

Department of Computer Science and Engineering



# Gyan Ganga

Institute of Technology & Sciences  
Jabalpur

CSE Technical Magazine

# insight!

AUGUST, 2019

Meet  
IOT with  
Raspberry pie

KNOW ABOUT!

BIG  
DATA

TOP TEN

TECHNOLOGIES!

AI

HYPECYCLE

GGITS TOUCH, ALIEN DASH,  
PRODIGIES OF GYAN GANGA AND MORE

Internet of Things  
Shield Family



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# FROM THE EDITOR'S DESK

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Mr. Santosh Vishwakarma

HOD, CSE

## From HOD's Desk

Dear Alumni & Friends,

Do you remember the time when we flipped through a hundred pages, through tens of books to learn about a single topic? Today, all we need is the Internet. A single search on any topic provides us with millions of information to refer to. Technology has become an inevitable part of our daily lives. Technology is not what it was sometime back. And technology will not be the same as it seems today.

We, the Computer Science & Engineering department of GGITS, are proud to present another edition of our magazine "CSE Insight", where we enumerate our efforts to strive towards technical eminence. Our endeavor is to preserve the momentum of the ever-improving technological world and mould the minds of the students so that they enter the industry with a spark of innovation and creativity



# VISION

- *To be a innovative and research oriented leading education center in computer science and engineering.*
- *To produce skillful and employable computer science graduates to meet upcoming social challenges with moral and ethics.*



# MISSION

- *To impart intensive, innovative teaching and training through state of art technology for achieving excellence*
- *To associate with industries for identification of social needs and seize opportunities for software development in live training and sustainable projects of social challenges.*
- *Continuous knowledge up-gradation of students, staff, faculty through research, trainings, seminars, workshops, conferences, webinars and higher studies.*
- *To impart knowledge of project management, commercial viability and code of conducts for Engineers.*



# PEO(Programme Educational Outcomes)

**PEO1.** Graduates will pursue their career in global domain for software development with proficiency in analysis, design, coding, testing, deployment, maintenance of software and application software

**PEO2.** Graduates will demonstrate professionalism with effective communication skills, leadership qualities, teamwork, ethical, economic, cultural, environmental issues related to multidisciplinary projects for resolving social issues.

**PEO3.** Graduates will enhance knowledge and skills through higher studies and lifelong learning new computing technologies for attaining professional excellence and research.

**PEO4.** Graduates will drive scientific and societal advancement through Technological innovation and entrepreneurship.



# PROGRAM OUTCOMES(PO)

Students should be able to:

**PO1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization for the solution of complex engineering problems.

**PO 2. Problem analysis:** Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.

**PO4. Conduct investigations of complex problems:** Use research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.

**PO 5. Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling to complex engineering activities, with an understanding of the limitations.

**PO 6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**PO7. Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

**PO8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO9. Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

**PO10. Communication:** Communicate effectively on complex engineering activities with the engineering community and with the society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

**PO11. Project management and finance :** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

**PO12. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



	<p><b>STUDENT ARTICLES</b></p>	
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# "Top 10 IT Technologies to be aware of"

-Arpit Singh Phillaura, CSE 3rd SEM

Technologies have made great inroads in our everyday life and thinking. Today Information Technology is a growing "Dynamic Sector" that offers several specializations that deals with the various aspects of the technology. One needs to catch up with the latest technologies to keep themselves updated. Let us see the top 10 trendy IT Technologies

**Cloud** -: Cloud basically focuses on maximizing the effectiveness of the shared resources. Cloud provides users and enterprises with various capabilities to store and process their data. There are several data centers that deal with the data.

**Big Data** -: We live in a world increasingly driven by data. Big data describes a information management strategy that includes and integrates many new types of data and data management.

**Internet-of-Things** -: The Internet of Thing (IoT) is increasing the connectedness of people and things on a scale that once was unimaginable. It is increasing interconnectivity of machines and personal smart devices.

## **Mobility** -:

Mobility is related to wireless networking for transfer of data. Mobility is somewhere related to mobile computing, which specifies the human - computer interaction.

**Artificial Intelligence** -: Artificial Intelligence is the branch of computer science concerned with making computers behave like humans. Its specializations are robotics, neural systems etc.



**Cyber Security** -: It is also known as Computer security or IT security. It is the protection of information systems from theft or damage to the hardware, the software, and the information on them.

**Social Media** -: Today social media is so much popular among youths, there are many websites, forums, micro blogging, social networking, and wikis are among the different types of social media.

**Bring Your Own Device (BYOD)** -: It is also called as bring your own technology (BYOT), bring your own phone (BYOP) and bring your own PC (BYOPC), this refers to the policy of permitting employees to bring personally owned mobile devices (laptops, tablets etc) to their workplaces to access privileged company.

**Augmented Reality** -: Augmented reality (AR) is a view of physical, real world environment whose elements are augmented by computer generated input such as sound, video, graphics or GPS data.

**Voice Recognition** -: It is a technology that deals with designing computer systems that can recognize spoken words.

These are top 10 trendy technologies we should be aware of. I hope this article would help technical students to learn about the IT world and its emerging worldwide technologies.

# WHAT IS BIG DATA?

-Ayushi Tiwari CSE 3<sup>rd</sup> SEM

The concept of big data has been around for years; most organizations now understand that if they capture all the data that streams into their businesses, they can apply analytics and get significant value from it. But even in the 1950s, decades before anyone uttered the term “big data,” businesses were using basic analytics (essentially numbers in a spreadsheet that were manually examined) to uncover insights and trends.

The new benefits that big data analytics brings to the table, however, are speed and efficiency. Whereas a few years ago a business would have gathered information, run analytics and unearthed information that could be used for future decisions; today that business can identify insights for immediate decisions. The ability to work faster – and stay agile – gives organizations a competitive edge they didn’t have before.

## Why is big data analytics important?

Big data analytics helps organizations harness their data and use it to identify new opportunities. That, in turn, leads to smarter business moves, more efficient operations, higher profits and happier customers. In his report *Big Data in Big Companies*, IIA Director of Research Tom Davenport interviewed more than 50

businesses to understand how they used big data. He found they got value in the following ways:



1. **Cost reduction.** Big data technologies such as Hadoop and cloud-based analytics bring significant cost advantages when it comes to storing large amounts of data – plus they can identify more efficient ways of doing business.

2. **Faster, better decision making.** With the speed of Hadoop and in-memory analytics, combined with the ability to analyse new sources of data, businesses are able to analyse information immediately – and make decisions based on what they’ve learned.

3. **New products and services.** With the ability to gauge customer needs and satisfaction through analytics comes the power to give customers what they want.

Davenport points out that with big data analytics, more companies are creating new products to meet customers’ needs.



# RASPBERRY.PI

Apurv Prakash Shrivastava, CSE 3<sup>rd</sup>

The raspberry pi is a low cost-credit card-sized computer that plugs into a computer monitor or TV and uses a standard keyboard and mouse. It is a capable little device that enables people of all ages to explore computing, and to learn how to program in languages like scratch and python. It's capable doing everything you'd expect a desktop computer to do, from browsing, word-processing and playing games.

What's more, the Raspberry Pi has the ability to interact with the outside world, and has been used in a wide array of digital maker projects, from music machines and parent detectors to weather stations and tweeting birdhouses with infra-red cameras. The joy of the Raspberry Pi is that it's Linux power. The open source operating system called Raspbian offers all the amazing freedom and software that has been created over the last two decades and more.

## PERIPHERALS:

### SD CARD

It might seem obvious, but before you can get started with the Raspberry Pi, you need to plug in lots of things. But getting those things right can make the whole process much easier.

The best place to start is with the SD card. This is because it's the most important peripheral you need to buy for your Raspberry Pi. These tiny rectangles with a chomped-off corner are for storing the OS, as they're the only device your Raspberry Pi can boot off. We'd recommend going for a 4GB device to start with, and if you need more storage, use a USB storage device, such as an external hard drive. But a certain

amount of capacity is essential, because you need at the very minimum 2GB (gigabytes) to install the default Raspbian operating system.

### POWER

We recommend powering the Pi solely from a micro-USB charger that's capable of atleast 1.2A. Any more than 1.2A won't cause problems, but any less may generate unpredictable behavior.



### NETWORK

For installation and configuration, the Raspberry Pi needs to be connected to your home network. This is best done through the on-board Ethernet port, as long as your home hub is working, simply connecting an Ethernet cable between the two is all you need to do.

### KEYBOARD AND MOUSE

YOU CAN connect a keyboard and mouse. Most models use a USB standard that means keyboards and mice will just work.



