MALNAD COLLEGE OF ENGINEERING

ಮಲೆನಾಡು ತಾಂತ್ರಿಕ ಮಹಾವಿದ್ಯಾಲಯ

Hassan-573202, Karnataka

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Even Semester
2024 Edition

CBSO NEWS

COMPUTER SCIENCE AND BUISNESS SYSTEMS STUDENTS ORGANIZATION

ENGINEERS MAKE THINGS, COMPUTER SCIENCE AND BUISNESS SYSTEMS ENGINEERS MAKE THINGS BETTER

FROM THE EDITOR: It gives us immense joy and satisfaction to bring this edition of CBSO NEWS LETTER. A lot of effort has gone into the making of this issue. I hope you enjoy reading the newsletter. The best thing about this issue is that it represents the creative side of MCE CSBS students. We think we all need to reconnect with. Amidst the busy schedule of a 4-month semester, with 3-exams, and all those assignments and problem sheets that make you want to bang your head on the wall, we tend to lose track of all the other simpler things that we are capable of, things that we could have been proud of, that can bring one satisfaction. So this time we have made an attempt to bring out the talent concealed within our student community. This issue includes articles, achievers and activities of the period. We hope you enjoy reading this issue as much as we have enjoyed making it.

- Nithin Gowda M T

Homomorphic Encryption

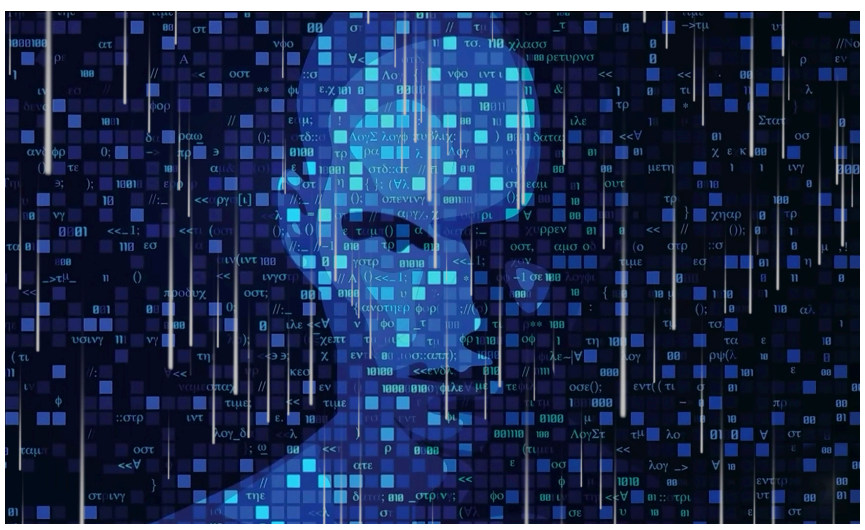
In an age wherein information is regularly referred to as the new oil, shielding its confidentiality and integrity has come to be paramount. Traditional encryption techniques have been effective at safeguarding records at relaxation and in transit, but what if you could perform complex computations on encrypted records without ever decrypting them? This revolutionary idea is at the heart of homomorphic encryption, an underrated but incredibly powerful cryptographic approach. We can explore the world of homomorphic encryption, its capacity packages, and the demanding situations it faces.

Homomorphic encryption is based on the concept of homomorphism in mathematics. Homomorphisms maintain the same overall structure of a base form but alter the way it appears. Homomorphic encryption is another step to protect and preserve sensitive data. This cryptosystem allows any machine-learning algorithm to perform computations on data without decrypting the plaintext, or raw data. For example, an entity operating in a homomorphic encryption system can find the sum of two numbers in a cloud server without ever finding out what the original two numbers are. Homomorphic encryption expands upon public key encryption schemes, utilizing one public key and one private key to encrypt and decrypt data. While other entities may have different keys to access certain data points, only the original data owner will hold the global decryption key. Homomorphic Encryption in simple terms, is a cryptographic approach that permits information to be processed even as it remains in an encrypted form. Unlike conventional encryption, which calls for statistics to be decrypted for any significant operation, homomorphic encryption permits computations to be performed at once on encrypted statistics. The result of those computations, when decrypted, fits the result of the same operations completed at the plaintext records. This manner in touchy statistics may be analysed, manipulated, and worked with, all even as it remains encrypted, hence retaining both privacy and security. One of the maximum compelling use instances for homomorphic encryption is steady outsourcing. Organizations can delegate computations to untrusted servers without revealing the touchy facts itself. For example, a healthcare company could carry out complex records evaluation on encrypted patient records stored on a cloud server without exposing any individual's clinical records.

