Vision of the Department

"To impart knowledge to young aspirants to develop Information Technology based solutions for the Industrial and Societal needs"

Mission

- Prepare students to acquire knowledge in the field of Information Technology through effective teaching learning methodologies.
- Establish conducive environment for better learning through the state of the art curriculum to exhibit talents and ingenuity.
- Nurture the students to be industry ready by enhancing their employability skills and entrepreneurial skills
- Develop Information Technology based solution as per the need of Society.

Program Specific Outcomes(PSOs)

- Able to apply appropriate techniques for storage of huge amount of data and ensuring its integrity.
- Choose appropriate method for data acquisition from real world and propose suitable solutions to solve problems.

Editorial Board

Chief Editor:

Mrs. Sushma M, Assistant Professor

Student Editors:

1. Rohith C R, 6th Semester.
2. Shruthi, 6th Semester.

Department Activities

- Samartha InfoTech Pvt Ltd Bengaluru and Dept. of ISE organized a one day workshop / Technical talk on 27-1-2019 for 6th semester students of ISE, CSE, ECE, TCE, EEE regarding the Internships and Final project in the Data Visualization and Computer Networking

- Faculties attended the Workshop on "Pedagogical Initiative" organized by IQAC, SSIT, Tumkur on 4-1-2019.

- Geeks Lab Technologies, AIESEC IIT Delhi and Dept. of ISE arranged a 3 days' workshop on "Artificial Intelligence & Machine Learning with Python" from 26-02-2019 to 28-02-2019.

- Mr. Pradeep M, Assistant professor recognized as Silver partner faculty under Infosys-Inspire-Campus Connect Faculty Partnership Model.

Congratulations

Prof. Suma R Completed PhD in VTU in March -2019 on the topic "Design of a secured location based routing protocol for MANET's" under the guidance of Dr. Premasudha B G, Professor, Dept. of MCA, SIT., Tumakuru.

Quantum Computing: Future Computing

Quantum theory is well known theory of physics in which characteristics and behavior of energy and matter of quantum that is of atomic and subatomic particles are discussed. In this connection Quantum computing deals with the developing Computer Technology (CT). In practical sense the computing capability is found to be greater than that from the abacus of today's modern supercomputer. Its performance gains in the billion-fold area and beyond. The quantum computer obeys the definite laws of quantum physics, would give remarkable benefits in processing power and capability, it also gives to perform tasks using all possible permutations simultaneously.

The system of computer development shows that its working capability and computing ability, the smaller computers give more powerful it has more ability in number-crunching than the big size of the computers. It is known that difference between the today's cellophane and room-sized computer in 50 years ago.

Instead of delightful advances, there are still plenty of complex problems that are found for world's most powerful computers and hence there is no guarantee for solving the critical problems. However, entering in to the area of atoms opens up powerful new possibilities in the field of quantum computing with processors speed could work millions of time faster than one we use today. However, the trouble is that quantum computing is more complex than traditional computing wherein quantum physics laws no longer apply.

Quantum Computing is a new and vibrant field interrelated with mathematics and union of computer science and physics. It utilizes the quantum mechanics to improve the efficiency and capability of computation for complex problem. It is better to conclude that the quantum theory is very useful to develop a quantum computer in future. The Idea of the computing is found to be invariant and uncertain but definite restores on the computational methods so that quantum dot will become a strong base and in applied manner.

At present, quantum computers and quantum technology remain in its revolutionary stage. In true sense the quantum computers are generally superior to conventional one. The difficulty arises of actually building them. Research and innovative steps in this field pointed out that the said problem will be resolved and solved by means of improving concern technology in time. Thus, Quantum computation has its origins in highly specialized fields of theoretical physics which indeed will affect in future, then only true outcome effect will be seen in the form of quantum computers.

Karthik M P
Student, 6th Semester, ISE

Cobot: Collaborative robot

A collaborative robot, also known as a cobot, is a robot that is capable of learning multiple tasks so it can assist human beings. In contrast, autonomous robots are hard-coded to repeatedly perform one task, work independently and remain stationary.

Today, advances in mobile technology, machine vision, cognitive computing and touch technology (including collision avoidance) are making it possible for small, lower-power robots to be aware of their surroundings and perform multiple types of tasks safely in close proximity to human workers.