But you do need to make sure you connect these devices to a powered USB hub, as this will ensure there's not too much power drain on the Raspberry Pi itself.

## DISPLAY AND SOUND

There are two connectors on the model B Raspberry Pi that are capable of sending a video signal to a display device. The yellow phono jack is for composite video and you can connect

this to a great number of television sets that usually have a yellow composite video-in port for external cameras or recorders. The modern HDMI connector on the board is much better suited to display duties. Another strength of the HDMI connector is that it can also carry the digital sound data from the Raspberry Pi. Your TV or amplifier will need to be compatible with this feature to work.

## PROJECTS-RASPBERRY PI

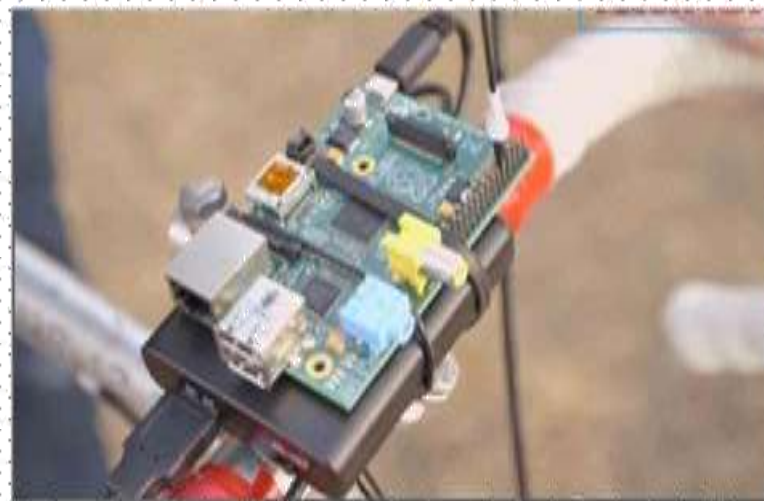
### WEATHER STATION FOR SCHOOLS

The Raspberry Pi Foundation has teamed up with Oracle to announce the Oracle Raspberry Pi Weather Station for schools. As a participating school, you'll receive a free weather station kit and asked to build and commission a weather station with pupils from your school. The kits will be supported with a range of teaching materials, covering computing and weather-related topics.

### PI-RATE RADIO

A simple, but effective hack from Make shows how you can turn your Raspberry Pi into a mobile FM transmitter to share your tunes with those around you. The beauty of this project is its simplicity. All you need is the Raspberry Pi basics—SD card, a power source, and the Raspberry Pi—plus a piece

of wire for an antenna, some basic tools, and about an hour of your time.



## PICROWAVE

Why bother owning a traditional microwave when you can swap out some innards and create your very own Pi-powered food nuker?

Developer Nathan Broadbent took his microwave apart, redesigned the touchpad, and added some new functions like voice control, a barcode scanner to access an online database of cooking times, a web-based interface for remote access, and auto-tweets for when the timer is done.





# TOP 10 CLOUD TRENDS

Harshit Sakhuia, CSE 3<sup>rd</sup> SEM

## 1. The hybrid cloud evolution

The term "hybrid cloud" no longer just refers to a mix and match of traditional IT and cloud-based solutions. That is still part of the definition but really "hybrid" means a purpose-built cloud solution that incorporates a variety of cloud-based and traditional IT components specifically deployed to address a business need. This includes ability to scale and access resources on demand, business continuity features, cross data centre security and inclusion of development lifecycle from test/dev to deployment across these environments.

The ability to seamlessly and flexibly integrate different cloud environments requires robust software control facilities to programmatically manage the networks across virtual and multiple physical environments.

## 2. Blurring lines between public and private cloud

The conversation has always been about "either, or." The focus going forward will be on workloads vs. risk and that will lead to blurred solutions that incorporate public and private cloud services. As in the hybrid cloud above, the ability to manage and flexibly configure your cloud infrastructure in a rapid and automated way emerges as a dominant new pattern in complex and sophisticated cloud environments.

## 3. "Cloud First" Approach

Application development adopts a cloud first approach at the expense of traditional vertical deployment models. This horizontally scaled approach, built for the cloud, managed by DevOps, is designed to operate within the strictures that cloud imposes and facilitates overcoming the objections enterprises still face in deploying to the cloud.

## 4. Flexible networking connectivity

Cloud and network are co-dependent. A cloud implementation can't be successful without reliable implementation can't be successful without reliable networking. However, network services should be fluid, like cloud services. Enterprises should be able to scale up and down network services to meet workload demand, usage and risk. The richness of the Open Systems Interconnection (OSI) stack, with multiple protocols and implementations of these protocols, requires this level of flexibility. Moreover, the ability to control these configurations requires the long promised value of network function virtualization (NFV) be recognized as a first class citizen in the cloud environment-virtual stack.





## 5. Standard deployment of Hyper Converged Infrastructure

A new category of infrastructure, the Hyper Converged Infrastructure (HCI) promises scale and performance by integrating compute, storage and network into a high performance, stack management focused hardware platform. The advantage of these sorts of architectures is that it becomes possible to manage costs by scaling the legs of the platform together. HCI simplifies the manageability of the infrastructure by creating a better and more uniform platform experience. This creates opportunity and incentive to create a tightly integrated management platform. The capabilities of this platform yield the effective delivery of a "software defined everything" infrastructure.

## 6. Rise of "born in the cloud" enterprise applications

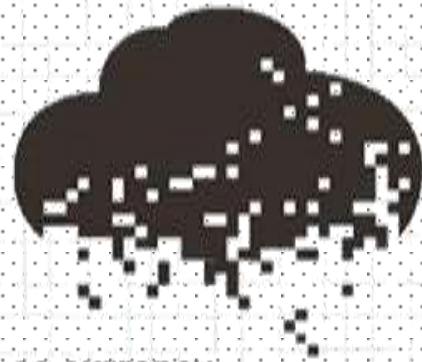
Enterprises are migrating legacy applications to the cloud but they also use cloud as the foundation for new, "cloud first" applications like high definition video and the Internet of Things. This represents significant opportunities for enterprises and cloud solutions. High bandwidth and high connectivity applications require controls for performance, security and feedback controls for cost management. As mentioned above, a flexible network is table stakes to succeed in this game.

## 7. DevOPS comes of age

Administrative control over the deployed stack has always been a battle between SysAdmin and developers. In the cloud the argument has been split by the introduction of a development focused Administrative function, DevOPS. The ability to provide governance and compliance control with an automated and agile approach to stack lifecycle management is a key attribute of the DevOPS function. New tooling is growing up in dozens of startups around the globe that leverages configuration management software, like Puppet, to control the full deployment in a reproducible, compliant and manageable way.

## 8. The world settles on OpenStack

As the OpenStack community has continued to evolve and mature the OpenStack offering, an amazing thing has happened, all the competitors have fallen away. There is only one choice standing. Happily that choice, OpenStack, offers a robust and mature cloud resource management environment. As cloud continues to evolve, varied and competitive offerings built on OpenStack will emerge and battle for primacy in the marketplace. The customer, wins in this discussion. Choice is competition, and competition is betterment.



## 9. Data as currency

These new cloud-first applications, whether horizontally scaled analytic engines or anything in the emerging IoT space, produce massive amounts of unstructured data. The cloud makes it easier to gather, store, distribute, analyse and share this ever-increasing amount of data at nearly limitless scale. The ability to leverage this data, both inside and outside the enterprise, will play a key role in business success. A new form of value emerges, insight derived from data analytics becomes more than a driver to business insight, it becomes a new form of value and product unto itself. It's enabled by networking, it's enabled by applications, and it's enabled by the cloud.

## 10. Enterprises move to global cloud deployments

There are no local businesses today. IT needs to support enterprises globally, so cloud and networking services need to span the globe—with data centres and connectivity that can service multi-national businesses and customers. Customers live around the globe. Suppliers work around the globe. Opportunities exist in 5 of the continents and in all the cultures on the globe.



# ARTIFICIAL INTELLIGENCE

-Soumya Deshpande, 5<sup>th</sup> SEM

Artificial intelligence (AI), sometimes called machine intelligence, is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans. Leading AI textbooks define the field as the study of "intelligent agents": any device that perceives its environment and takes actions that maximize its chance of successfully achieving its goals.<sup>[1]</sup> Colloquially, the term "artificial intelligence" is often used to describe machines (or computers) that mimic "cognitive" functions that humans associate with the human mind, such as "learning" and "problem solving".

