



Machine Learning

Message From Dean, FCAIT



Prof. R. P. Soni

Artificial Intelligence and Machine Learning are not new areas of Computer Science; these infact were initially discussed in early sixties and seventies. For a very long time these remained only of academic interest to computer science community. However, with the rise of automation, changes in business models, development of new models in auto industries, the AI and ML have gained increased significance.

In simple terms Deep Learning can be defined as a way to automate predictive analytics. Concepts of DL are applied in all types of big data analytics applications, especially those focused on natural language processing (NLP), language translation, medical diagnosis, stock market trading signals, image identification etc.

In this issue students have contributed articles related to ML algorithms, applications in image processing and text processing, image transformation and refinement.

We hope you liked the new activity of TechTalk started last semester. Please give your suggestions to the coordinator of this activity for making it more rewarding.

You will be happy to know that India Today has ranked our BCA institute as 17th best institute in top 50 BCA colleges of India.

Congratulations to winner teams which participated in state level Hackathon!

From Editorial Desk

CHIEF EDITOR

Prof. Tripti Dodiya

EDITORS

Prof. Poonam Dang

Prof. Bharti Shah

Prof. Monica Gupta

Prof. Chitresha Jain

DESIGNERS

Prof. Poonam Dang

Prof. Bharti Shah

Machine Learning is one of today's most rapidly growing technical fields, lying at the intersection of computer science and statistics, and at the core of artificial intelligence and data science. We are very glad to bring you forward the next vibrant issue of D-Kosmos with machine learning concept.

The issue highlights the outstanding achievements of our students at HACKATHON - 2018, an initiative by Government of Gujarat. The issue also has glimpses of various activities like SHADEZ- The cultural Fest, CSI, CSR, CWDC, Farewell, Educational and Industrial tours etc. successfully conducted at FCAIT. There is the snapshot of the National Level Technical Festival CYBER SHADEZ 2017 on the theme "BLOCK CHAIN".

The issue portraits the University extravagaza of the I.M. Nanavati Sports Meet 2018. We have encompassed the felicitations of the students who have participated and brought laurels to the institute.

There are Faculty Achievements inked to decorate the academic enhancements.

So just take a dip into this literary ocean and enjoy your reading.

We would like to hear the suggestions and queries from you at dkosmos@glsica.org.

Have a happy reading!!!!!!

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MACHINE LEARNING



Machine learning is an application of artificial intelligence (AI) that provides systems the ability to automatically learn and improve from experience without being explicitly programmed. Machine learning focuses on the development of computer programs that can access data and use it learn for themselves.

Machine Learning is a set of rules that a computer develops on its own to correctly solve problems. The basic idea is that a Machine Learning computer will find patterns in data and then predict the outcome of something it has never seen before. The process of learning begins with observations or data, such as examples, direct experience, or instruction, in order to look for patterns in data and make better decisions in the future based on the examples that we provide. The primary aim is to allow the computers learn automatically without human intervention or assistance and adjust actions accordingly.

APPLICATIONS

Virtual Personal Assistants

Siri, Alexa, Google Now are some of the popular examples of virtual personal assistants. As the name suggests, they assist in finding information, when asked over voice. All you need to do is activate them and ask “What is my schedule for today?”, “What are the flights from Germany to London”, or similar questions. For answering, your personal assistant looks out for the information, recalls your related queries, or send a command to other resources (like phone apps) to collect info. You can even instruct assistants for certain tasks like “Set an alarm for 6 AM next morning”, “Remind me to visit Visa Office day after tomorrow”. Machine learning is an important part of these personal assistants as they collect and refine the information on the basis of your previous involvement with them. Later, this set of data is utilized to render results that are tailored to your preferences. Virtual Assistants are integrated to a variety of platforms. For example:

- Smart Speakers: Amazon Echo and Google Home
- Smartphones: Samsung Bixby on Samsung S8
- Mobile Apps: Google Allo

Online Customer Support

A number of websites nowadays offer the option to chat with customer support representative while they are navigating within the site. However, not every website has a live executive to answer your queries. In most of the cases, you talk to a chatbot. These bots tend to extract information from the website and present it to the customers. Meanwhile, the chatbots advances with time. They tend to understand the user queries better and serve them with better answers, which is possible due to its machine learning algorithms.

