

Mytros

Mind of Young Technocrats and Research Oriented Students

Annual e-magazine

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KIET
GROUP OF INSTITUTIONS

(A Technical Campus approved by AICTE &
Affiliated to Dr. A.P.J. Abdul Kalam Technical Univ., Lucknow)
Accredited by NAAC with Grade 'A' (5 yrs.)
"Shaping Young Minds with Skill Oriented & Value Based Education"

HOD's Message



"The aim of the department is to provide high quality education along with training to the students with all the new advancements in the computer field. The process of learning is extremely important in life. What you learn, how you learn and where you learn play a crucial role in developing one's intellectual capability, besides career. The department takes initiatives to improve the soft skills, analytical capabilities, verbal communication and develop logical thinking and current industry technological skill, of the students so that they can face the competition in the corporate world confidently. In the department, Students are nurtured to become world-class software professionals as Project Managers, System Analysts or Team leaders in Industry or become Entrepreneurs in their own innovative way. I am sure in times to come; many students from the

department will make indelible mark nationally and internationally in the field of Computer Application and bring laurels to themselves, to their families, to the Organization they belong, to KIET and our country.

Dr. Ajay Kumar Shrivastava

Additional HOD's Message



"Our Prime Objective is to prepare our students to meet increasing global challenges of ever evolving technologies so as to make the students acceptable to both industries and higher institution of learning. Our mission is to train students to develop inquisitive mind for the true understanding of real life problems and to build optimal computer solutions for the benefit of society. Regular activities are arranged and encouraged in the department for indigenous product development, skills enhancement and interdisciplinary interactions. The Department boasts of intelligent alumni, most of them being placed in reputed international firms like IBM, WIPRO, INFOSYS, TCS, DELLOITE etc. The department believes in close interaction with the industry on regular basis to keep in pace with the ever changing scenario of the IT industry. Department of Computer Applications endeavors to provide best professional opportunities to our students and look forward to their bright future. We as a team resolve to take the department to heights of success and glory and prepare for the forthcoming challenges.

Prof. Rabi N. Panda

Editorial Team's Message

Dear Readers,

It provides us immense joy and satisfaction to finally re-introduce our very own departmental magazine "MYTROS". We have tried our best to make sure this magazine helps you in recapitulating the momentous journey in KIET. The best thing about this issue is that it represents the creative side of MCA students to a fair degree-something that we think we all need to reconnect with. Amidst the busy schedule of a 4-month semester, with 3-CTs, surprise quizzes and all those assignments and projects 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, poems, projects, a host of other things. We hope you enjoy reading the magazine.

Editorial Team



**Manish Kumar
Jha**



Apeksha Goel



**Akshay Kumar
Saha**



Shreya Saxena



ARTICLE SECTION



Smart Belt & Head Gear Project
Indian Army in Upholding the Security of the Nation
What is LIFI Technology
Smart Waste Management
Blockchain is the Sound of the Future

Smart Belt & Head Gear Project

Ashi Anand
IV Sem Sec-A

The visual challenge is a global problem among people and large population is suffering due to this problem. About 15 million people in India are blind. The sense of dependency on someone else hurts a lot. So we build a technical solution to ease this pain. We have developed a Smart Belt and Headgear that can help visually impaired people in detecting obstacles and directions on roads or in their residence/offices.

A large number of people uses sticks to assist them, but somehow that is not enough to ensure their safety. The solution we are providing them, make sure to avoid as many problems as we can. we have built a prototype of smart belt and headgear which can be used by blind people for detecting obstacles on their path. We have also filed a patent for the design of our prototype.

Smart Belt

The smart belt will assist visually impaired people while they are on a walk. This belt will notify the user when an object appears before it in the form of buzzer sound and vibration. Our next step to make this belt more interactive, we are going to add voice-based alert through earphones and FM module, so that the user can enjoy using it.

