSION 2:

The second session had live demonstrations with lots of visuals and kept us hooked to the projector screen. Mr Praveen Hanchinal sir delivered the lecture in an efficient manner. He was able to give basic idea of Deep learning, machine learning and AI .

DAY 2

Topics Covered:

Blockchain & Cyber Security

Speakers: Mayur Patil

SESSION 1:

This session consisted of a lot of new information and a whole new exposure to the world of blockchains, the visuals made it easy to imagine and understand the structure and information stored and passed in blockchains. Why are bitcoins based on blockchain technique

SESSION 2:

This session was by far the most interesting one and also relatable since we had learnt certain basics of security from CNS, the different types of attacks and how to conquer them were really fascinating .

DAY 3

Topics Covered:RPA(Robotic process automation) & metaverse

Speakers: Mayur Patil

SESSION 1:

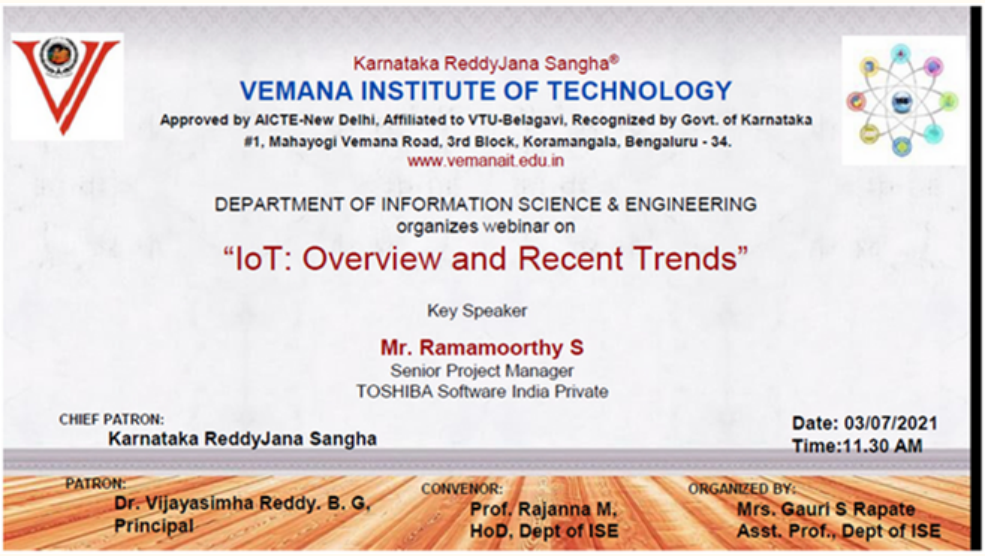
The last day was the one with most working demo's , following are excerpts from day 3 session 1 and 2.Fundamental concepts of RPA and it's uses explained with the help of a video showing how automation helps humans against working like robots for the same process repeatedly.

FACULTY DEVELOPMENT PROGRAMME

A 2-day faculty development programme on “Quality in teaching learning and assessment process” was organized from 21st to 22nd March 2022. All the faculty of the college registered for this 2- day program. **Dr. H.S. Guruprasad Professor of ISE from BMS college delivered the lectures.**

WEBINARS

The department of Information Science & Engineering, Vemana Institute of Technology organized a webinar titled "**IoT: Overview and Recent Trends**" to the students of ISE dept on 3rd July 2021. The speaker of this webinar was **Mr. Ramamoorthy S** Senior Project Manager,



TOSHIBA Software India Private Ltd. he emphasize on Benefits of IoT, IoT Architecture, Functional IoT Stack Smart Sensors ,IoT Future Trends, IoT Industry Project examples.

Conclusion:

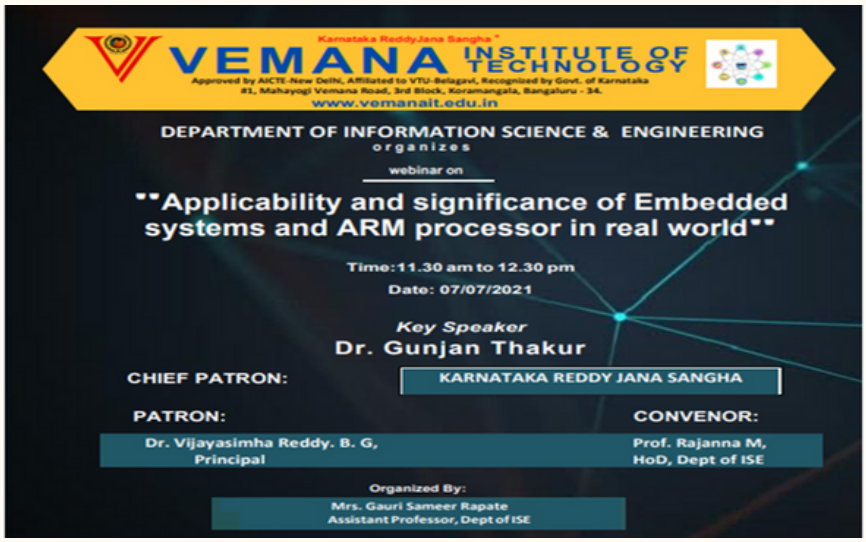
Students were fascinated with the trends in IoT domain and were keen on considering this area of specialization in future

The department of Information Science & Engineering, Vemana Institute of Technology organized a webinar titled "**Data Science to solve real world applications**" to the students of 6th & 8th semester of ISE dept on 4th June 2021. The speaker of this webinar was **Mr. Hemanth Kumar** A Data Scientist at Rubixe Technologies Pvt. Ltd He emphasized on Machine Learning and Deep Learning ,

Problem Solving: Supervised and Unsupervised machine, learning algorithm,Classification, Linear Regression and Logistic regression, This was explained using the COVID -19 real world illustration, Developed expertise in Predictive modeling with dataset of person being sad/happy.

Conclusion:

Students gained practical insights on applying data science in solving practical problems.



The department of Information Science & Engineering, Vemana Institute of Technology organized a webinar titled "**Applicability and significance of Embedded systems and ARM processor in the real world**" to the students of 4th semester of ISE dept on 7th June 2021. The speaker of this webinar was **Dr. Gunjan Thakur** she emphasized on Microprocessor vs Microcontroller, ARM Processor , RISC vs CISC Embedded System Hardware Interrupt, Controller Registers and CPSR Processing Modes.

Conclusion:

Students understood the role of embedded systems in today's world, their significance and applications.

The department of Information Science & Engineering, Vemana Institute of Technology organized a webinar titled **"Emerging Technologies, Inspiring Start-ups, Disruptions &Innovations"** to the students of ISE dept on 18th June 2021. . The speaker of this webinar was **Mr. Murali Sundaram** Technology Consultant

NPEDIA Technologies, Chennai he emphasized on Insights towards entrepreneurship,

Voice,technology, AR ,VR, What,is,machine,learning?, Demand for data scientists

Artificial Intelligence, Quantum computing new research area, non IT, develop cloud architecture, Microbiome Space exploration Drones – apart from surveillance and inspection, AI and its opportunities.

Conclusion:

Students gained insights on entrepreneurship, role of data scientists & space exploration.

The department of Information Science & Engineering, Vemana Institute of Technology organized a webinar titled "**Cloud Security**" to the students of ISE dept on **21st June 2021.** The speaker of this webinar was **Dr. Jayaprakash Govindraj**

Vice President, Security Engineering, AQR Capital Management he emphasize on

Applications of cyber security Cyber security career options Cloud computing(5-4-3 models),cloud virtualization Traditional Web Applications to Cloud Migration

AWS Service IAM / Sample Policies Too AWS Services–Security Threats Ideas for Final year project

Conclusion:

Students were inquisitive towards using cloud concepts for their upcoming projects.

The department of Information Science & Engineering, Vemana Institute of Technology organized a webinar titled "**Learn C++ : A Walk Through Linux**" to the students of ISE dept on 24th June 2021. The speaker of this webinar was **Ms. Rajeshwari K, Assistant Professor, BMS College of Engineering & Ms. Preetha, Assistant Professor, BMS College of Engineering**. she emphasize on Introduction to C++, Introduction to Linux environment, Object Oriented Concepts, **Classes & Objects, Inheritance, Polymorphism, Execution of C++** program on Linux platform

Conclusion:

Students gained revision on the fundamental aspects of programming using C++**.**

Mr. Anup Kumar Gupta

IBM Accredited Advisory Project Manager,

Digital Engagement Analytics - Data & AI Services

The department of Information Science & Engineering, Vemana Institute of Technology organized a webinar titled **"Data & AI from career perspective"** to the students of 6th & 8th semesters of ISE dept on 16th June 2021. The speaker of this webinar was Mr Anup Kumar Gupta BM Accredited Advisory Project Manager, Digital Engagement Analytics - Data & AI Services he emphasized on Why we require robots?, What are the AI services? The working of robots ,Robots which think like human. Robots which don't think like human.How humans are different are from humans

Conclusion:

Students were inquisitive with considering AI as one of their career domain.