Search Engine Result Refining

A Google and other search engines use machine learning to improve the search results for you. Every time you execute a search, the algorithms at the backend keep a watch at how you respond to the results. If you open the top results and stay on the web page for long, the search engine assumes that the the results it displayed were in accordance to the query. Similarly, if you reach the second or third page of the search results but do not open any of the results, the search engine estimates that the results served did not match requirement. This way, the algorithms working at the backend improve the search results.

Online Fraud Detection

Machine learning is proving its potential to make cyberspace a secure place and tracking monetary frauds online is one of its examples. For example: Paypal is using ML for protection against money laundering. The company uses a set of tools that helps them to compare millions of transactions taking place and distinguish between legitimate or illegitimate transactions taking place between the buyers and sellers.

Speech Recognition

Speech recognition (SR) is the translation of spoken words into text. It is also known as “automatic speech recognition” (ASR), “computer speech recognition”, or “speech to text” (STT). In speech recognition, a software application recognizes spoken words.

Image Recognition

One of the most common uses of machine learning is image recognition. There are many situations where you can classify the object as a digital image. For digital images, the measurements describe the outputs of each pixel in the image.

In the case of a black and white image, the intensity of each pixel serves as one measurement.

In the colored image, each pixel considered as providing 3 measurements to the intensities of 3 main color components ie RGB.

For face detection – The categories might be face versus no face present. There might be a separate category for each person in a database of several individuals.

For character recognition – We can segment a piece of writing into smaller images, each containing a single character. The categories might consist of the 26 letters of the English alphabet, the 10 digits, and some special characters.

ALGORITHMS

In machine learning, such solutions are called target or output and situations are called input or unlabeled data. Situation and solution in combination it is called labeled data.

Supervised: All data is labeled and the algorithms learn to predict the output from the input data. If you are training your machine learning task for every input with corresponding target, it is called supervised learning, which will be able to provide target for any new input after sufficient training. Your learning algorithm seeks a function from inputs to the respective targets. If the targets are expressed in some classes, it is called classification problem. Alternatively, if the target space is continuous, it is called regression problem.

Unsupervised: All data is unlabeled and the algorithms learn to inherent structure from the input data. If you are training your machine learning task only with a set of inputs, it is called unsupervised learning, which will be able to find the structure or relationships between different inputs. Most important unsupervised learning is clustering, which will create different cluster of inputs and will be able to put any new input in appropriate cluster. Other than clustering, other unsupervised learning techniques are: anomaly detection.

Semi - supervised: Some data is labeled but most of it is unlabeled and a mixture of supervised and unsupervised techniques can be used. If a very few inputs have associated targets, it is called semi-supervised learning. Semi-supervised learning with active learning often can be augmented by extra targets obtained through interactive query by trainer, which were not available during initial stage of training. This is generalized by proactive learning and also called as optimal experimental design.

Dhruv Mishra - BCA and Neha Aswani - IMSCIT, Sem-II

DEEP LEARNING

Deep Learning is a subfield of machine learning concerned with algorithms inspired by the structure and function of the brain called artificial neural networks. Deep learning is a specialized form of machine learning. A machine learning workflow starts with relevant features being manually extracted from images. The features are then used to create a model that categorizes the objects in the image. With a deep learning workflow, relevant features are automatically extracted from images. In addition, deep learning performs “end-to-end learning” – where a network is given raw data and a task to perform, such as classification, and it learns how to do this automatically.

Another key difference is deep learning algorithms scale with data, whereas shallow learning converges. Shallow learning refers to machine learning methods that plateau at a certain level of performance when you add more examples and training data to the network.

A key advantage of deep learning networks is that they often continue to improve as the size of your data increases.