Head Gear

Headgear is detecting the hurdles on the way by using ultrasonic sensors. We are covering a total arc of 150° angle. So any hurdle which comes to the path would be notified to the user with the exact angle information by using another motor. So, whenever the ultrasonic sensor detects any hurdle, it passes the information to the Headgear motor. Headgear motor turns the sensor needle and ticks/push the forehead of the user. Hence the hurdle's position is passed to the user.

We have presented this project in
-Innotech 2k18 in IOT category and we won second prize.
-Karmana 2k19 in IOT category and we won first prize.

Indian Army in Upholding the Security of the Nation

Akshaya Kumar Saha
IV Sem Sec-B

I Akshay Kumar Saha, student of KIET is here to write something about Indian Army, which is Safeguards of our Country. I believe that Indian Army is the role model for every individual due to its dedication and commitment to work.

Needless to say, Indian Army upholds the security of our Nation and it is all because of our Defence Force that we constantly feel a sense of security and are able to breath and live freely without any sense of fear. Even if any opponent attacks our nation, we can sleep safely and peacefully. Our soldiers live under constant threats and wage wars where many lose their life and many get wounded severely in order to protect their Motherland. They live separated from their families and friends and are posted at remote locations where normally a person can't even survive.

Whenever I think of Indian army, I become happy. A common person knows very little about Indian Army because maximum of the things are classified. Still there is sufficient information in public domain.

Indian army before independence (under British rule) had participated in World War I and II. After independence it has also fought many wars like first Kashmir war (1947), India-China war (1962), India - Pakistan war (1965), Bangladesh liberation war (1971) and the Kargil war (1999). Besides these, Indian army has also handled some smaller conflicts like Operation Polo (1948), India-China conflict (1967), Siachen conflict (1984), etc.

Indian army has also successfully handled many riots:- (2002) Godhra riots, (1992) Mumbai riots, Anti-Sikh riots (1984) etc. It is currently also tackling terrorism across India like J & K and North Eastern states.

"Indian Army is an Producer of Honest and Dedicated Persons"

Army day is celebrated formally in New Delhi at 'Amar Jawan Jyoti', India Gate every year on 15th of January. The day is celebrated to commemorate the appointment of our first army chief, Lieutenant general K.M. Cariappa. The story of his appointment is also very interesting. The story goes something like this Pandit Jawaharlal Nehru was having a meeting with senior army personals and cabinet ministers. He suggested that the post of first army chief should be given to a British officer because Indian officers have no experience in handling such a post. One of the army personnel present there, objected to this and said that, as we also don't have the experience of leading a nation, so we should appoint a British person as our first Prime Minister. After hearing this, Nehru realised his mistake and asked the person that would he like to become the first army chief? On this he suggested the name of Lieutenant general K.M. Cariappa who was also present there and thus he became the first army chief.

"आपको देश की सुरक्षा, सम्मान और कल्याण हमेशा और हर बार सर्वप्रथम है"

"फिर है, आपके सैनिक का सम्मान कल्याण और सुविधा"

"आपकी अपनी सुविधा, अराम और सुरक्षा हमेशा और हर बार आखिर में अते है।"

I believe that we are lucky to have Defence Force like Indian Army at our disposal without which we could have never survived. Hats off to their indomitable spirit.

Long live India and long live Indian Army,

"JAI HIND"

LIFI

Ankit Asthana
IV Sem Sec-A

LIFI stands for Light Fidelity and is a Visible Light Communications (VLC) system which runs wireless communications that travel at very high speeds.

With Li-Fi, your light bulb is essentially your router. It uses common household LED light bulbs to enable data transfer boasting speeds of up to 224 gigabits per second

The term Li-Fi was coined by University of Edinburgh Professor Harald Haas during a TED Talk in 2011 Haas envisioned light bulbs that could act as wireless routers.

Subsequently, in 2012 after four years of research Haas set up company pureLIFI with the aim to be the world leader in Visible Light Communications technology. In this modern day of technology, internet and digital communication has become a major factor. The number of devices accessing a network is increasing exponentially which is leading to complexity in network traffic and shortage of bandwidth.