Homomorphic encryption is a technological marvel that promises to revolutionize statistics privacy and steady computation. Its capability programs are vast, from stable outsourcing to privacy-maintaining records analysis and collaborative machine mastering. While it faces demanding situations, ongoing studies and improvement are gradually mitigating those boundaries. As we retain to navigate the statistics-pushed global, homomorphic encryption stands as a beacon of hope, supplying the promise of privacy in an era of ubiquitous records sharing and analysis. It may be underrated nowadays, however it's far absolutely a generation with a brilliant and transformative future.

ROBOTICS AND AUTOMATION

Emerging robotics trends meet the growing demand for industrial automation, digitalization, and sustainability. Automated guided vehicles (AGVs) and autonomous mobile robots (AMRs) automate material handling in warehouses. On the other hand, coots perform pick-and-place tasks alongside humans in manufacturing operations. The robotics sector also sees large activity and investment in drones, humanoid robots, and robotic cybersecurity, among others. This info provides an overview of robotics trends ranging from intelligent robotics and robots as a service to the Internet of Things (IoT).



Applications

Current and potential applications include:

- Manufacturing: Automating repetitive tasks and improving productivity and quality.
- Autonomous transport: Self-driving cars, drones, and airplane autopilot.
- Domestic robots: Robotic vacuum cleaners.
- Construction robots.
- Agricultural robots.
- Medical robots: Used in surgeries and rehabilitation.
- Food processing.
- Automated mining.

A DAY IN TCS

TCS ,Whitefield, Bangalore . 2nd Year Students with M S Srinath, Balaji Prabhu V and C. M. Naveen Kumar.

On 12/08/2024, our team had the opportunity to visit Tata Consultancy Services (TCS) in Whitefield, Bangalore, a leading global IT services and consulting company. The primary objective of this visit was to gain insights into the company's operations, understand its cutting-edge technological advancements, and observe its work culture. TCS, established in 1968, is renowned for its innovative solutions and significant contributions to the IT industry, making it an ideal destination for our industry visit.
An Industrial Visit organized by the Department of Computer Science and Buisness Systems, for the students in order to get practical knowledge about advanced technology and industrial insights.The visit was organized by Head of the Department Dr.M.S.Srinath.We started traveling from the college campus at 6 am by two buses. Totally 60 students along with 4 coordinators faculty were there in the journey.

Tata Consultancy Services Limited (TCS) is an Indian multinational information technology (IT) services and consulting company headquartered in Mumbai.It is a part of the Tata Group and operates in 150 locations across 46 countries. In March 2024, it was reported that TCS had more than 601,546 employees worldwide. TCS is the second-largest Indian company by market capitalization, the most valuable IT service brands worldwide, and the top Big Tech (India) company. In 2012, it was the world's second-largest user of the U.S H-1B visas.
This Industrial visit is very helpful in acquiring practical skills & bringing a positive change in our thinking & behavior regarding technical education & specializing our technical skills.Got practical knowledge about the advancement in technology in the IT field.The visit to TCS in Whitefield, Bangalore, was an enlightening experience. It provided us with a comprehensive understanding of how a leading IT services company operates. We gained valuable knowledge about advanced technological solutions, efficient operational strategies, and the importance of sustainability and corporate social responsibility. This experience has undoubtedly enriched our understanding of the IT industry and inspired us to pursue excellence in our future endeavors.

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None can destroy iron, but its own rust can! Likewise none can destroy a person, but its own mindset can!
- Ratan Tata

FACULTY ACHIEVEMENT

M.S.Srinath Filed an Indian Patent with, Amarendra H.J. And Shashank Lingappa in “Metal Matrix Hybrid Composites" Indian Patent .