APPLICATIONS

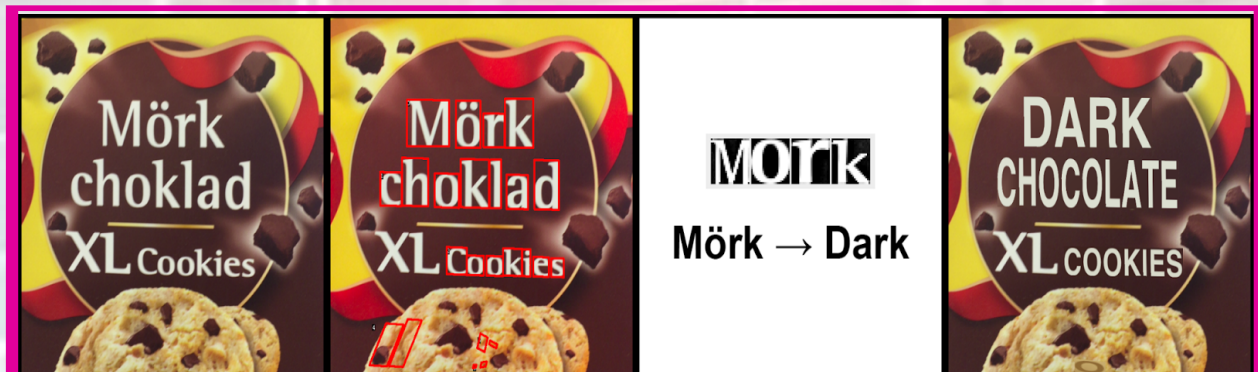
Navigation of self-driving cars- Using sensors and onboard analytics, cars are learning to recognize obstacles and react to them appropriately using Deep Learning.

Recoloring black and white images- by teaching computers to recognize objects and learn what they should look like to humans, color can be returned to black and white pictures and video.

Medical Research- Cancer researchers are using deep learning to automatically detect cancer cells. Teams at UCLA built an advanced microscope that yields a high-dimensional data set used to train a deep learning application to accurately identify cancer cells.

Electronics- Deep learning is being used in automated hearing and speech translation. For example, home assistance devices that respond to your voice and know your preferences are powered by deep learning applications.

Restore colors in B&W photos and videos- A system based on Deep Learning under the title Let there be color! for example, helps to give color to black and white photos and even videos.



Removing the language barrier- The Deep Learning technology allows you to determine whether there are letters on the picture and then, when the letters are identified and words are recognized, the application translates the inscription from the pictures into your native language.

Ridhi Dave - IMSCIT, Sidhi Dave - IMSCIT, Sem-II

BEYOND ACADEMICS

Industrial Tours

Visit to Mundra Port - UDAAN

Third Year students of FCAIT-BCA went for an industrial trip at Mundra port which is the largest private port of India located on the north shores of the Gulf of Kutch near Mundra, Kutch district, Gujarat. The trip was of 2 days on 9th and 10th March, 2018. 76 students along with 4 faculty members visited the port. The students mainly visited 4 places at mundra port: West port Jetty, South port, Adani power plant and Adani Wilmar Oil refinery.



Visit to BSNL-RTTC

FCAIT organized an industrial visit at BSNL – RTTC (Regional Telecom Training Centre) on 2nd January, 2018. RTTC, Ahmedabad is one of the prime training centre of BSNL in the western region. The main purpose of this tour was to explore and gain knowledge about working of mobile and broadband connection. Students visited 7 different labs like FTTH – Fiber to the Home, MLLN - Managed Lease Line Network, Network Lab, Broadband lab, OFC lab- Optical Fiber Communication, C-DOT lab, Telecom Museum.

Educational Tours

Visit to Centre for Environment Education

FCAIT organized an educational visit at CEE (Centre for Environment Education), on 21st February, 2018, under the subject Environmental Studies. Students learned many new things about protecting environment and maintaining cleanliness. Students were demonstrated the reuse of waste materials. Students also learnt how to make natural colors without chemicals for Holi festival.

