E7.INE

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ABOUT The DEPARTMENT

The Department of Information Technology came into existence at the faculty of Engineering in 2001 at TCET. The Information Technology has450+ students and 28 qualified faculty members. The Department has 8well equipped labs.

CARRER PROSPECTS

In the past 16 years, if one Engineering stream that has steadily gained prominence is the stream of 'Information Technology'. With this intent our institution established bachelors' degree in Information Technology in the year 2001. Students with diploma in computer Engineering and Information Technology are eligible for enrollment in the course.

JOB OPPORTUNITIES

Information Technology has become a safe bet for students; as on successful completion of their course they are not to a specific field and can apply to a variety of it enabled services companies. Besides the IT engineers have plenty of options to work in it companies in departments such as design, development, assembly, manufacture and maintenance, etc. Working as programmer, web developer, and e- commerce specialist with telecommunications companies, automotive companies, aerospace companies, etc. Can be a lucrative career option as well. Moreover, numerous national and multi-national computer manufacturing companies, computer hardware system design and development companies, computer networking companies, software development companies, etc. Require computer professionals in large.

SCOPE

True to its global reputation, the Indian it sector has lots of scope in terms of growth in employment opportunities. according to nasscom, the indian it exports are expected to expand to the tune of us$ 175 billion by 2020. A huge requirement of trained it engineers is expected in coming years. Some of the multinational firms and government sectors who hire computer engineers in large are google,yahoo,microsoft,intel,apple,accenture,oracle,ibm,honeywell,facebook,hp,amazon,dell,isro,drdl, ecil, acer, bel,etc.

Vision

"The Department of IT will strive to be at the top position among the renowned providers of IT education"

Mission

The IT Department is committed to enrich students by rigorously implementing quality education with a focus to make them industry ready, while imbibing in them professional ethics and social values to become responsible citizens.

Programme Educational Objectives:

PEO1: To enable learners to gain a broad background across fundamental areas of information technology along with a depth of understanding in a particular area of interest within the domain of information systems.

PEO2: To prepare learners for effectively using modern programming tools to solve real life problems.

PEO3: To prepare learners for successful career in Indian and multinational organizations. To identify and evaluate current and emerging technologies. To assess their applicability to address the users' needs and recognize the need for continued learning and motivate students to pursue it throughout their career and higher studies.

PEO4: To encourage and motivate Learner's for Research &Development and entrepreneurship.

PEO5: To inculcate independent critical thinking, problem solving and leadership skills, with an ability to analyze the impact of technology on individuals, organizations and society including professional, ethical, legal and public policy issues.

PEO6: To encourage Learner to use best practices and implement technologies to enhance information security and enable compliance, ensuring confidentiality, information integrity, and availability.

PEO7: To develop excellent written and oral communication skills to effectively interact with clients, users, co-workers and managers. To Collaborate and work in teams to accomplish a common goal by integrating personal initiative and group cooperation.

Programme Outcomes

PO1: An ability to apply knowledge of computing, mathematics, science and engineering fundamentals appropriate to the discipline.

PO2: An ability to analyze a problem, and identify and formulate the computing requirements appropriate to its solution.

PO3: An ability to identify and analyze user needs and take them into account in the selection, creation, evaluation, administration and effective integration of IT-based solutions into the user environment.

PO4: An ability to design and conduct experiments, research and development activity in computing and IT.

PO5: An ability to use and apply current techniques, concepts, skills, and modern tools necessary for computing practice.

PO6: An ability to analyze the local and global impact of computing on individuals, organizations, and society.

PO7: An understanding of the impact of sustainable development and engineering solutions in a global, economic, environmental, and societal context.

PO8: An understanding of professional, ethical, legal, social, cultural, security issues and responsibilities.

PO9: An ability to function effectively individually and on teams, including diverse and multidisciplinary, to accomplish a common goal.

PO10: An ability to communicate effectively with a range of audiences.

PO11: Recognition of the need for and an ability to engage in continuing professional development and pursuing Higher Studies.

PO12: An understanding of engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects with an understanding of best practices and standards and their application.