As machines become increasingly capable, tasks considered to require "intelligence" are often removed from the definition of AI, a phenomenon known as the AI effect.<sup>[3]</sup> A quip in Tesler's Theorem says "AI is whatever hasn't been done yet."<sup>[4]</sup> For instance, optical character recognition is frequently excluded from things considered to be AI, having become a routine technology.<sup>[5]</sup> Modern machine capabilities generally classified as AI include successfully understanding human speech,<sup>[6]</sup> competing at the highest level in strategic game systems (such as chess and Go),<sup>[7]</sup> autonomously operating cars, intelligent routing in content delivery networks, and military simulations.

Artificial intelligence can be classified into three different types of systems:

Analytical  
Human-inspired  
Humanized artificial intelligence.<sup>[8]</sup>

Analytical AI has only characteristics consistent with cognitive intelligence; generating a cognitive representation of the world and using learning based on past experience to inform future decisions. Human-inspired AI has elements from cognitive and emotional intelligence; understanding human emotions, in addition to cognitive elements, and considering them in their decision making. Humanized AI shows characteristics of all types of competencies (i.e., cognitive, emotional, and social intelligence), is able to be self-conscious and is self-aware in interactions.

# Components of AI



## Applications

- Image recognition
- Speech recognition
- Chatbots
- Natural language generation
- Sentiment analysis

## Types of models

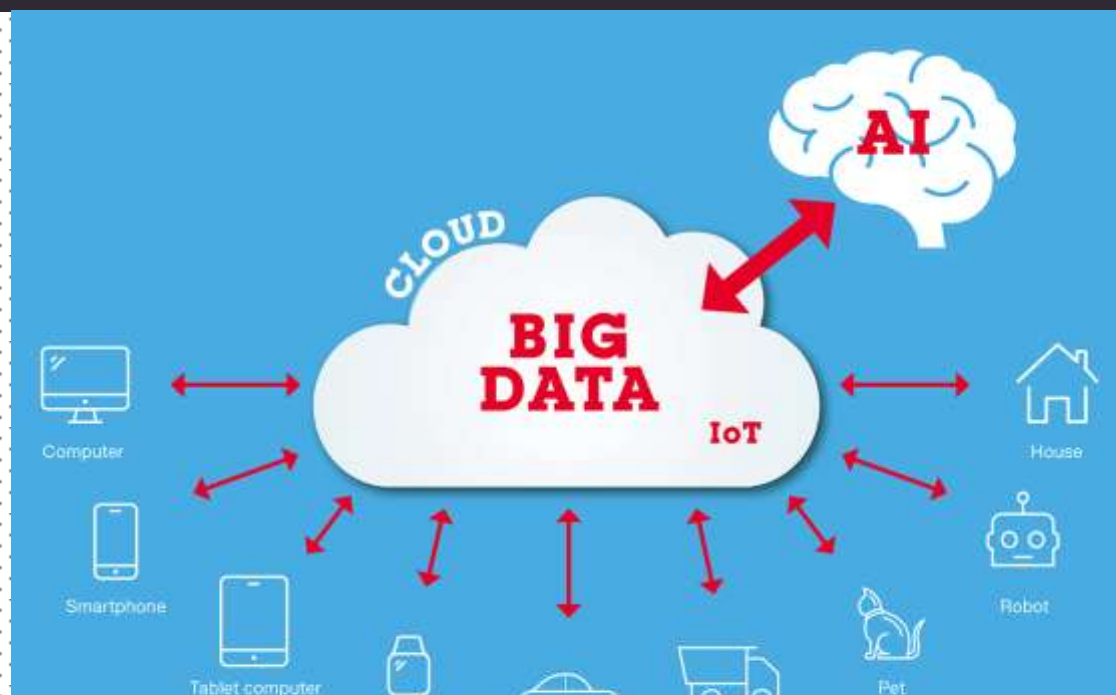
- Deep learning
- Machine learning
- Neural networks

## Software/hardware for training and running models

- GPUs
- Parallel processing tools (like Spark)
- Cloud data storage and compute platforms

## Programming languages for building models

- Python
- TensorFlow
- Java
- C





# IOT (INTERNET OF THINGS)

Trusha kandae. CSE 3<sup>rd</sup> SEM

The Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines, objects, animals or people that are provided with unique identifiers (UIDs) and the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction.<sup>[1][2][3][4]</sup>

The definition of the Internet of things has evolved due to the convergence of multiple technologies, real-time analytics, machine learning, commodity sensors, and embedded systems.<sup>[5]</sup> Traditional fields of embedded systems, wireless sensor networks, control systems, automation (including home and building automation), and others all contribute to enabling the Internet of Things. In the consumer market, IoT technology is most synonymous with products pertaining to the concept of the "smart home", covering devices and appliances (such as lighting fixtures, thermostats, home security systems and cameras, and other home appliances) that support one or more common ecosystems, and can be controlled via devices associated with that ecosystem, such as smartphones and smart speakers.

There are a number of serious concerns about dangers in the growth of IoT, especially in the areas of privacy and security; and consequently industry and governmental moves to begin to address these.



# Internship Experience at Bhabha Atomic Research Centre (BARC), Mumbai.



-Ankita Sadani,  
CSE VII SEM

Hi I'm Ankita Sadani, final year student in Computer Science Department. I did my summer internship in the TPD (Technical Physics Division) at Bhabha Atomic Research Center, Mumbai for 4 weeks. There was no stipend provided, it was a purely volunteered research internship once selected. I worked on "Cross-Compiler & Debugger for 8051 micro-controller". My guide made me work on the board in which microcontroller was placed and one could actually burn C programs into it and henceforth, watch its outcome on the board.

I had a great experience at BARC, not just academically but personally too. It helped me know how the world works. The work culture was great, but it had the environment of a particular government organization. Fortunately, my guide was an active member of the scientific fraternity of BARC. He had a history of bagging projects which were outsourced by organizations like ISRO, DRDO, etc. But when it comes to the lower staff, they had their fixed notions and followed a strict timetable.

The best thing about the work culture at BARC was that everybody worked sincerely towards the goals they were assigned. There were no loopholes in the research one had to do to make something work. The best thing about the internship, for me was the library. It was a storehouse of such tremendous information, and I confided in it. The campus is a city in itself. There is a km length long building, imagine that! I got the opportunity to visit Crystal Technology Section (CTS), where actual crystals were manufactured to be used in its various applications. I was lucky enough to visit the Computer Division too, where I saw the magnificent ANUPAM-Adhya Supercomputer. Wow! It was an amazing feeling to see the live supercomputer ever. The working hours were flexible, my mentor was extremely helping and polite. But since it was highly secured area and the highly confidential information, makes it difficult to be able to access the internet and again no mobile phones were allowed. Also, it has a highly bureaucratic system.

My gains in terms of intellectual capabilities and mindset, from this internship are:

- I got to manage things, like I had never done before, including time and money.
  - Learned how to persuade people, increased my communication skills, and made new friends.
  - The combined knowledge imparted by mentors, friendly discussions and library is definitely going to set a milestone in my ways of trying to understand things.
- Lastly, I have learnt from the scientists at BARC that knowledge has no bounds and there is a long way to go and reckoned Robert Frost famous verses -
- "The woods are lovely, dark and deep,  
And there are many promises to keep,  
And miles to go before I sleep,  
And miles to go before I sleep."







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**APPLICATION FOR NATIONAL INNOVATION AWARD - 2019**

**APPLICATION SESSION : 2019 -  
2020**

**APPLICATIONID:NRDCHQ/2019/N0**

**131 PART -A**

**IMPORTANT NOTE (Kindly read the following note and provide details of your Innovation in the application form accordingly):**

**The Award Committee primarily considers the following attributes in the Innovation for recommending Awards:**

1. ORIGINALITY/NOVELTY OF THEINNOVATION
2. PRINCIPLE INVOLVED IN THEINNOVATION
3. ADVANTAGES/ IMPROVEMENTS OVER KNOWNALTERNATIVES
4. POTENTIAL/ STATUS OF COMMERCIALISATION OFINNOVATION

This information is provided for guidance to enable the applicants to provide appropriate details of their Innovation.