Visit to Dandi Kutir

Dandi Kutir is India's largest & only museum built on the life and teachings of one man, Mahatma Gandhi. FCAIT organized an educational visit at Dandi Kutir Ashram, Gandhinagar. The main purpose of this tour was to explore and gain knowledge about Father of the Nation - "Mahatma Gandhi". It gives glimpses of Gandhi's early life which is beautifully portrayed with the help of audio- visuals. From his birth on 2nd October 1869 in Kathiawad, to his childhood when he was a shy , remarkable and unique student. It also traces his marriage to Kasturba and his experiments with youth.



Visit to Indroda Dinosaur and Fossil Park

FCAIT organized an educational visit at Indroda Dinosaur and Fossil Park which is situated at Gandhinagar city. It spreads over an area of about 400 hectares and it is second largest hatchery of dinosaur eggs in the world. It is the only dinosaur museum in the country .

Tech Talk



Inspiration can take many forms, and often we find it through people. Tech Talk is an activity initiated with the vision to inspire students and building an aptitude of proactiveness. As a part of these series, a Tech talk was organised on 20th February, 2018 at FCAIT. The talk was a speech by Steve Jobs that talked about his personal and professional life and his approach to overcome various challenges.

CSI Activities

Date	Seminar Title	Expert Name
4/12/2017	Internet of Things	Dr. Harshal Arolkar, HoD, Msc(IT), GLS University
22/12/2017	Search Engine Optimization	Asst. Prof. Bharat Katariya, FCAIT, GLS University
19/01/2018	IOS	Mr. Pratik Maniar, Infocity, Gandhinagar
24/01/2018	Digital Marketing	Mr. Harsh Panchal, Mr. Nishil Prasad from Suggest My Choice, Baroda.

CWDC Activities

Fitness and Health

The seminar was held on 3rd January, 2018 by Dr. Nehal Shah, practising physiothapist from Vadilal Hospital. The aim of this seminar was to provide awareness about healthy life style. The doctor explained dangers of prolonged cellphone usage and taught safe postures to avoid neck pain. The doctor also focus on various reasons for neck pain, avoidance steps and correct posture and disadvantages of using excessive mobile phone.

Meditation & Healing Techniques

“It is said that student life is root of the character tree of human life.” Believing in this FCAIT organized a seminar which was conducted on 19th January, 2018. In this seminar the students learnt the techniques to develop the quality of clarity of vision, creativity, satisfaction, confidence, communication skills, balanced temperament and organized personality through meditation.

Fitness Tips for Women

The seminar was held on 24th January, 2018 by Dr. Sunita Patel, a practioner, from an association WOW. The aim of this seminar was to provide awareness about women’s health, wellbeing and safety.



NSS & ISR Activities

Date	Event Name	Place
20/12/2017	Computer awareness drive at mathasur primary school	Mathasur Village
	Visit to Mathasur Ashram shala	
28/12/2017	Blood Donation Camp	GLS University
	Thalassemia Camp	
04/01/2018	Visit to Jivan Vruddhi Children's Home	CTM, Ahmedabad
20/01/2018	Visit to “Maniben Old Age Home”	Chandra Nagar, Ahmedabad
	Cloth distribution drive to poor people	Vasna, Ahmedabad

Online Interacion with Alumni

FCAIT regularly organize interction with alumnis who have settled in various countries across the world.

This time we connected with two of our Alumnis:

-> Mr. Jay Soni, Technical Support Engineer, IT Recs Solution NJ, USA

-> Mr. Divyang Bhimani, Software Developer, LogiNext Solutions, Mumbai.

The interaction through skype have been found to be very interesting and fruitful by the current year students since they gather information about the work culture, prospectus and the current IT scenario about that place. Skype lectures gives the guidance to the students who want to study and job in IT after graduation.

Farewell

“A farewell is not just about saying goodbye but rather, it is about encouraging and giving your best wishes to your students for new journey of life.”