Majority of industrial robots are still autonomous. They are expensive, large and reside behind barriers for safety reasons. Although industrial robots have played an important role in the automotive industry and its suppliers, their high cost, large size, weight and complex programming requirements have limited their use in other vertical industries. Another barrier to adoption is the cultural fear of robots dominating the workplace and replacing human employees.

Cobots are purposely designed to address this fear. A collaborative robot is not intended to augment the human worker's capabilities, not take the place of a human worker. In many cases, the cobot takes the form of an arm, providing the worker with an extra set of hands.

Today, collaborative robots are currently used in several vertical industries, including manufacturing, supply chain management and healthcare. They generally have lower power requirements than their large, autonomous counterparts, are often mobile and use collision detection to prevent injury to their human colleagues and other cobots. Popular collaborative robot manufacturers include Universal Robots, KUKA, Rethink Robotics and Franka.

Cobots are robots designed for direct interaction between human and robot, inside a shared space. Businesses need to look for ways to improve productivity, and cobots are a great way to cope with these challenges. In several firms, the use of cobots is on the rise and their use is encouraged to stay safe during the pandemic, as some businesses were severely affected due to the social-distancing orders. The collaborative robot market is experiencing an exponential growth since Cobots are additional support to the human worker. Growing demand for cobots with high payload capacity is expected to create extensive investment opportunities. Collaborative robots are used in a wide range of applications, both within factories and outside them. Many collaborative robots are readily available to use at a moderate price range additionally; edge computing breakthroughs have streamlined the design of collaborative robots.

In recent years, technological and artificial intelligent automation and sensor developments have increased their meaning and impact. Innovations in machine vision, mobile technology, touch technology, cognitive function, and collision avoidance, make it possible for small, low-power robots in immediate contact with people to be aware of their environments and carry out multiple tasks safely.

The demand for cobots is high and rising, even with the impact of the pandemic. Inevitably, there was a short-term lag, but that is already turning around. When growing, businesses must search for ways to increase their efficiency, cobots are a perfect way to address these challenges. The use of cobots in several firms is on the rise and encouraged for the near future to stay safe during the pandemic.

Breakthroughs in edge computing have added flexibility and streamlined the design of collaborative robots. Integration costs to install them have been reduced, and little or no programming is required to set them up. An increase in flexibility opens up the possibility to automate a large number of new tasks and applications by collaborative robots. Those few who excel throughout this competitive industry are awaited for profitable ventures as the collaborative robot market has rapidly risen.

Mrs. Vani B V
Assistant Professor, Dept of ISE.

Conference and Publications

- T. Shreekumar, K. Karunakara, Face Pose and illumination Normalization for Unconstraint Face Recognition from Direct Interview Videos, International Journal of Recent Technology and Engineering (IJRTE) ISSN: 2277-3878, Volume-7, Issue-6S4, April 2019

- T. SreeKumar,, Karunakara K "Hybrid Dense Matching Feature for Face Recognition" International Journal of Advanced Computer Science and Applications (IJACSA) Volume 10,Issue-3,March 2019

- Dr. Parameshachari B D, Dr.Supriya M C, Kiran, Rashmi P, Dr. Rajashekarappa, Dr. Panduranga H T, Controlled Partial Image Encryption Based on LSIC and Chaotic map", ICCSP 2019, January 19–21, 2019, Kuala Lumpur, Malaysia .

- Dr. Parameshachari B D, Dr.Supriya M C, Kiran, Rashmi P, Dr. Rajashekarappa, Dr. Panduranga H T, Controlled Partial Image Encryption Based on LSIC and Chaotic map", ICCSP 2019, January 19–21, May-2019, Kuala Lumpur, Malaysia .

PLACEMENTS -2018-19

Congratulations on your well-deserved success

Sl. No.	Name of the student placed	Enrollment no.	Name of the Employer
1	Yashaswini DS	15IS073	DXC TECHNOLOGY
2	Sindhu H S	15IS054	FACE
3	Praneet Kulkarni	15IS038	PATHFRONT
4	Raghu Ramesh Shirahatti	15IS040	SCII
5	Tanushree KS	15IS064	SILVERPEAK
6	Vaibhav Sudesh	15IS067	SPERIDIAN
7	Tasmia Praveen	15IS065	ZENOPSES
8	Yogitha S	15IS075	TCS
9	Devika S K	15IS013	TCS
10	Shilpa H S	15IS050	TCS
11	Sreenidhi S	15IS058	TCS