1. Title for innovation : AN ATTENDANCE APPLICATIONSYSTEM

2. Fieldoftheinnovation:ComputerScienceandInformationTechnology

3. PARTICULARSOFTHEAPPLICANT(S): i). Name of the PrincipallInnovator:

S.No.	Name	Gender	Designation	Name of the organization	Academic qualification	Sharing % of award amount
1	Dr.AshishMishra	Male	Professor	Gyan Ganga Institute of Technology and Sciences, Jabalpur (M. P.)	P.hD Computer Science and Engineering	12

S.No.	Official address	Residential address	Phone	Mobile	E-mail
1	Gyan Ganga Institute of Technology and Sciences, TilwaraRoad,Jabalpur (M. P.)Pin-482003	1204/A,NirmalKripaBhavan ,In Front of Dr.S.K.Gautam,NearGautam Ji Ki Madiya,Jabalpur,Pin 482003	07612420604	9827355484	ashish.mish2009@gmail.com

ii).Name(s)oftheCo-Innovator(s):

S.No.	Name	Gender	Designation	Name of the organization	Academic qualification	Sharing % of award amount
2	DR. VIKAS PARE	Male	Assitantprofessor	LNCT GROUP ,KALCHURI NAGAR RAISEN ROAD ,462021 ,BHOPAL	P.hD MECHANICAL Engineering	11
3	DR. ASHOK VERMA	Male	HOD	GYAN GANGA INSTITUTE OF TECHNOLOGY AND SCIENCES , jabalpur	P.hD Computer Science and Engineering	11
4	AYUSH SHRIVASTAVA	Male	Student	GYAN GANGA INSTITUTE OF TECHNOLOGY AND SCIENCES , JABALPUR	B.E final year	11
5	PROF ARADHANA SAXENA	Female	Assitantprofessor	RUSTAMJI INSTITUTE OF TECHNOLOGY BSF ACEDAMY ,TEKANPUR, GWALIOR	M.tech	11
6	PARASHU RAM PAL	Male	professor	ABES ENGINEERING COLLEGE GHAZIABAD, UTTAR PRADESH	PHD	11
7	PROF RAHUL SAHU	Male	Assitantprofessor	LNCT GROUP ,KALCHURI NAGAR RAISEN ROAD ,462021 ,BHOPAL	M.tech	11
8	DR. RACHNA KAMBLE	Female	Assitant professor	LNCT GROUP ,KALCHURI NAGAR RAISEN ROAD ,462021 ,BHOPAL	P.hD Computer Science and Engineering	11
9	CHAITANYA RAI	Male	Student	GYAN GANGA INSTITUTE OF TECHNOLOGY AND SCIENCES , JABALPUR	B.E 2nd year	11



# Introducing college's first Android App



# GGITSToUCH

-SHIKHARSHRIVASTAVA, SHUBHAMKHANDALKAR

CSE, VIISEM

Keeping pace with the technology and with a mission of providing students with state-of-the-art facilities, GGITS proudly presents GGITSTouch.

An Android app developed by ShikhaShrivastava and ShubhamKhandalkar, Students of 7th Semester CSE department, is a handy tool that adds expediency to a lot of conventional stuff. In a Material Design shell app provides an unprecedented Time Table Management Scheme, Dynamic push notificationsto alert students of substantial notices', app has Knowledge boost BOT that regularly informs students of all the latest happening in the engineering world. With this it also provides students with lecture feeds, syllabus, time table and a handbook.

The app is deployed on Play Store and stands high with above 700 downloads and a rating of 4.7/5. Some of the user reviews of the app are as follows:

VaibhavTiwari says:

"This is insanely greatlyThese guys surely deserve kudos from all of us, constantly strivingto serve awho le new generation of aspiring students. This app represents an example of intelligent designing and innovative programming methodology. Its attractive yet simple UI and its immense utility range brings it on par with some of the best apps in the market. Thank youguys"

Harshika Pandey says:

"This app makes things a lot easier. Thanks:D"

TejasParanjape says:

"The new UI and announcement alert system is out of this world. A professional grade app!!"



# ALIEN DASH



**SHREYANSH DEB, CSEVSEM**

Alien are attacking your spaceship. Be the 'saviour'.

Presenting Alien Dash , a dodge style 2D game designed by Shreyansh Deb, CSE V Sem.

The Game is about different Aliens who move and grove to kill you by colliding with your Space Ship.

The player acts as a spaceship saviour and Dodge the ship from Aliens in an endless runner.

Player earns coins for the Distance they can survive.

Shreyansh, along with two of his friends worked round the clock to make this fun yet challenging gam e. he put in his designing skills to make Alien Dash successfully available to all of us via Google Play.

Play, Score BIG and brag about your score to family and friends





# DIVA'S WORLD (WEBSITE)



-RESHU VISHWAKARMA, CSE VII SEM



It consists of Pageant's life-story, achievements, photos, videos, final round questions asked to them in Miss Universe contest.

Technology used- Visual Studio20 73 Language used- HTML and CSS

# HOW CRICKETERS GOT THEIR LIFE PARTNERS(WINDOWSAPP)



Description- It is a static windows app which reveals the real-life story of many Indian cricketers.

Technology used- Visual Studio2013 Language used-C#



Jayant Dawani  
CSE 5<sup>th</sup> Sem

**Chaze.in** is an hyperlocal e-commerce platform and delivery service start up founded in Jabalpur March 2019. It provides complete solutions for local business to compete with online market as it provides delivery option within 1hr, local business information, products, business promotion and user-reviews of local businesses. Chaze deliver best quality products from local shops of city, categories including vegetables, groceries, electronics, bakery, cosmetics, footwear, 24\*7 food, stationary, books etc.

Became operational in March 2019 in Jabalpur, Chaze is steadily rising up to become a household name. The hyperlocal e-commerce platform boasts of 5k downloads and more than 4k active users even though it has been barely 6 months since the release.

Chaze was founded in May 2018 with mission of providing ecommerce platform for local businesses along with delivery. It promoted local product by offering deals on such and provided delivery for the same.

Founders of Chaze recall an incident when they all went food the customer needs are more than that. Before Chaze, there was an operational food delivery system by the name of Food Haunt. It was founded by some of the current founders and was gaining traction.

“It was time to expand horizons” Few months later, Food Haunt was shut down and working on chaze started. Presently, Chaze has 16 employees under it and has collaborated with over 40 shops in Jabalpur. It plans on expanding its variety of services to include Venue bookings, local service providers and local news. It also plans on including other cities too into its operational territory.

Chaze is available on Android Play Store and on web as [chaze.in](http://chaze.in)

Chaze.in

Unwired Road, JDA Colony, Barga

Search for Products, Shops and More

GO TO SHOPS LOGIN / SIGNUP

Electronic devices Groceries Fruits and Vegetables Health and Beauty Footwear Fashion Accessories Stationery Flowers Watches

Now shop and browse products from your favourite local shops Online...

Fruits and Vegetables VIEW ALL

Muzar Lotus root 500gm Picadore Chili 250 gm Pudina - Mint Plant, 2 Brijal - Sabji bangun... Red bell pepper - Lal Ankurit Chana Sprout... Mousambi Sweet Lim... Garlic (Lahsun) 250gm Painted Gour



# mylo

## ABOUT US

Mylo is notably one of the most convenient local deals and discounts discovery platform, currently operational in Jabalpur connecting customers and merchants across services like restaurants, cafés', spa, salons, activities, etc.

Looking for discounts and deals over the internet, visiting venues is such a tedious job, our App is here to the rescue, with Mylo you can discover latest cafe's, restaurants, spa's, salons, gyms. Users can also go through the reviews and can deal the products at best affordable costs.

You can get the best cafés to party with friends, restaurants to dine with family, salons to make-over, gyms for fitness and many more.

To redeem a deal, follow simple steps:

1. Search your favourite place you want to visit.
2. Book the best deal you want to enjoy.
3. Once you buy the deal show it to the vendor and vendor will scan the QR code.

We are consistently innovating, staying ahead of the curve in Lifestyle trends, therefore we select the best offers and opportunities exclusively for our users.





# **FACULTY ARTICLES**



# NEED OF TEXT PRUNING IN IR SYSTEMS



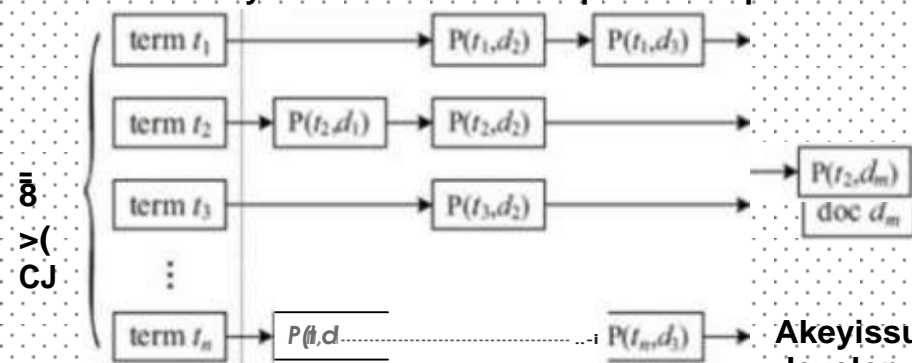
Author Name

-Dr. Santosh Vishwakarma Department of CSE

Information Retrieval [IR] is a branch of computer science which deals with the retrieval of unstructured documents that should satisfy user's information need. To improve the efficiency of IR Systems, much of the attention has been given to retrieval efficiency, etc. Efficient Performance of IR system can be achieved by employing suitable data structure, policy driven memory caches and adequate algorithms to access these data structures. The most efficient data structure for implementation of IR system is inverted index.