FROM THE

DEAN

Dr. Kamal Shah
R&D Cell

For six years, the faculty and the students have been working together in bringing forth the IT Department's Technical Magazine – Ezine , and this time, yet again, I acknowledge the efforts put to present to you this exemplary magazine.

Ezine, like always, provides opportunity for all students to write various technical articles in five technical domains defined by the department. Various activities and achievements at the departmental level have also been highlighted which will be a motivational factor for all other students to achieve a standard of excellence.

Let the "learning attitude" develop in each one of us and may all of us contribute for the betterment of our society.

FROM THE

HEAD OF DEPARTMENT

Dr.Rajesh Bansode

The Department of I.T, with its dedicated body of well-qualified faculty, technical staff and students, is committed to be an international, multi-disciplinary center of excellence in I.T through education and research. The impact of Technological advancements on human life is not complete without the role of Information Technology, along all axes. Hence all-pervading nature of Information Technology is culminated with huge demand for education in the said field. The steady rise in the number of students opting to specialize in Information Technology is a testimony for that. Education in Information Technology imparts the knowledge through which the needs of users within an organizational and societal context can be met.

The Department of I.T with its cohesive team of faculty members, offers a sound program at the UG as well as the PG levels. The curriculum is a blend of the conventional and the radical. It is updated regularly to keep up with the growing demands and the changing trends of the software industry and research laboratories. Core courses include Programming Languages, Computer Architecture, System Software, Networking Technologies and Artificial Intelligence.

Our B.E (IT) program provides graduates with the skills and knowledge to take on appropriate professional positions upon graduation. It also assists the graduates to attain leadership positions and successfully pursue post graduate studies and research in the field. Different core areas of Information Technology that are covered by our curriculum include programming, networking, web systems, information management and human computer interaction. The program is designed in such a way that the graduate develops a practical understanding of the technologies and acquires expertise for a successful career.

Faculty

The vibrant faculty members of the department possess demonstrated expertise in many areas of information technology and flair for teaching different courses. The department consists of a medley of faculty members with rich academic experience. Faculty members are involved in carrying out collaborative research projects with leading industries and international universities. In addition to the above, the faculty members' possess essential attributes of being a good mentor to students.

Research & Consultancy

Research in the department focuses on creating and evaluating innovative learning experiences, inspired by educational principles and technical progress. The key areas of research of the faculty members include semantic web, data mining, software reliability, wireless sensor networks, network security, big data analytics and cloud computing. Students are motivated to pursue multi-disciplinary research projects on long term basis jointly with other department students.

FROM THE

FACULTY INGHARGE

Every challenge , every adversity , contains within it the seeds of opportunity and growth.

Hetal Amrutia

ASSITANT PROFRSSIOR (IT Department)

Being the Editor In charge of the IT Department magazine "Ezine", it gives me an immense pleasure to bring to you seventh issue. The name and fame of an department depends on the caliber and achievements of the students and teachers. The role of a teacher is to be a facilitator in nurturing the skills and talents of students. This magazine is a platform to exhibit the literary skills and innovative ideas of teachers and students. This latest issue is combination of articles , project description , Student's achievements, department activities and many more.

We would like to place on record our gratitude and heartfelt thanks to all those who have contributed to make this effort a success. We profusely thank the management for giving support and encouragement and a free hand in this endeavor. Last but not the least we are thankful to all the authors who have sent their articles.

With all the efforts and contributions put in by the editorial team, I truly hope that the pages that follow will make some interesting reading. I congratulate the editorial team for making "Ezine" innovative and inspiring.

FROM THE

EDITOR

"Try not to become a man of success, but rather try to become a man of value"
- Albert Einstien