GUEST LECTURE DETAILS

The department of Information Science & Engineering in association with Vemana IT NDLI Club and Library Advisory Committee,Vemana Institute of Technology organized a Guest Lecture titled **"Deep Learning and its Applications"** to the students of 6th and 8th semester of ISE dept. **on 23rd May 2022.** The speaker was **Dr. M. Senbagavalli** Associate's Professor,Alliance University, she emphasize basics of Deep Learning.Different types of Machine Learning.Classification of Deep Learning models.

Differences between Neuron and Perceptron in different hidden layers of Deep learning.Deep Learning models and their uses in different applications.Applications of Deep Learning for students Projects and Seminars.

Conclusion:

Students felt that the session was more informative and interactive. They understood the basic concepts of Deep Learning and its Applications.

The Department of Information Science & Engineering Vemana Institute of Technology organized a Guest Lecture titled " **Learning industry domain knowledge and reusing it for software development**". " to the students of 6th semester of ISE dept. on 4th june 2022. The speaker was **Mr. Manoj Kumar Lal** Coming from Darbhanga, Bihar, graduated in Mechanical Engineering from BIT Sindri and did his ME in **Aerospace from IISc Bangalore in 1997**. He joined TCS immediately after IISc and has been there for more than 24 years now.and Mr.Anil Kant Choudhary Advisor | Consultant | Mentor | Guide | Speaker | AuthorAdvisor | Consultant | Mentor | Guide | Speaker | Author Freelance he emphasize Industry domain

GUEST LECTURE DETAILS

knowledge (e.g., banking, insurance, retail) which is equally important in producing a quality software along with technology and soft skills, is not adequately exposed to our graduating students. One of the important reason being, there are multiple Industry and their domain knowledge is vast. Knowledge Driven Development (KDD), an emerging knowledge management framework has come up with a scientific way of learning multiple domains using a common structure. It also links domain knowledge to software development. This has created an opportunity to seed industry domain knowledge in academia increasing the employability of students.

ORIENTATION PLACEMENT

The department of Information Science & Engineering, Vemana Institute of Technology organized " Orientation Placement" to the 6th Semester Students of ISE dept on 30th April 2022. The speakerwas Mr. Rahul R Analyst (Dev-Ops) KPMG Global, Bangalore. he emphasize on Preparation of Resume, Placement Recruitment Process, Roles in IT Industry, Tips to prepare for placements, Sources of preparation.

Conclusion:

Students got insights on effective preparation of resume and also about the various sources of preparation for placements.

PROJECT EXHIBITION

The Student Project committee organized the Project exhibition on 15th June 2022 and was held in the respective departments. The aim of the exhibition was to showcase innovative projects carried out by final year students thereby encouraging other to inculcate competitive zeal, gain knowledge on advanced technologies and undertake inquisitive projects.

PROJECT EXHIBITION 2022 INAUGURAL FUNCTION

A selection committee consisting of Head of the department, two senior faculty and project coordinator shortlisted the projects to be exhibited. Project exhibition started with an inaugural function presided by honorable President KRJS, Sri. S. Jayaram Reddy along with office bearers of KRJS. Other dignitaries present were industry experts, Mr. Santhosh Kumar Adinarayan, Chief Design Engineer, Maxim Analog Devices, Dr. Babu Rao Ponangi, Senior Engineer, FEA Quest Global Engineering Services Pvt. Ltd., Mr. Saravanan Ganesh, Managing Director and Chief, Coding coach, Principal Vemana IT Dr. Vijayasimha Reddy B. G., all department HoDs, teaching and non- teaching staff.

From the **Department of Information Science & Engineering, out of thirty projects six projects were shortlisted and the following projects were awarded.**

I PRIZE

Project Title: Detection of Depression and Treatment Response Prediction using Machine Learning.

Project group: Sravya C, Pavithra R, Shravan R

Guide: Mrs. Manjushree C V

II PRIZE

Project Title: Automatic Face Mask Detector and Temperature Scanner.