Inverted Index is described as a 3-tuple as follows:

The posting score is calculated through various approaches which also includes the particular IR scoring system. Conceptually, the inverted index can also be defined as a relation which consists of a list of terms as the cardinality and the document collection as the degree of the relation. Generally, it consists of only non-zero entries. A pictorial representation of an inverted index is shown in Fig.1



A key issue in the development of inverted index is to develop algorithms that reduce input output bandwidths and storage overhead. The size of the index file determines the storage overhead imposed. Furthermore, large index files directly effects the processing times. In order to achieve efficiency, pruning methods are applied in the inverted index. Some posting list entries maybe removed or pruned without significantly degrading precision. The users should not be able to recognize the difference in the results from an unpruned index and a pruned index.

One of the most important aspects of pruning unimportant terms is to calculate the scores of the term based on the Chi-Square statistical method. The document score is computed based on the associated terms inside it. A document is pruned from the index if it falls below the specific threshold values. This is a lossy approach as it permanently discards some documents, thus subsequently posting list entries. The method shows significant improvements of pruning at a cost of nearly 60% of the full inverted index did not significantly affect the precision.



**Author- Dr.Preeti Rai**  
**Department Of CSE**

# **DEVELOPMENT OF FACIAL INFORMATION BASED GENDER CLASSIFICATION TECHNIQUE**

## **OVERVIEW OF THE RESEARCH**

Face is a characteristic of human beings, which uniquely reveals their identity, age, and emotions. Although humans are adept in determining the gender of a human by a quick inspection of his/her face, but to accomplish this task computationally with the same efficiency is yet to be achieved. However, due to inherent facial intricacies, classification of gender by analyzing a person's face is a challenging task. Nevertheless, gender classification from a person's face can play an important role in a variety of computer vision-based applications. Surveillance and security system design, biometric authentication systems such as smart systems controlling the access of people to prohibited areas, and search engines with an image filter to optimize the search are some potential applications. Apart from computer vision-based applications, the gender information gathered from the face can also be utilized for areas like demographic study. Gender classification, if used in conjunction with face recognition, makes the face recognition task twice as fast by eliminating the search for a particular gender.

Fig. 1 shows a gender classification system which consists of preprocessing, feature extraction, and classifier module. The preprocessing module extracts the most relevant information of face from the face image i.e. the Region of Interest (ROI). The feature extraction module measures ROI in terms of features or properties that are finally used by the classifier to classify an image as male/female.

While developing any gender classification system, researchers focus primarily on two modules: the feature extraction and classification. Also, most of the works use a database containing mainly the full-frontal face images. Moreover, literature rarely discusses work on

- The size of the feature vector.
- Gender classification from the face images with variations in illumination, expression, and noise. Partially occluded images (due to various reasons).
- Motivated from these observations, following are the objectives of this work:
  - Design and develop a gender classification system robust to varying extents of occlusion.
  - Propose an efficient, yet small sized feature vector so as to enhance the classification accuracy and speed of a system. It is possible only if the ROI is extracted from the most potential segment of an image.

## **PREPROCESSING**

The following method is used to extract an efficient ROI. To find the relevant face area from the image, three points, left and right corners of the eyes, and center of the chin are selected on the face, see Fig. 2. The average value of these three points (say,  $P$ ) is calculated and its distance (say,  $r$ ) from any corner point is computed. From point  $P$ , a square with side  $2r$  is drawn. Portion of the image contained within this square is the desired face image.



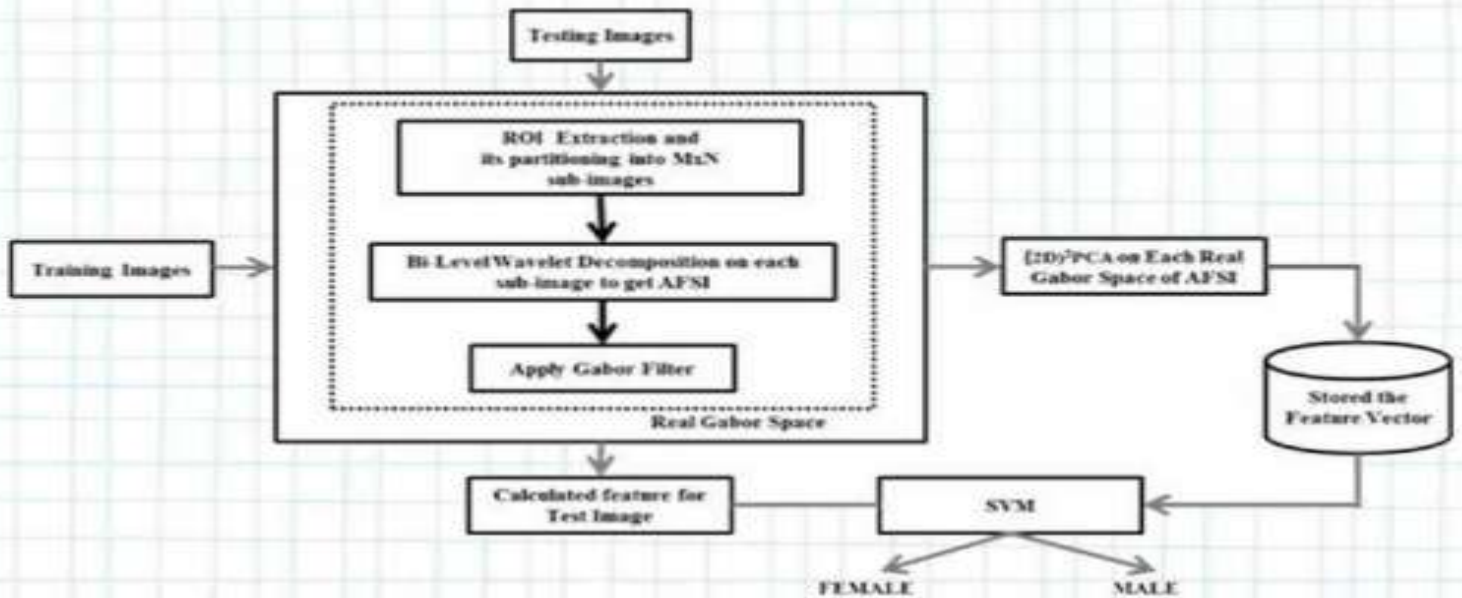


**PROPOSED COMBINATION TO GET A FEATURE VECTOR ROBUST TO VARIOUS EXTENT OF OCCLUSION - GABOR FEATURE BASED (2D)2PCA**

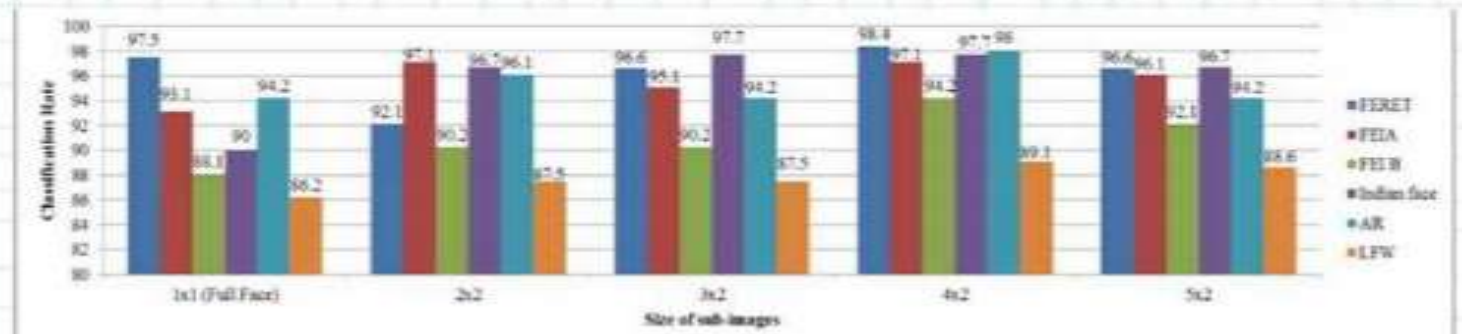
Recognizing gender of a person from occluded face image is a recent challenge in gender classification research. This article investigates the issue and proposes a gender classification system that works for non-occluded face images to face images occluded up to 60%. To address the occlusion problem, local features from the face are extracted in addition to the global information of the face. It is observed that local features in face images are most robust to distortions caused by expression and illumination changes. To target these local properties, the Region of Interest (ROI) of a face image is partitioned into  $S_i = M \times N$  number of sub images. Bi-level wavelet decomposition is applied on a sub-image gives Approximation Face Sub-Image (AFSI). AFSIs contain potential information of ROI image. A set of Gabor filters with six orientations is then applied to get real Gabor space which contains vital information of the face and is less sensitive to the variation of illumination, expression and poses. The real Gabor space is a quite high dimensional space. It is further projected to horizontal and vertical directions of 2DPCA (i.e. (2D)2PCA) subspace for dimension reduction and selection of the most discriminated feature subset. In the testing phase, features of target face sub-image are calculated as stated above, and are classified using SVM classification scheme. The block diagram of the proposed system is given in Fig.3