This increases the risk of conflict between frequencies of the bandwidth which is happening with Wi-Fi these days. To overcome these problems permanently, a new concept of super-fast wireless communication has been introduced, known as Light Fidelity or Li-Fi. In the present paper the authors have given a systematic study on latest development in Li-Fi technology.

Smart Waste Management

Akhil Kulshrestha
IV Sem Sec-B

Trash management is a one of the hard problems. The existing models are very ineffective due to its poor placement, collection scheduling, dump yard allocation and management, ever increasing transport cost and resulting health issues such as Overflowing waste causes air pollution and respiratory diseases. The solution shall present a solar powered smart garbage bin (IoT) which houses necessary biotech based mini/macro waste decomposer and necessary mechanical and electronics to manage, monitor and secure the Smart bins & detect usage violation etc.

Causes

Overflowing waste causes air pollution and respiratory diseases. Landfills have and will continue to give rise to serious public health problems of land and water pollution. Contaminated water causes viral diseases like cholera, dysentery and typhoid fever. It can cause skin conditions like scabies and Trachoma (a preventable eye disease in which the eyelashes eventually invert, leading to blindness).

Reason for waste Management

The most important reason for proper waste management is to protect the environment and for the health and safety of the population. Certain types of waste can be hazardous and can pollute the environment. Bad waste management practices can also cause land and air pollution which can result in serious medical conditions in humans and animals. Implementing good waste management practices not only helps to protect the environment but can be beneficial to your business.

Energy Efficiency

have you thought of how you could use waste products as a combustion fuel for things such as cooking or heating?

Cost Saving

managing the waste your business produces can result in valuable materials to reuse. This can save you money while potentially creating new jobs and business opportunities.

Resource Recovery

reducing, reusing and recycling your waste is important for the environment, and it can also be profitable. It decreases the amount of waste for disposal, saves space in landfills, and conserves natural resources

Problem Mitigation

In the proposed system the level of garbage in smart dustbins are detected by a Sensor system. With that we can segregate the waste at initial level before it enters the body of the smartbin. This solution focuses on reducing transport cost by proposing shortest route algorithms.

Ultrasonic Sensor Systems

can be used to indicate the different levels of the amount of the garbage collected in the Dustbin which is placed in public area.

Power System

Solar Panel will charge the battery of smart bin.

Smart Compaction Module

Compaction will create space in the smartbin that is left. Safety: Safety Sensor will detect a person's hand than to immediately stops the compaction cycle.

Image Processing

Image processing will help in the segregation of waste as well monitor the area around smartbin.

Segregation of waste

Described as a trisorter, this is a single space that can direct disposal items into one of three containers at the bottom.

Transportation Module

Optimal Route Path will be generated between the Highest Priority SmartBins. Compaction will be initiated when Truck's Bin is full. If there is no space after compaction than Navigation system will help Waste truck drivers to fulfill their tasks.

Conclusion

In the system advocated above, fusion of sensors, identification technology and internet connectivity will lead to a uniquely smart disposal trash bin. Together with the cloud, these trash bins would become irreplaceable element in the waste management cycle where the collection, transportation, storage and recycling of waste could be automated. The use of RFID technology in waste collection services not only increases efficiency of waste management through automation, but also increases environmental responsibility which is one of the pillars of the Smart City.

Blockchain is the Sound of the Future

Apoorv Jain
IV Sem Sec-C

Nowadays, everyone face new challenges such as information security, trust and transparency but when different stakeholders, decentralization of working processes and so on. The development of blockchain technology and smart contracts provides new opportunities for enterprises to address these problems.

Blockchain enabled smart contracts are computer programs that can be consistently executed by a network of mutually distrusting nodes, without the arbitration of a trusted authority.

Smart contracts provide enterprises the possibility to collaborate and execute self-enforcing contract clauses in a blockchain network without the involvement of a third-party.