Beleiving in this FCAIT oraganized farewell function to bid abieu to final year students of 2015-2018 batch on 11th April, 2018 at H.H auditorium. The function began with blessings delivered by Prof. R.P Soni, Dean , FCAIT , who wished for the bright future of the students. The speech was followed by video depicting journey of their three years of college life. Third year students shared their experiences of college journey. The students enthutiastically participated and enjoyed their farewell function.

Placement Cell

Placement is a planned period of learning, normally outside the institution at which the student is enrolled, where the learning outcomes are an intended part of a programme of study. It includes those circumstances where students have arranged their own learning opportunity with a placement provider, with the approval of the institution. FCAIT always plans for students for their placement as one of the important career prospects. There are a number of opportunities for placement learning which exist in programmes at the FCAIT. Students who aspire for jobs are taken care of yet a majority of the students go for higher studies.

Following are the list of the students selected in various IT industries/academic institutions:

Company Name	Student Name
TCS	Aenil Patel
	Muskaan Chandnani
	Harsh Ojha
	Akshat Patel
	Niyomi Rabdu
	Burhanudin Barodawala
	Darshita Panchal
	Krupali Mehta
	Dhvija Shah
	Gaurav Agarwal
Wipro	Khushbu Shah
	Gaurav Agarwal
Theta Techno Labs	Chetan Mahajan
Parshwanath Life Science	Dhruvil Modi
ICICI	Aditi Solanki
	Parth Changela
	Darshil Joshi
	Niral Desai
GLS University	Jignesh Soni
	Hiren Kothiya
	Jigar Solanki
	Ashok Savaliya
	Jay Gediya

Best Project Abstracts - 2018

E - Assessment of Virtual Circuits

Prepared By:

Internal Guide:

**Vatsal Dave
Sarthak Trivedi
Bhumika Hasani**

Asst. Prof. Poonam Dang

The project E-Assessment of Virtual Circuits is a web-based application. Through this application, a registered user can draw the circuit using EDA (Electronics Design Automation) tool OSCAD (Open Source Computer Aided Design) and can get automatic assessment of the drawn circuit through E-assessment. This process is done in two core processes like Logical Evaluation, which consists of netlist file comparison with help of test cases and Functional Evaluation, which consists of comparing output files.

DigiMed

Prepared By:

Internal Guide:

**Prem Raval
Riddhi Purani
Ayush Patel**

Asst. Prof. Nirav Suthar

DigiMed is an application which collaborates Aadhar Card and hospitals. DigiMed lets patients enroll in hospital via QR code of Aadhar card, a unique identity code for every citizen. DigiMed helps patients to fix their appointment with doctors, fix laboratory visits, save prescriptions and bills. DigiMed accesses everything on a central database which will help the Government in tracking of diseases and national health level. Other features like sorting, reviewing, etc are even provided.

E-Campus

Prepared By:

Internal Guide:

**Ranghani Khushboo
Muskan Sadnani**

Asst. Prof. Rinkal Shah

E-campus as a virtual campus — a web-based learning system and electronic community center for students, faculty and parents. This customizable and secure portal offers courses, collaboration and communication tools, assessment features, and access of teaching and learning resources. This app is integrated with Moodle. It gives a real time interaction with students, faculties and parents. Parents can view progress reports, student results and any complaints about students. We provide online lectures too. Parents also can chat with faculty. Assignments and notes can be uploaded and downloaded.

"SHADEZ" -Internal Cultural Activity

"Learning doesn't just takes place in stuffy classrooms, it can happen everywhere , everyday to every person". College cultural events are some of the most happening events to facilitate the development of a campus climate that is welcoming and affirming to all and provide a wonderful opportunities for students to learn and explore perspective of various cultural dimension. "SHADEZ – 2017" is the annual cultural fest organized by FCAIT on 15th and 16th December, 2017 at the college premises.

Various events such as singing, group dance, master chef, debate, public speaking, on the spot photography, best out of waste, collage, antakshri, instrumentation, database treasure hunt were held simultaneously. The two days fest was attended by more than 250 students and more than 100 participants have participated in 15 different contests.