**Experimental results for non-occluded images**

For the occlusion free faces, performance is evaluated with different number of sub-images 2x2, 3x2, 4x2, and 5x2. The results are shown in Fig. 4. It can be concluded that local features offer improved classification rate as compared to global features (full face image i.e. 1x1). It is also observed that features extracted from 4x2 sub-images outperform all others. The experimental result also illustrate that the proposed approach outperforms existing approaches in terms of classification rate by achieving more than 95% accuracy for most of the databases (FERET, FEI, Indian Face, and AR) except LFW as shown in Fig.4.



**Fig. 3: Process flow of Gabor based (2D)2PCA**



**Fig. 4: Classification rate for different size of sub-image**

### Experimental results for occluded face image SUMMARY AND CONCLUSIONS database

Occlusion on face images usually occurs when a person wear sunglasses, suffers injury on faces, covers his/ her face with scarf, hand or put mole on his/her face. The proposed system is tested on naturally as well as artificially occluded face images as shown in the Fig.5

(a) and (b). The results on naturally occluded AR database are shown in Table 2.

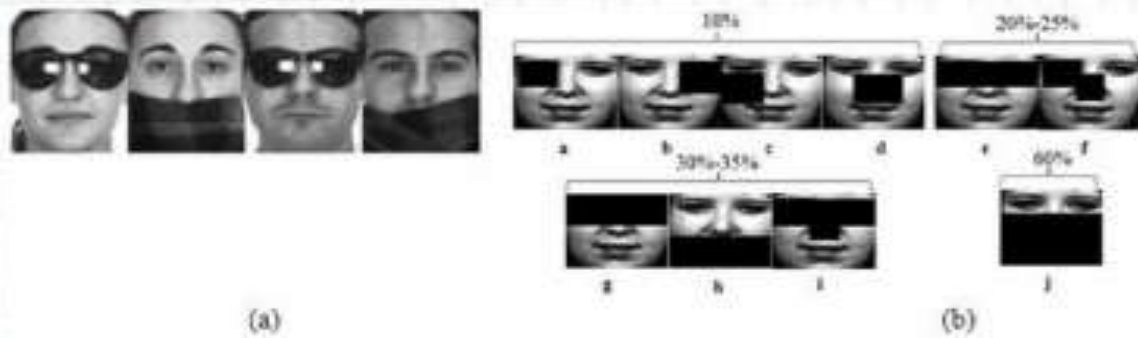
In case of artificially occluded images, the proposed work achieves, 92.0% accuracy (averaged over all databases) under small (70%) occlusion and an average classification accuracy of 86.8% under large (60%) occlusion using two-fold cross validation as shown in Fig. 6. Verification of the results under person independence condition with very high

occlusion of up to 60% is a significant contribution of the work.

The important findings of the work are summarized as:

- Developed a gender classification system for both occlusion free and occluded faces.
- In occlusion free case, it enhances the classification accuracy and speed.
- System renders accuracies above 90% under lower occlusion conditions.
- System also survives in higher occlusion conditions by giving minimum of 86% accuracy.
- We analyze the impact of various face parts in the context of gender classification.

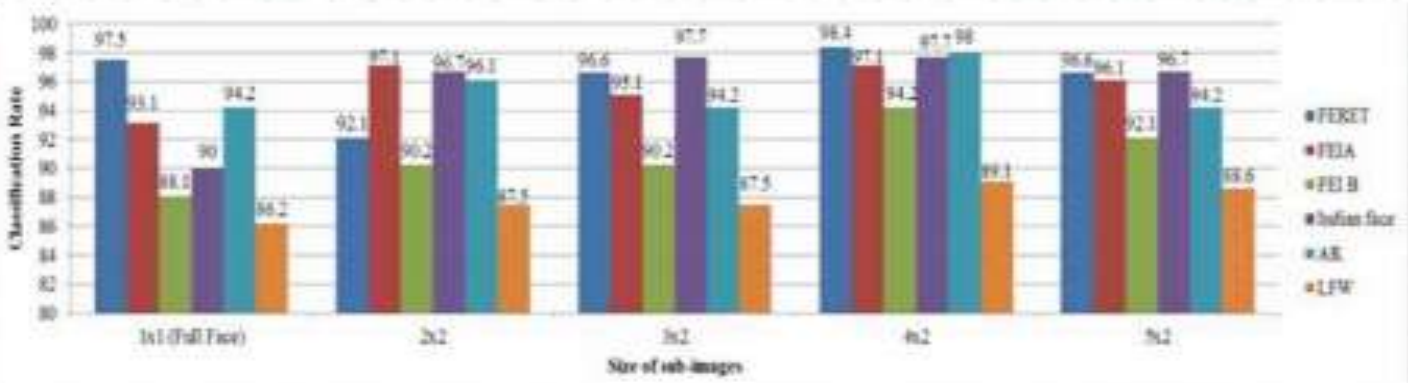




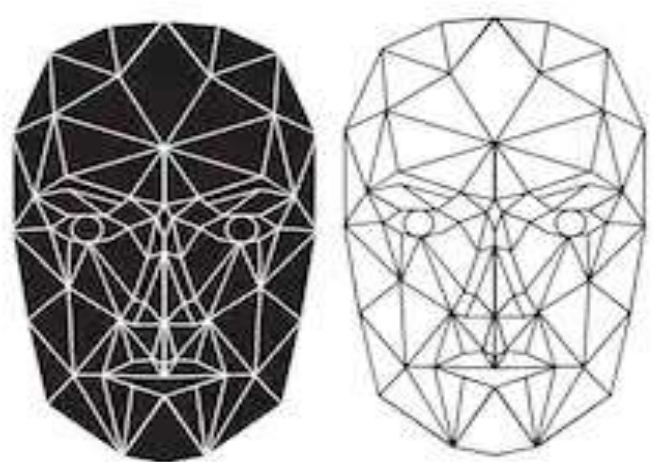
**Fig. 5: Samples of Occluded Face Images (a) Naturally occluded; and (b) Artificially occluded**

Sub-images	Wearing Sun glass (in %)	Wearing Scarf(in %)
1x1	91.4	69.15
2x2	94.2	86.2
3x2	92.2	88.4
4x2	94.2	90.1
5x2	92.2	86.7

**Table 2: Classification Rate on Naturally Occluded face (AR)**



**Fig. 6: Overall performance of the system with varying degree of occlusion**



# THE EVOLUTION OF MACHINE LEARNING



Ms. Jigyasa Nigam  
Department of CSE



We generally hear analysts talk about complex data terms, and they all are sure for its faster growth. Complex data may be in a different form like text, media, image, and so on.

But in today's scenario main source of text data are blogs and YouTube videos, they all are in natural language, and it is too difficult to extract the information from there because, in human language one information is given in many different ways. And nowadays each and every thing converts in digital form. But most of the people are unable or not comfortable to interact with digital world because of language, that is why our researchers work hard on natural languages, it's called Natural language processing(NLP).

NLP is a branch of artificial intelligence and highly interdisciplinary field of study comprising of concepts and ideas from Mathematics, Computer Science and Linguistics. NLP is playing a main role in machine learning. Machine learning (in the context of text analytics) is a set of statistical techniques for identifying some aspect of text (parts of speech, entities, sentiment, etc.). In future if we want to make a system which enable us to understand speech and sentiments and take an appropriate decision based on this, For this we need to train our machine. But to train our machine for this, we need to collect huge amount of text bodies and speech for the languages. And to access huge amount of data, distributed systems are used. Now one more effective distributed file system is used called Hadoop.