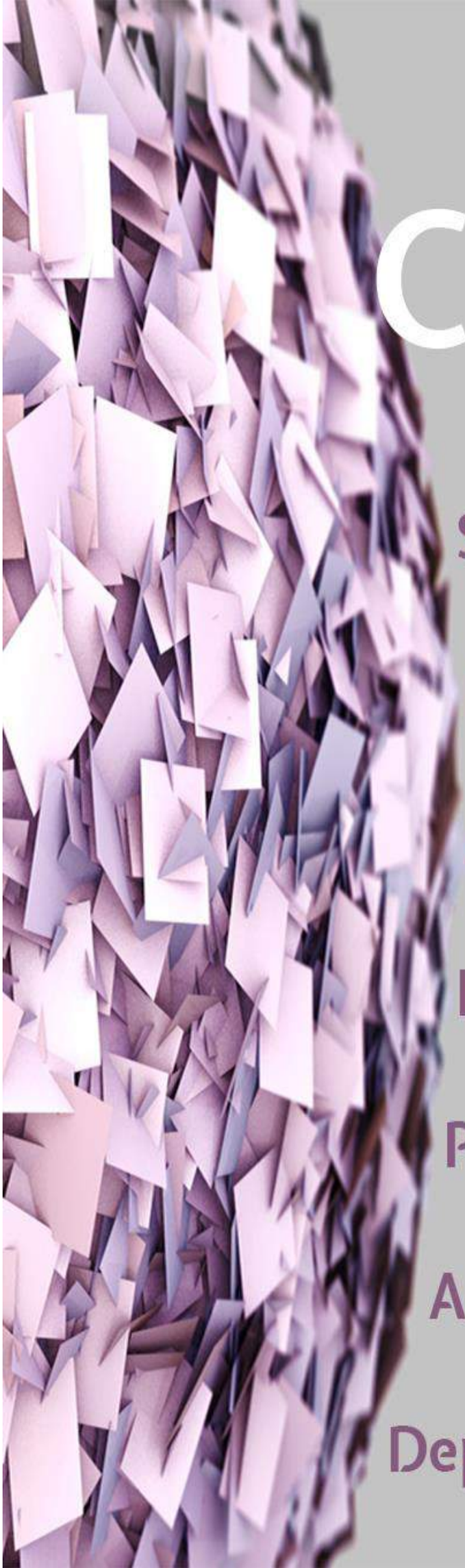
Tanishq Mehra
TE IT A

I feel priveleged to be associated with the Ezine-17 magazine. Through this magazine, we tried to cover various insights on the areas of Internet Of Things, Artificial Intelligence, Business plans, Agility, Data Mining, with the list being interminable. It is my expectation that this magazine will give many young but burgeoning fields an academic voice and a chance for discourse that will move us forward intellectually.

The idea was to produce an eclectic magazine which the students, under the guidance of our esteemed faculty, have done due justice to. Over the years our goals and objectives of Ezine Magazine have been and will always be: to keep the art alive by showcasing the IT industry's achievements and accomplishments while educating our readers with informative step-by-step educational articles.

We, the publication team, strive to present as much information in the most decorous way possible.

The members of our team have left no stone unturned to cover each and every aspect of the events occuring within the IT department. It was a pleasure working with them and we hope you find this magazine as informative and entertaining which shall be commensurate with the efforts put in by us.



CONTENT

STUDENT ARTICLES

STARTUPS & IITIANS

Startups nowadays are becoming one of the most talked about type of ventures in the world. It's being promoted on a very large scale. With its innovation in nearly every field it's being widely accepted in the errands relating to the Information Technology as well. A startup is all about being innovative. Creating something that is not yet produced in the market.

IT related startups have boosted the business in various sectors, by providing people with improvised hardware and smarter applications. The innovation in Information Technology has created a radical impact as people nowadays prefer online shopping than shopping at a store, Digital marketing is more preferable than high cost newspaper advertising, Cloud computing is more preferred than a private computer network.

One such California based company that grabbed the entire market is Uber Technologies Inc. It's been established in 528 cities. It works on a software application which allows consumers to request car transportation or food delivery through the Uber application.

One more sector where we can see great enhancement is in the field of Artificial Intelligence. Artificial Intelligence is being innovated with varying concepts. The basic idea behind it is to perform tasks requiring human intelligence such as visual perception, speech recognition, decision making, communicating.