Veteran experts in their respective fields like Ms. Komal and Mr. Sumang had obliged our request for judging the group dance, singing and instrumentation events respectively as external referees.

The events provided a platform to students to experience the learning beyond class room and promote innovative ideas. Students enthusiastically participated in all the events.



National Level TechFest "CYBER SHADEZ-2018"

Faculty of Computer Applications & IT (BCA, iMSc(IT) PGDCA, M.Sc-IT) and Faculty of Computer Technology (MCA) hosted the Technical Festival "Cyber Shadez" on 17th February, 2018. The theme of the TechFest was "Block Chain".

The objective of the TechFest was to provide a platform for the dynamic young students to showcase their technical talents with competitive spirit. The events organized during the festival were Idea Presentation, Tech Programming, Relay Programming, Web Craft - Removing Bugs from Code, IT Quiz, Gem Collection - Database Treasure Hunt and Artful - Logo / Flex Design. More than 250 students of FCAIT & FCT performed enthusiastically and won prizes in various events.

The event was graced by Dr. Unnat Pandit, Head of Operations, Atal Innovation Mission, National Institution for Transforming India (NITI Aayog), Government of India. He talked about "Strengthening Innovation Ecosystem for India by 2022" and emphasized on how to change the perception of observations about problems in day to day life and conversion of problems into solutions by innovation. He also focused on how the innovation can easily make transformation into ecosystem and discussed about technology adaption by giving real-life examples.

In the pre-lunch session, four events named Idea Presentation, Remove Bugs from Code, Tech programming and preliminary round of IT Quiz were held in parallel. The students showcased their talent by presenting real-life live models and posters of RFID Based Attendance System, Robotics and Home Automation. The post-lunch session started with Relay Programming, Logo/Flex Design and Treasure Hunt in parallel.

The event ended with prize distribution. The staff members of Faculty of Computer Applications & IT and Faculty of Computer Technology along with student volunteers coordinated the entire event with great success.



I. M. Nanavati Inter-College Sports Celebration -2017-2018

GLS University believes that the field of sports not only institutional competitive activity but also helps in educating the youth by inculcating the team spirit. Keeping this in mind GLS University every year organizes a "Sports Celebration" where students from every Institute showcase their sports talent. The 3rd annual GLS University Sports Celebration was held from 15th December, 2017 to 29th December, 2017 wherein around 1450 students from different institutes participated in individual and group events. This year Faculty of Computer Applications & Information Technology (FCAIT) hosted the "Athletics Events". Have a glimpse of the Sports Fever at GLSU.



FCAIT Achievements in Sports Meet:

In Group Events:

FCAIT- 1st Runner up, Volleyball (Boys)

FCAIT- 2nd Runner up, Cricket (Boys)

In Athletic Events:

Henil Shah- Gold Medal, Long Jump

Ashish Kumar- Bronze Medal, Badminton Single (Boys)

Ashish Kumar & Garima Jain- Bronze Medal, Badminton Double Mix

Ashish Kumar- Silver Medal, Discus Throw

Achievements

Name of Student	Competition Name	Position	College Name
Sagar Ladla	C/C++ Programming	1 st	Dept. of Computer Science, Vallabh Vidya Nagar
Sagar Nagrani			
Vraj Mehlana	Quiz	3 rd	Rotary Club Quiz, Ahmedabad
Sagar Ladla			
Aman Pandya	NFS	1 st	Rollwala College of Computer Science, Ahmedabad
Indu Shetty	Poster Presentation	1 st	Charusat University
Sabera Kadiavala			
Vandan Pandey	Web Designing	1 st	Kadi University, Gandhinagar
Jeel Shah			
Arnav Desai	Treasure Hunt	1 st	
Aman Pandya	NFS	2 nd	
Nandini Rana	Mehendi	1 st	SSIT, Gandhinagar
Nandini Rana	One Minute	1 st	
Vandan Pandey	Poster Presentation	1 st	SSCSS, Bhavnagar
Jeel Shah		1 st	
Indu Shetty		Paper Presentation	



Smart Gujarat for New India Hackathon- 2018

To create and promote the innovation culture and develop the innovation ecosystem across affiliated colleges and universities under the Education Department of Gujarat, the Government of Gujarat recently organized "Smart Gujarat for New India Hackathon 2018". First one of its kind state sponsored Hackathon involves 16 Departments who have shared 206 problem definitions to be solved by 1,100 teams comprising more than 8,000 students from 202 colleges affiliated to 35 universities under the guidance of 500 unique faculty mentors making it the highest in such open innovation experiment.