While smart contracts provide new options for enterprises and several studies have been carried out. The understanding of domains using smart contracts helps enterprises during decision making process about smart contracts adoption. By this all the criteria are done smartly and securely on the network.

completeness>



Deepanshu Bansal
IV Sem Sec-C

Internet of things (IoT) is an Advanced technology that makes our lives simpler and happier. The term "IoT" stands for the internet of things, can be defined as the interconnection between the individually identifiable embedded computing apparatus in the accessible internet infrastructure. The 'IoT' connects various devices and transportations with an help of internet as well as electronic sensors. With the rapid increase in the number of users of the internet over the past decade has made the Internet a part and parcel of life, and IoT is the latest and emerging internet technology. IoT Technology waves us to the world where we can connect, interact and command any Device using the Internet. It is a Giant Network of connecting things and people. With this Simple and powerful technology, we can make many amazing projects to control any electronic devices at home or Industries.

I have making the project of "Electronic Controlling System" which is based on the iot Technology. In this Project we can automatically watering in the plants when the soil tempreature is high. This project is about a moisture-sensing automatic plant watering system using Arduino UNO. The system reads the moisture content of the soil using soil moisture sensor and switches ON the motor when the moisture is below the set limit. When the moisture level rises above the set point, the system switches off the pump.

The automatic watering system helps you to water plants at your home, garden or farm in your absence. It uses technology to detect the moisture level of the soil and automatically water the plant when there is no moisture detected in the soil.

Objectives of the Project

Monitor the moisture content of the soil using a soil moisture sensor and the water level of the tank using a float switch.

Turn the motor ON when the soil moisture falls below a certain reference value and if there is enough water in the tank.

Using Components in this Projects-

1. Arduino Uno
2. Soil moisture sensor
3. Buzzer
4. Channel Relay for Arduino
5. Jumper wires

Arduino-The Arduino UNO is one of the most used microcontrollers in the industry. It is very easy to handle, convenient, and use. The coding of this microcontroller is very simple. The program of this microcontroller is considered as unstable due to the flash memory technology. The applications of this microcontroller involve a wide range of applications like security, home appliances, remote sensors, and industrial automation.



IOT



AROUND THE WORLD

This Giant Smog Vacuum Cleaner In China Actually Works

one of the 21st century's bleakest problems, air pollution leads to the premature death of 3 million people every year, a

Now Chinese Scientists find a solution that is

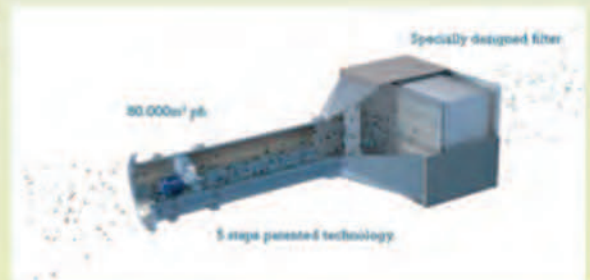
Giant Smog Vacuum Cleaner

This Tower Sitting in a field in the Chinese port city of Tianjin, the 23-foot-high Smog Free Tower looks a little like a giant fan. It's actually a park-scale air purifier, designed to pull in the city's pollution, filter it, and create a bubble of breathable air for people passing by. According to a study published in the journal Nature last year. That number is set to double by 2050.



The Vacuum Cleaner

It is an outdoor vacuum cleaner; it sucks in dirty air, filters it and then pumps it back out, clean. The filter is a specially designed, five-step affair, which can even pick up ultra-fine particles. The Dutch inventors say that their machine can filter 95% of ultra-fine particles and 100% of fine particles out of the air. It cleans 80,000 m³ of air per hour within a 300-meter radius and up to a height of 7km.



"It's a large industrial filter about 8 metres long, made of steel ... placed basically on top of buildings and it works like a big vacuum cleaner."

Smog Into Jewellery

The Smog Free Tower is part of Studio Roosegaarde's Smog Free Project, which includes the Smog Free Ring and Smog Free Bicycle. The carbon in the smog itself – to create synthetic diamonds that they incorporate into a ring. So, by sharing Smog Free Ring you donate 1000m³ of clean air to the city where the Smog Free Tower is located.