Apple's Siri is one of the greatest achievements in this field. This personal assistant abides to all the functions by communicating with the user. It converts the user language and replies accordingly to it. Google now is another such software with

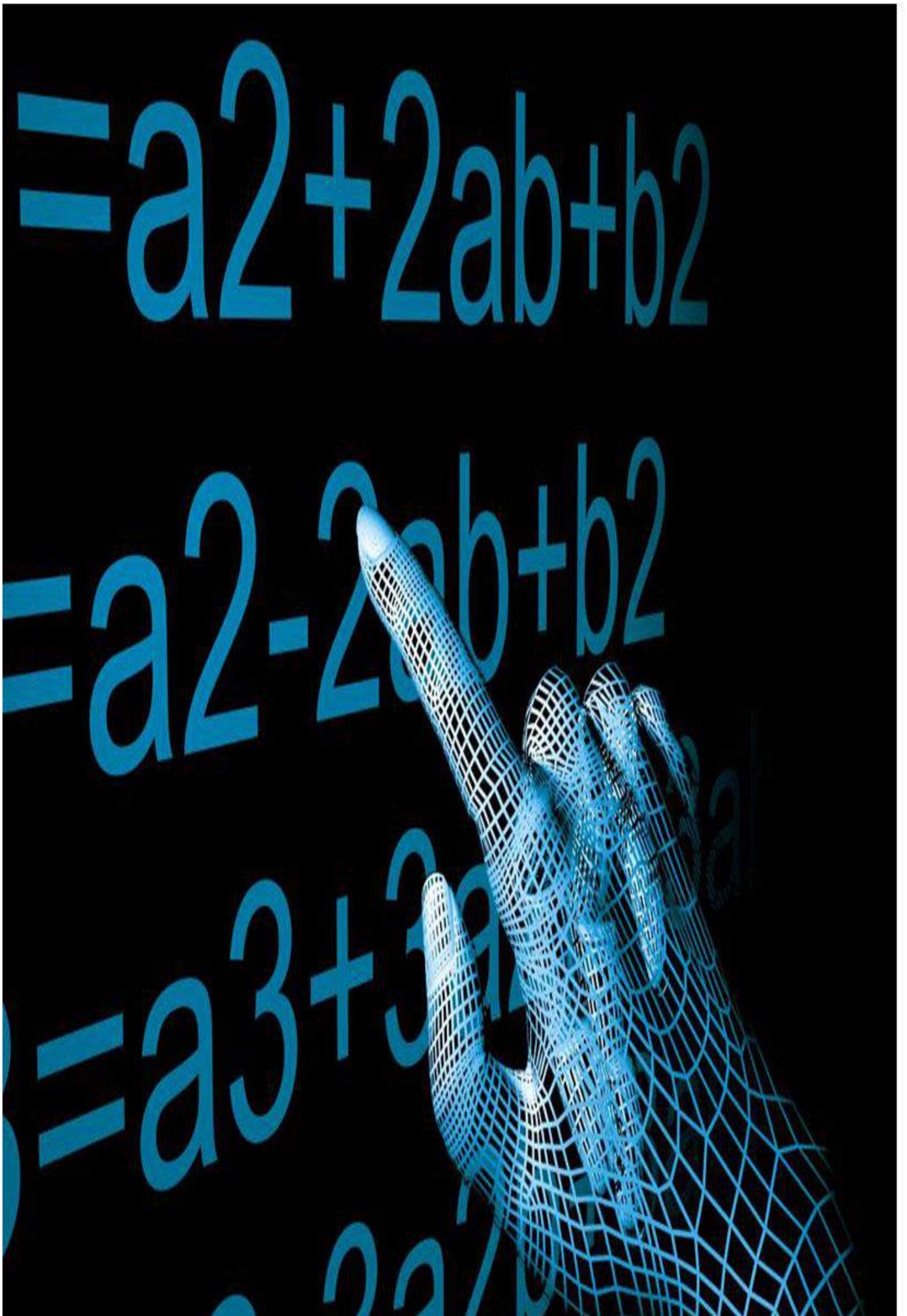
more advanced features and being user friendly, can be accessed by everyone.

With the growth in technology, self-driven cars are being promoted on a large scale. The software used behind making such cars is quite a sophisticated one. It actually processes all the data in real time and according to the surroundings by sensing the objects around you using Laser Illuminating detection and Ranging. While some of the things are hard-coded such as stopping at the red lights and other things based on the experiences of the user. The learning algorithm processes not just the data of the car you are riding in but also learns from the objects moving in the surroundings. Self-driven cars are the future of transportation!