Apache Hadoop is an open source software framework for storage and large-scale processing of data-sets on clusters of commodity hardware. Hadoop is an Apache top-level project being built and used by a global community of contributors and users. It is licensed under the Apache License 2.0. The combination of Natural language tool kit(NLTK) and Hadoop is perfect for preprocessing raw text. Hadoop streaming is a utility that comes with the Hadoop distribution and allows you to create and run map/reduce jobs with any executable or script as the mapper and/or the reducer. Dumbo is an open source tool that can be used to do the NLP task of automatic word association with a very large corpus by using Hadoop on Amazon EC2.

Many machine learning projects continue in progress like "Anusaaraka" in LTRC (Language Technologies Research Centre) at IIIT Hyderabad.

Naturally occurring instances of human language, be it text or speech, are growing at an exponential rate given the popularity of the Web and social media. In addition, people are increasingly becoming more and more reliant on internet services to search, filter, and process and, in some cases, even understand the subset of such instances they encounter in their daily lives. Whether you think about it or not, those services allowing you to do so much with language everyday are generally trying to solve well-understood NLP problems under active research.



# STUDENT ACHIEVEMENTS



# Smart India Hackathon 2019

- Our Hon'ble Prime Minister, Shri Narendra Modi, envisages a Digital India to bridge the digital divide in our country and further promote digital literacy in order to make development a comprehensive mass movement and put governance within everyone's reach in India. In order to work towards our PM's vision, MHRD, AICTE, i4c and Persistent Systems have come together to organize Smart India Hackathon (SIH) 2019 - a unique Open Innovation Model for identifying new and disruptive technology innovations to solve the challenges faced in our country.

As a matter of pride for GGITS and Jabalpur, 4 teams won first rank in Smart India Hackathon 2019 at different locations, and for different problem statements.

Each winning team got cash prize Rs.75000 for Complex Problem Statement and Rs. 50000 for Simple Problem statement, Medals and Certificates. Winning teams are-

Team SPECS CODERS  
Cash prize of Rs. 75000  
BHU Varanasi

Team @EXPERIMENTAL  
Cash prize of Rs. 75000  
Hubli, Karnataka

Team XTREME ACES  
Cash prize of Rs. 50000  
New Delhi

Team XONO 6\_NODES  
Cash prize of Rs. 50000  
Hyderabad

"Hackathon are where your crazy idea becomes reality."

~ AlexKern







# GLIMPSE





35 Teams from Gyan Ganga Group were shortlisted in Central India's biggest Hackathon, Hackfest Jabalpur held on 12th and 13th January 2019. Out of which three teams received awards. One was second runnerup and received Rs.50000 Cash prize along with Trophy and Certificate. Other two teams received Jury Award for Best Design and Best Choice. Students got opportunity to meet and interact with Flipkart CTO Mr. Ravi Garikipati and Director of World Innovation Team Mr. Arthur Gogatz.

Winning teams were-

1. Team Tech Divas (Ayushi Jain, Monika Agrawal and Paridhi Amlathe) -3rd prize Rs.50,000
2. Team Agro Fest ( Aayush Shrivastava, Bhavna Dwivedi and Sanjit Verma-Jury Choice Award Rs.40,000
3. Team Techyon's ( Shasvat Jain, Yogita Chitnis and Rohit Vishwakarma) Jury Choice Award Rs.40000

#HackfestJabalpur



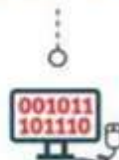
# HACKATHON



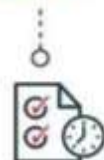
BRAINSTORM



DEVELOPMENT



PROGRAMMING



TIMING



TEAMWORK



GOAL





**SRIJAN**  
FOUNDATION



**SRIJAN – 2019 is organized by Sister Nivedita Takniki Siksha Samiti, Bhopal and Co Organized by MPCOST Bhopal in various prestigious institutes of M.P. Srijan a festival of innovative science models, presentation of technical papers and other technical events . Students from all the streams of Engineering have participated in the competition .Event included the felicitation of faculty members of Gyan Ganga Group of Institutions as well . Proud to have you all in our college . Heartiest Congratulations to all the achievers .**



# **QRHUB**

## **(AT IIT-KANPUR)**

**Techkriti is an annual inter-collegiate technology and entrepreneurship festival organized by the students of Indian Institute of Technology Kanpur. It was launched with the aim of developing interest and encouraging innovation in technology among students.**

**The name of the event was Social Con quest.**

**Students of CSE department 6th Semester presented their project of QR Hub in IIT Kanpur during their annual Tech Fest, Tech Kriti held in March, 2015. They achieved 3rd Position and were the only non IIT'ians among the Top 5 candidates.**

**1. ShikharShrivastava,**

**2. Vatsalya Dixit**

**3. Shubham Khandalkar**

**4. Varun Anandani**





# Chancellor's Scholarship Award 2019

Our students have yet again proved their intelligence and competence, and made Dept. of Computer Science & Engineering proud by bagging the very prestigious Chancellor's Scholarship Award in 2019 also. It proves determination and persistence possessed by our talented students. Congratulations for the big success!



Ritika Jain

CSE Batch 2016-20



Pratyush Bhurak

CSE Batch 2016-20

# LAKSYHA

Lakshya was a new initiative taken by the Gyan Ganga institute of technology to felicitate the students which have proved their worth as an Engineer got placed in various companies. The college management was present



This event acted as an inspiring and motivating medium for the students to work hard excel in their careers. Students also got to know about the excellent campus opportunities provided by Gyan Ganga institute of technologies.

Gyan Ganga has always believed in commending the students to inspire them to scale greater heights. Lakshya 2019 - Felicitation Ceremony was held on 16 May to recognize the young talented engineers. Congratulations to all the achievers.





# SOCIAL ACTIVITIES

FUN FOR EVERYONE



# GYANOTSAV

One of the biggest and very famous event Gyanotsav 2019 Cultural Night was organized on 22nd Feb in Amphitheatre where students were given a platform to showcase their talents, perform in a cultural skit and entertain the audience by lavishing the diverse culture, values and traditions of India. There were folk dances, Free style dances both group as well as solo, Drama, Fashion show, Songs and Band performances. This year's theme was patriotic. One of the major attractions was played by NCC cadets of group based on Indian Soldiers life and recent Pulwama attack. Gyan Ganga Group annually treats guests well with complete entertainment with Gyanotsav Cultural Night.





# HOLI CELEBRATION

## GLIMPSE





# FOXOGYAN

Creative and resourceful, Student Ambassadors lead campaigns and projects at their colleges and in their communities to encourage others to contribute to Mozilla (and utilize our products). Together, Firefox Student Ambassadors play a large role in helping to improve the global experience of people on the Web.

On 3rd February 2015, first Mozilla club of Jabalpur was launched by club lead Deepak Jain at Gyan Ganga Institute of Technology and Sciences. The club was named FoxoGyan.

Activities conducted under FoxoGyan include-

1. Session on web maker tools and Net Neutrality.
2. TechHours: A four day workshop on fundamentals of computer to students of Maharani Lakshmi Bai School, Jabalpur on 27th May.



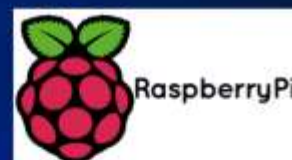
Highlights of FoxoGyan activities.





# TECHNOVATION MISSION CLUB (T.M.C)

*"Enlighting and Exploring the Innovative Minds and Techies within You"*



## MISSION

- Active Learning
- Learn something from which you can earn
- Solving real life problems and experiencing the implementation of programming to the Hardware
- Learning and implementing new innovative ideas using trending technologies.



Faculty Co-ordinator:-  
Prof.Ashok Verma

**LEADERS**  
-Apuv Prakash Shrivastava  
-Arpit Singh Phillaure  
-Harshit Sakhuja  
-Ayushi Tiwari

**MANAGEMENT**  
-Ashutosh Verma  
-Kathanshi Diwakar  
-Trusha Kanade  
-Maansi Sharma  
-Abhishek Thakur

**Contact Details:-**  
7014363823  
9479661984

**Just Follow Us on!**

 @tmc\_ggits  
 @tmc\_ggits



# ALUMNI CSE



## Alumni Speaks



**Anirudh Chawla(CSE Batch 2014)**  
**Currently working as a Systems Engineer for Infosys Limited ,Hyderabad**

Everyone says, what you learn in college is not gonna be used in the company you work, they have their own tools and own technologies. But the real fact is the basic education you get from college is really important. The whole outside world developed is based on the fundamental aspects of Computer Science and Electronics Engineering which you study in college during the graduation time.