Shubham Mishra
IV Sem Sec-A





BLOCKCHAIN

BLOCKCHAIN is a very hot topic nowadays, It's a topic that is disruptive. It's a topic that is accelerating. But do you know what blockchain exactly is? This is the problem that many of the people don't know what exactly blockchain is and how it really works. Well, blockchain is having a very vast area of applications it cannot be explained in a small article but still I would try to give a brief overview. The blockchain is a public electronic ledger built around a P2P system that can be openly shared among disparate users to create an unchangeable record of transactions, each time-stamped and linked to the previous one. Every time a set of transactions is added, that data becomes another block in the chain. Blockchain can only be updated by consensus between participants (consensus means if there are 100 nodes in a network then 51% nodes have to agree to validate a block) in the system, and once new data is entered it can never be erased. Encryption of data is always done through the SHA256 hashing algorithm, hashing here, means taking an input string of any length and giving out an output of a fixed length. In the context of cryptocurrencies like Bitcoin, the transactions are taken as an input and run through a hashing algorithm (Bitcoin uses SHA-256) which gives an output of a fixed length.

There is always a question which pops out in every person's mind that how secure blockchain is? While no system is "unhackable," blockchain's simple topology is the most secure today, according to Alex Tapscott, the CEO, and founder of Northwest Passage Ventures, a venture capital firm that invests in blockchain technology companies.



"In order to move anything of value over any kind of blockchain, the network [of nodes] must first agree that transaction is valid, which means no single entity can go in and say one way or the other whether not a transaction happened," Tapscott said. "To hack it, you wouldn't just have to hack one system like in a bank..., you'd have to hack every single computer on that network, which is fighting against you doing that". "So again, it's not un-hackable, but significantly better than anything we've come up with today," he said. The computing resources needed for most blockchains are tremendous, Tapscott said, because of the number of computers involved.

ROBOTICS & IOT

This club was started in 2018 by HOD of MCA under the guidance of Mr. Chetan Vashisth. This club has successfully completed its two semesters. At Present Coordinators of this club are Garima Singh (MCA-IIA) and Sakshi Gupta (MCA-IIA).

At the beginning, there were just a few students but the numbers kept on increasing day by day as the demand of this field is high in the market and it's getting more and more popular.

Members of this club are very hardworking and have given amazing results in various project competitions like Innotech'18, KARMANA'19 etc. This club handles so many small and big projects like Pollution monitoring, Fire Extinguisher, Smart Belt for Blind People, Messenger dog, Smart Dustbin etc.

In Innotech, a project of this club got the first runner up position and in Karmana each of the four projects that were submitted grabbed the prize. Every member of this Club is working hard to resolve real time problems of the world.

WEB CLUB



This club was started in 2019 by HOD of MCA. This club is going to complete its first semester.

The Coordinators of this club are Kartik Deep Sagar (MCA IV-C) & Rishabh Gupta (MCA IV-C).

Currently this club doesn't have large number of members but we are motivating other students to join this club and we are sure many members will join the club very soon.

Existing Members are very hardworking and this club won the 2nd Prize in National Level Project Competition i.e KARMANA'19 in category of Web Designing. And a lot more is yet to come.



ALUMNI SECTION

The best life time experience I had in my life is the time I spent in **KIET**. I cherish all the moments spent there as special moments of my life. I became a part of **KIET** back in the year 2013 in MCA. **KIET** had always been the special place for me to groom myself a better Student, a better Person, a better Professional and above all a better Human Being.

I was a very shy personality initially, however during my stay at **KIET** my faculties helped me to polish my interpersonal and professional skills which helped me to become a successful career oriented person in my life. Additional to academics I had always loved travelling in different cities and exploring the different cultures. Currently, I am the QA Lead of a Successful organization at DLT Labs Private Limited.