Three teams and their mentors from FCAIT, BCA have registered in Hackathon 2018 with specific problem statements given by Education department, Government of Gujarat.

The first team "DigiMed", comprising of Raval Prem, Purani Riddhi, Dave Vatsal, Trivedi Sarthak, Patel Ayush, Patel Mohammed Talha, Vachhani Rushita and Suroliya Akshat had submitted their idea on 'Application to Maintain Patient Complete Details' to Health and Family Welfare Department.

The second team "Attendance SPY" comprising of Tanwani Mohit, Tanwani Vishal, Raghani Khushboo, Hotwani Pratibha, Mahajan Chetan, Mehta Vatsal, Patel Parin and Pathan Hamza had submitted their idea on 'Mobile Location Based Student Attendance' to the Education Department.

The third team "SDAP (Student Dropout Analysis Portal)" comprising of Pandeji Vandan, Shah Jeel, Patel Anil, Memon Sahil, Wadhvani Ravi, Jasrajani Dilip, Bambhoriya Jinal and Achhava Mohammed Sahil had submitted their idea on 'Student Dropout Analysis for School Education' to the Education Department.

The team "Attendance SPY" won 1st prize with cash amount of Rs.50,000 by Education Department on 24th - 25th March, 2018. This team also won 3rd Prize with cash amount of Rs.20,000 amongst 1100 teams across 16 Departments.

The team "DigiMed" won 1st prize with cash amount of Rs.50,000 by Health and Family Welfare Department on 24th - 25th March, 2018.



Faculty Corner



Dr. Ankit Bhavsar, Prof. Poonam Dang and Prof. Jyoti Dubey of FCAIT has participated in Action-Oriented Research Project organized by GLSRD. The team secured first position for the project entitled "IOT and WSN Based Solid Waste Management System for Ahmedabad City".

Prof. Jyoti Dubey, Dr. Ankit Bhavsar published research paper titled "Wireless Sensor Network Based Accident Avoidance Architecture for the Fleet of Long Route Vehicles" in International Journal "EAI Endorsed Transactions on Scalable Information Systems" Vol.4 Issue 5, December, 2017, ISSN No. 2032-9407.

Prof. Jyoti Dubey, Dr. Ankit Bhavsar published research paper titled "Wireless Sensor Network: Assisting Solution for Accidents Avoidance on Indian Highways" in International Journal "International Journal of research In Computer and Robotics" Vol.5 Issue 12, December, 2017, ISSN No. 2320-7345.

Prof. Jenny Kasudiya, Dr. Ankit Bhavsar published research paper titled "Scenario of Crowd Gathering in India - Review and a Possible Solution" in proceeding of International Conference on "Electrical, Electronics, Computers, Communication, Mechanical and Computing (EECCMC - 2018)" and IEEE explore, January, 2018 ISBN No. CFP18037 - PRT - 978 - 1 - 5386 - 4303 - 7.

Prof. Shaily Thaker presented a paper titled "Analysis of Fuzzification Process in Fuzzy Expert System" in International Conference on Computational Intelligence and Data Science, organized by NorthCap University on 7th-8th April, 2018.

Prof. Ankita Kanojiya presented paper titled "Analysis of Architecture and Forms of Outputs of Decision Support Systems implemented for different domains", at the International Conference on Inventive Communication and Computational Technologies (ICICCT, 2018) during 20th-21th April, 2018.

Cross Word Solution