Confrence Attended

Shashank Lingappa M, Mahantesh Matur, Hemanth TS, Niranjan SB has participated and delivered an oral presentation entitled Functional characterization of MoCoCrSi/flyash composite clads developed on stainless steel through microwave hybrid heating in International Conference on Eco-friendly Fibres and Polymeric Materials - EFPM (Hybrid Mode), Bangkok,Thailand on 19th-20th February 2024.

ACTIVITIES OF THE DEPARTMENT

Dyashin Technosoft, a Software Development and Engineering Services Company. They offer a 360-degree approach solutions and cutting-edge technology products providing unique solutions. From learning and consulting services to project services.
We were blessed to have a visit from Dyashin's CEO and his team. They provided the wonderful insight about their company and spoke about their idea of cutting the interview and focusing more on the persons caliber than just analysing their talking skills. This point is clearly unique and different which gave an assurance to all those who are poor in talking skills.
They also, gave an honest review about today's company marketting structures, their experience of working with people and guiding them.

Truly, having them was onebof the amazing yet productive session ever. It was helpful to all of us to connect more to the future and to really know what to expect and aspire to be.

DYASHIN company visit , 2nd year students with M.S.Srinath and C. M. Naveen Kumar. Faculty Advisor: Hemanth T.S.

KMF,HASSAN , 2nd year students with M.S.Srinath , Ankitha S and Sushma M V

Govt. School visit, Doddagadvalli, 2nd year students with M.S. Srinath and Sushma M V

Heritage visit, Doddagadvalli, 2nd year students with M.S. Srinath and Sushma M V

In this SCR class, the entire class had the enriching opportunity to embark on a heritage visit to Doddagaddavalli Lakshmi Devi Temple, located in Doddagaddavalli near Hagare,Belur taluk ,Hassan. The purpose of this visit was to explore and appreciate the historical and cultural significance of the temple. This Heritage visit wouldl help the students to have a peak towards our ancestoral rich culture. Students had the chance to witness the architectural marvels, intricate designs, and religious importance of the Lakshmi Devi Temple. The visit likely involved guided tours, providing insights into the historical context, artistry, and unique features of the temple. This immersive experience aimed to broaden students' perspectives beyond the academic realm, fostering an appreciation for heritage and cultural preservation. We also had the chance to visit the Government Higher Primary School, Doddagadvalli. The SCR class excursion to Doddagaddavalli Lakshmi Devi Temple and Govt School visit offered a holistic learning experience, combining theoretical knowledge with practical exposure to historical and architectural elements.

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Man needs his difficulties because they are necessary to enjoy success

-Dr. APJ Abdul Kalam

Our Students have participated in the Malnad Fest and have been fruitful in a few events. Lets look through those, in a glimpse.

1. **FLASHMOB**

The adjacent picture is of Flashmob, and they have bagged 2nd place, in this event

2.Rhythmic Tales

The aforementioned students from our branch have secured second place in Rhythmic Tales.

3.Vogue

Vogue, this year had the themes color play, and our branch was given "White & Gold". They were able to showcasethe play of colours effectively that they were awarded with 3rd place in this event.

Total Accomplishment :

Sl.No	EVENTS	PLACE
1.	TDH	1st place
2.	Vouge	3rd place
3.	No Budget Parody	1st place
4.	Flashmob	2nd place
5.	Rhythmic Tales	2nd place
6.	Vantage Point	2nd place
7.	Mask making	1st place

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"Education is the most powerful weapon which you can use to change the world."

- Nelson Mandela

STUDENTS ACHIEVEMENTS IN SPORTS

- In Kho-Kho, the students of Computer Science and Business Systems won third place at the inter-college VTU tournament held at PES, Mandya.
  The team members are : Divyashree H. A. and Yukthamukhi S. P.

- Divyashree H. A. of our branch won first place in the 3000m and 800m running events in athletics. She was also honored as the Individual Women's Champion of MCE.
- Akshay S. M. won first place in the 5000m running event in athletics.
- Vijayalakshmi won third place in the 100m running event in athletics.
- Rujula P. and Manyshree R. won second place in singles and doubles badminton, respectively.

All of these achievements were accomplished during the Malnad Fest 2024 held at MCE, Hassan.