Project group: Bhavana S, H K Sandeep Kumar Reddy, Harshita Kulkarni, Kusuma J

Guide: Prof. Rajanna M

FACULTY PAPER PUBLICATIONS

- MR SATHYANARAYANA N "VEHICAL TYPE CLASSIFICATION USING HYBRID FEATURES AND A DEEP NEURAL NETWORK",PUBLISHED IN IJAMC JOURNAL
  VOLUME 13,ISSUE 1, 2022

- MRS.SRIDEVI K N, DR PRAKASHA S, "A STUDY OF PROTOTYPING IN INFORMATION RETRIEVAL PROCESS UTILIZING CONTEXT REQUIREMENTS AND FEATURE SAMPLE SIZES", ACCEPTED IN 3RD INTERNATIONAL CONFERENCE ON INTEGRATED INTELLIGENT COMPUTING, COMMUNICATION & SECURITY [ICIIC – 2021], AUG-2021 INDIA & PUBLISHED IN ATLANTIS PRESS –INDEXED WEB OF SCIENCE ONLINE ISSN:2589-4900. DOI:10.2991/AHIS.K.210913.012

- MRS.SRIDEVI K N, DR PRAKASHA S, "INTEGRATIVE INFORMATION RETRIEVAL WITH A CONSUMER STRATEGY APPROACH", ACCEPTED IN 3RD INTERNATIONAL CONFERENCE ON INTEGRATED INTELLIGENT COMPUTING, COMMUNICATION & SECURITY [ICIIC – 2021], AUG-2021 INDIA & PUBLISHED IN ATLANTIS PRESS –INDEXED WEB OF SCIENCE ONLINE ISSN:2589-4900. HTTPS://DX.DOI.ORG/10.2991/AHIS.K.210913.013.

8TH SEM TOPPERS 2021-22

Sl. No	USN	Name	Percentage	Photo
1	1VI18IS083	ROHAN KESHAV	95 %	
2	1VI18IS091	SAHANA P	94%	
3	1VI18IS052	MANISHA P	93 %	

4TH SEM TOPPERS 2021-22

Sl. No	USN	Name	Percentage	Photo
1	1VI20IS084	SAHANA A	84 %	
2	1VI20IS115	VINAY KULKARNI V	83.7 %	
3	1VI20IS024	MEGHANA JAIN N	82.8 %	
4	1VI20IS042	LEKHA K A	82.4 %	

TECHNICAL ARTICLES

LIGHTINING DETECTOR

DETECTORS OF **ELECTROMAGNETIC RADIATION** IN THE SPECTRAL RANGE FROM ULTRAVIOLET TO FAR INFRARED ARE CALLED LIGHT DETECTORS. FROM THE STANDPOINT OF A SENSOR DESIGNER, ABSORPTION OF PHOTONS BY A SENSING MATERIAL MAY RESULT EITHER IN A QUANTUM OR THERMAL RESPONSE. THEREFORE, ALL **LIGHT** DETECTORS ARE DIVIDED INTO TWO MAJOR GROUPS THAT ARE CALLED **QUANTUM** AND **THERMAL**. THE QUANTUM DETECTORS OPERATE FROM THE ULTRAVIOLET TO MID-INFRARED SPECTRAL RANGES, WHEREAS THERMAL DETECTORS ARE MOST USEFUL IN THE MID-AND FAR-INFRARED SPECTRAL RANGE WHERE THEIR EFFICIENCY AT ROOM TEMPERATURES EXCEEDS THAT OF THE QUANTUM DETECTORS

WEATHER APP

A WEATHER APP IS AN APPLICATION THAT CAN INFORM ABOUT REAL-TIME WEATHER INFORMATION LIKE TEMPERATURE, HUMIDITY, AQI CAIR QUALITY INDEX), ETC. THIS CAN BE A GOOD MINI-PROJECT, THIS MAY HELP ONE LEARN A LOT IN THE RESPECTIVE TECHNOLOGY. THERE CAN BE SOME ADDITIONAL FEATURES OF THE APP SUCH AS: SENDING HOURLY OR DAILY INFORMATION UPDATES TO THE USERS, SENDING ALERT MESSAGES IF REQUIRED, INTERACTIVE USER INTERFACE SO THAT MORE AND MORE PEOPLE ENGAGE, ETC.

THIS APP CAN BE BUILT USING ANY OF THE TECHNOLOGY FOR EX: JAVASCRIPT FRAMEWORKS) OR DJANGO AND PYTHON. YOU CAN USE ANY WEATHER API (APPLICATION PROGRAMMING INTERFACE). OPEN WEATHER API IS ONE OF THE BEST TO INTEGRATE YOUR PROJECT WITH.