I will always be thankful to kiet along with all my Faculty members for always being there and helping me for whatever I am today into my professional grounds. Thanks a Ton everyone for being a part of my life and all will be remembered always throughout my life.



Pooja Mishra
QA Lead
DLT Lab Pvt. Ltd.
MCA, Batch 2013-16

I always thought of being a software engineer and to accomplish my dream, I have opted KIET. The journey of 3 years which was started 5 years back, is still so refreshing and memorable. It's been an amazing experience with KIET which was full of learning and enjoyment, which i never forgot. College has provided me the best environment for grooming and strenthen my professional and personal skills both. I would like to thank Sangeeta ma'am, Ajay Sir, Naresh sir, Prashant Sir, Atul Sir, Shashank Sir, Anil ahlawat Sir, Jayshree nimesh ma'am, Priyanka sharma ma'am and all for their continuous support & guidance that made it very easier for me to step ahead positively to achieve my aim and here I am working in Appinventiv Technologies as QA. I wish all the success to the college and to all my juniors. I would say- Keep shining, enjoy your college life and always keep your aim in your mind.

Amrita Vishwkarma
Quality Assurance
Appinventiv Technology
MCA, Batch 2014-17





Achievements

Placement Synopsis

Major Recruiters

95

Total student Placed

128

Total No. of Companies

4.50
LPA

Total Offers

155

Highest CTC



MOOCs certifications

MOOCs

38

Total Certification by Session 2018-19

55

NPTEL MOOCs Certification

05

ELITE Certification

18

Course Era Certification





Achievements

S.No.	Name of Student Participants	Rank	Event name	Category	
1.	Ashi Anand	2 nd Position	Innotech (Inter Institute Technical Event)	Internet Of Things(IOT)	
	Archy Mathur				
	Amit Kumar Rajput				
	Neeraj Maurya				
2.	Apoorv Jain	3 rd Position		Intelligent Computing	
	Bhavya Singh				
	Nikesh Bhardwaj				
	Yogendra Pratap Singh				
3.	Ashi Anand	1 st Position	Karmana (A National Level Project Competition)	Internet Of Things(IOT)	
	Archy Mathur				
	Amit Kumar Rajput				
	Neeraj Maurya				
4.	Dhananjay Maheshwari	2 nd Position			
	Navneet Singh				
5.	Deepak Goel	3 rd Position			
	Naman Kumar				
	Vikas Tiwari				
6.	Kumari Sameer	2 nd Position		Artificial Intelligence	
	Raghav Sharma				
	Rishabh Kharie				
7.	Anjali Sharma	2 nd Position		Web Designing	
	Kartik Deep Sagar				
	Mansi Chauhan				
	Rishabh Gupta				
8.	Akash Jaiswal	1 st Position	Application Program		
	Akash Kumar Jaiswal				
	Anjali Chauhan				
	Kavita Sharma				
9.	Akash Jaiswal	3 rd Position		Android	
	Akash Kumar Jaiswal				
	Apeksha Goel				
	Shreya Saxena				
10.	Ankit Kumar Sharma	1 st Position			Online Quiz
	Shubham Pilonia				
	Tushar				
	Vinay				
11.	Madhav Mohan	1 st Position			
	Navneet Singh				
12.	Anurika Nath	2 nd Position			
	Prerna Singh				
13.	Bhavya Singh	3 rd Position			
	Pallav Aggarwal				
14.	Amit Kr Rajput (Spark Team)	3 rd Position	Epoque (Annual Techno Cultural Fest)	Fashion show	
15.	Gaurav Shakya	1 st Position		Photography	
16.	Nidhi Sharma (Phoenix) Navneet Singh (Phoenix)	1 st Position		Group Dance	
17.	Amit Kr Rajput (Spark Team)	3 rd Position	Prastuti (Inter College Cultural Fest)	Fashion show	
18.	Nidhi Sharma (Phoenix) Navneet Singh (Phoenix)	3 rd Position		Group Dance	
19.	Gaurav Shakya	2 nd Position		Photography	



Photo Glimpse