Our course structure has been such designed that we get the basic knowledge of all the fundamental technologies you might use to develop a complete software product, so never underestimate the college studies saying this won't be used. Knowledge never goes waste and grades are equally important. Our teachers are highly qualified and experienced and you must learn from them as much as you can during your college life.

Currently I am working on Big Data technology, now this has been a buzzword from a really long time as to what it is, let me explain it to you simply.

"Big data is a term simply used for voluminous amount of data that may be structured, semi-structured or non-structured".

Structured data means that could be stored using traditional RDBMS systems, that has a proper schema or to say they have a proper data model, but there are data like email messages, audio files, presentations that do not have a proper schema which cannot be used using traditional RDBMS systems. But that data is equally important, as they have to used for analytics and predicting user choices. So all these data collectively constitutes Big Data, and to manage Big Data there is a framework called Hadoop and Map-Reduce which is an open source product used for processing these data.

Hadoop is known for storing this data in distributed systems which can s which has its own file system call HDFS, Hadoop Distributed File System.

Map-Reduce programs can be written using Java, C++, Python, Ruby etc which processes the data user wants, Map fetches the data and Reduce processes the data for the optimal results and computation.

Now these 2 terms might seem new and you might think it is difficult, but let me tell you they are very easy to learn only if you have your fundamentals cleared. Hadoop commands are written with the help of basic linux commands like mkdir, mv, cp, put, get which you learn in college and Map-Reduce programs are written using basic programming languages. Yes there is just not these 2 things Hadoop and Map-Reduce, there are more components like Sqoop, Hive, Pig, Chukwa which are also used in parallel but the fundamental remains the same.

So friends I wish you all the good luck for your college life ahead, study the concepts well and moreover practice those concepts so that you can learn more about it. Theoretical knowledge is important, but practical is a little more important. In case of any issue you come across for which you need help, you can send me an email at [anirudh.8692@gmail.com](mailto:anirudh.8692@gmail.com).





**Romi Chattaraj (CSE Batch 2014)**  
 Currently working in Zensar

Hello, I am a scholar from Gyan Ganga 2010 batch and currently working for Zensar Technologies having 5 years of work experience. The technology which I am currently working on is Peoplesoft which is an ERP (Enterprise resource planning) system. This is an oracle product which streamlines the financial and HR processes across an entire organisation and delivers the proven, comprehensive financial management capabilities required to grow a changing, complex business.

The 2 major modules which we support and enhance are HCM (Human capital management) and FSCM (Finance Supply chain management) for one of the leading insurance company in the United Kingdom.

**Peoplesoft HRMS:** From recruiting and managing talent, to accurately forecasting future workforce needs, PeopleSoft Human Capital Management enables you to proactively manage HR operations while focusing on strategic business initiatives.

Below are the key features of the module:

- Manage HR globally on a single system of record while complying with local laws and regulations
- Forecast, deploy, track and manage labour with workforce management
- Streamline Time Manager Tasks to approve time, resolve exceptions, and make better decisions with real-time analysis of enterprise labor data.
- Cut costs and increase productivity with workforce service delivery Streamline hire process, leave management and payroll processes

**Peoplesoft Finance:** PeopleSoft financial management solutions; organizations can increase productivity and lower transaction-processing costs, gain visibility into business-critical information, strengthen financial discipline and implement governance best practices, and meet multiple reporting and regulatory requirements.

Below are the key features of the module:

- PeopleSoft asset lifecycle management applications break down data silos and integrate the planning, acquisition, operation, maintenance, and renewal of an organization's asset base
- Peoplesoft payables streamlines accounts payable operations by providing the flexibility and responsiveness required to maintain good supplier relationships. Automated discount calculations that comply with suppliers' individual terms ensure rapid and accurate payments and efficient cash management.
- Peoplesoft Receivables helps you handle customer invoices more efficiently, streamline invoice processing, and resolve credit and collection issues rapidly. With it, you can track, analyse, and manage payments and deductions so that you always have an accurate view of customer balances and credit histories. In addition, by using the application to analyse open invoices and vouchers, you can predict future cash flow with precision, minimizing the risk of unexpected shortfalls and maximizing opportunities to use excess cash.



- PeopleSoft General Ledger helps the Customers that have multiple entities, lines of business, or global businesses that must consolidate their financial results according to generally accepted accounting principles (GAAP). This entails using entity hierarchies that accurately reflect business activity to meet external and internal reporting requirements. PeopleSoft General Ledger's robust consolidation capability builds hierarchies to manage the consolidation process. This allows companies to consolidate and report the financial results of any number of related legal entities or operating units and easily manage reporting structures.

## **The Business Value of Peoplesoft (ERP)**

Central to the value of ERP systems is the ability of different business functions to work more closely together and therefore be more efficient, as the system:

- Provides a real-time information source on all parts of the business (in our case it's the Human Resource and the financial module), allowing companies to identify problems quickly and find improvements
- Reduces regulatory risks by integrating compliance information with all the relevant business functions
- Automates central business functions such as procure-to-pay, order-to-fulfilment and lead-to-cash processes
- Improves customer services by providing one source for billing and customer enquiries
- Consolidating all systems within one centralised platform has freed the organisation from having to devote significant time to running reports and data analysis separately for each department.

The case of ERP systems and the easier to implement cloud ERP systems becomes stronger as your business grows. The accuracy of information and removal of redundant process means your business will improve as your costs reduce.

Technical competencies required to support and enhance an ERP application (PeopleSoft):

- Basic knowledge of Object oriented programming, the coding language used is People Code and the tool used is Application Designer
- SQL, PLSQL, knowledge of Oracle databases
- Linux scripting





**-Abha Upadhyay  
Batch 2011**

She is in Accenture company since 2014 and currently working in banking domain with struts technology using Unix.

I have completed my BE from GGITS college in 2011 and got placed in zensar technology from college placement.

I have worked on jsp servlet spring and oracle in zensar project which was manufacturing project. I have worked 2.5 yrs in zensar then switched to Accenture company in 2014 and currently working in banking domain with struts technology using Unix.

It was very good experience in GGITS college since all the teachers are very experienced and trained us towards IT carrier to make a unique identity for our future growth. The experience, skills and technology which I learnt from college is helping me a lot in my IT carrier to get into a new stream everytime and improve myself better in any challenge and I'm very thankful to my college and teachers for all their support to me.



# ALUMNI INTO HIGHER LEARNING



Sajal Goyal  
University: University of Florida



Rahul Trivedi  
University: Northeastern University



Akhand Singh  
University: University at Buffalo



Devanshu Mukherjee  
University: University at Buffalo, The State University of New York





Gaurav Bhatia  
University: Technische Universität Darmstadt



Luv Ahuja  
University: San Francisco State University  
San Francisco, California



Sajal Choukse  
University: Northeastern University



Pankhuri Soni,  
University: James Cook University Singapore





Shubham Dubey  
Indiana University, Bloomington, Indiana



Mayank Badkul,  
MBA at Amity University



Amal Nair,  
Symbiosis Centre for Information Technology



Ramandeep Samra  
University of Victoria  
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A handwritten signature in blue ink.

*Suresh Azariah Sam*  
*(SOM Director - GMSC)*



# SPARK UP YOUR NEURONS!

1. Who is the founder of Flipkart?
2. Who is the founder of OYO Rooms?
3. Who is the founder of Freecharge?
4. What is a printer that creates peripheral models called?
5. What term best describes a software that can expand to support increasing workloads?
6. What are individual requests made to a web server called?
7. Smart appliances and Wi-Fi connected cars fall under what category?
8. What is the company that makes websites available over the internet?
9. A program that allows Windows to run on a Mac is what type of software?
10. What device allows multiple USB devices to connect to a single USB port?

1. SACHIN, BINNY BANSAL 2. RITESH AGRAWAL 3. KUNAL SHAW 4. 3D PRINTER 5. SCALABLE  
6. HITS 7. INTERNET OF THINGS 8. WEB HOST 9. EMULATION 10. USB HUB



# **DESIGNING TEAM**



**APURV PRAKASH SHRIVASTAVA,  
CSE 3<sup>rd</sup> SEM**



**HARSHIT SAKHUJA, CSE 3<sup>rd</sup> SEM**



**ARPIT SINGH PHILLAURA, CSE 3<sup>rd</sup> SEM**



**CHAITANYA RAI, CSE 3<sup>rd</sup> SEM**