CALENDAR OF EVENTS

Every year there will be a calendar of events which includes when the semester starts and when it ends. It even includes all the events to be carried out in the particular semester.

PARTICULARS	START DATE	END DATE	REMARKS
Semester	24/04/2024	29/07/24	96 Days - Acdemic
Registration of Regular courses	24/04/2024	25/04/2024	Exam - Academics
Backlog Registration	29/04/2024	24/04/2024	Exam - Academics
Malnad Fest	04/05/2024	05/05/2024	College Fest - Extra Curricular
CIE - 1	27/05/2024	29/05/2024	Exam - Academics
CIE - 2	27/06/24	29/06/2024	Exam - Academics
CIE - 3	22/07/2024	24/07/2024	Exam - Academics
Last Working Day	29/07/24	29/07/24	Academics
SEE	02/08/2024	17/08/2024	Exam - Academics

Toppers of Semesters, 2023-2024

1st Semester

Sl. No	Name	USN	CGPA
1.	Chandana H R	4MC22CB004	9.6

2nd Semester

Sl. No	Name	USN	CGPA
1.	Sinchana C M	4MC22CB023	9.10

3rd Semester

Sl. No	Name	USN	CGPA
1.	Sinchana C M	4MC22CB023	9.59

TESTIMONY

As an engineering student passionate about creating a positive impact on our environment, my journey into sustainability and green engineering has been both enlightening and transformative. This testimony encapsulates my experiences, challenges, and the invaluable lessons I have garnered while pursuing projects and internships dedicated to sustainable technologies and practices.

My interest in sustainability was sparked during my sophomore year when I enrolled in a course on environmental engineering. The alarming data on climate change and resource depletion presented in class made me realize the urgent need for sustainable solutions. This realization prompted me to join the university's Green Engineering Club, where I had the opportunity to collaborate with like-minded peers on various sustainability projects.

One of the most significant projects I worked on was designing and implementing a rainwater harvesting system on our campus. The project aimed to reduce the reliance on municipal water supply by collecting and storing rainwater for non-potable uses such as irrigation and flushing toilets. As a team, we conducted a thorough site analysis, designed an efficient collection and storage system, and oversaw the installation process. The project not only provided a practical solution to water conservation but also raised awareness about sustainable water management practices among the student body.During my junior year, I secured an internship at a renewable energy company specializing in solar power solutions. This experience was a pivotal moment in my engineering career, as it allowed me to apply theoretical knowledge to real-world challenges. I was part of a team responsible for designing and optimizing solar panel installations for residential and commercial clients. My role involved performing site assessments, calculating energy yields, and developing cost-benefit analyses for potential projects. This hands-on experience deepened my understanding of solar technology and its potential to reduce carbon footprints and promote energy independence.

One of the most rewarding aspects of my internship was participating in a community outreach program aimed at promoting solar energy adoption in low-income neighborhoods. We conducted workshops to educate residents about the benefits of solar power and provided assistance in applying for government grants and subsidies. Witnessing the positive impact of our efforts on the community reinforced my commitment to sustainability and demonstrated the social and economic benefits of green engineering.

In addition to practical projects and internships, I have been actively involved in research focused on sustainable materials and green manufacturing processes. Under the guidance of a faculty advisor, I worked on a research project exploring the use of biodegradable materials in the production of packaging solutions. Our research aimed to identify alternatives to single-use plastics that are not only environmentally friendly but also economically viable. This project honed my research skills and highlighted the importance of innovation in achieving sustainability goals.

Throughout my journey, I have encountered numerous challenges, including technical hurdles, limited resources, and occasional skepticism about the feasibility of sustainable solutions. However, these challenges have only strengthened my resolve to pursue a career in green engineering. They have taught me the importance of perseverance, collaboration, and continuous learning.

In conclusion, my experiences in sustainability and green engineering have been incredibly fulfilling and have shaped my perspective on the role of engineers in addressing global environmental challenges. From campus projects and internships to research endeavors, each experience has contributed to my growth as an engineer committed to sustainability. I am excited to continue my journey, leveraging my skills and knowledge to develop innovative solutions that promote a greener and more sustainable future for all.