The IT sector being a great platform is readily advancing by providing solutions to the complex problems faced in other fields by using user-friendly softwares. Great startups await for the future, with the advancement in the technology one will see the advancement in the economy and various industries.

Author:
VINAY
AGARWAL
FE-IT-A

MATHEMATICS IN COMPUTER SCIENCE



Being a maths lover from very young age and a newcomer in computer science I always tried to relate these two subjects...and this relation fascinates me. But then there are people who don't like maths or they start not liking it after 10th/12th when it gets crucial and still they are expecting a very good career in engineering or more precisely in computer science branch. In following article I would like to explain mathematics as the base of computer science .

Let's first elaborate "computer science", as per definition it's a branch of science(so it has to be analytical) that deals with computational devices. Now word computational means "the action of mathematical calculation".

As per conventional point of view mathematics is numbers,equations or graphs but if you dig a bit deeper you will realize that it's a whole different language...it's the language of the universe and our civilizations biggest achievement ever.having the capacity for abstract reasoning, critical thought, and logical deduction that's the mathematical way of thinking. In this regard, a strong background in mathematics is imperative to succeeding in computer science

1. Math teaches understanding and communication through abstract language.

Computer programming has its own languages, which are very abstract. Using syntax, one must represent specific processes, commands, and visuals through punctuation, symbols, and single words. To someone with no experience thinking or communicating in abstract languages,

learning a programming language can be terrifying.

However, abstract programming languages are very similar to the mathematical language that students learn in math class. From simple equalities to complex mathematical representations, learning mathematics teaches students the art of reading, comprehending, formulating thoughts, and communicating with abstract language.

Of course, mathematical language and computer programming languages aren't exactly the same. But experience using any abstract language gives beginning computer scientists an advantage.

2. Math teaches how to work with algorithms.

Algorithm is among the most bandied-about terms in the technology scene. In short, an algorithm is an abstraction of some process into a form in which the process can be repeated, implemented in different ways, and applied to new problems.

The word may be used more frequently in computer science, but most students first use algorithms in mathematics. For example, consider an equation like 5 + x = 7. Students learn to find an unknown summand by subtracting the known summand from the sum. This is an algorithm -- one that students quickly learn to apply to new problems and implement in different ways.

3. Math teaches students how to analyze their work.

In a day's worth of programming, any computer scientist is guaranteed to make a mistake. As such, programmers must know how to assess a problem, analyze their work, and fix errors.

Math is one of the few subjects where students analyze their own work in this way. A student might answer a math question (How much do the puppy and kitten weigh together?), realize that their answer is unreasonable (231 pounds), and analyze their own process to understand their mistake and how to fix it (maybe they forgot to convert from ounces to pounds). Math, in short, prepares students for fixing bugs.

4. General skills aside, computer science still involves a lot of math.

In addition to general skills important for computer science, the facts and figures of math are essential. As computer programming interacts more with our world, the importance of accurately modeling that world through mathematics grows.

For example, to build a self-driving car, the equations used to program its turns, acceleration, and acceptable distance from other cars must be spot-on.

Becoming a computer scientist requires a fair amount of mathematical knowledge and skill. Even more importantly, success in computer science requires the ability to think mathematically. So why is it necessary to talk about how math helps prepare budding computer scientists for their academic careers?

Thank You !!!!

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HOME AUTOMATION

We are living in an exciting time where "things" are becoming smart. Automatic systems are preferred over manual systems. The Internet of things, IOT, is the latest emerging internet technology.

Automation being the best application of IOT can be termed as the process of controlling and operating various equipment using control systems with less or no human intervention. Home automation where various electrical and electronic home appliances such as fan, lights, kitchen timer etc. are controlled remotely over the cloud, using IOT, will provide people with more comfort.

Wireless home automation consists of various blocks such as power supply, optocoupler, WiFi module, TRIAC, voltage regulator, switch mode power supply and load. A system can be designed that not only monitors the sensor data like heating, lightning, ventilation, security of the home appliances but also actuates a process according to the requirement.

The sensor parameters will be stored on the cloud in a timely manner. The home automation allows the user to operate the system from anywhere in the world through internet connection thus making it a smart way of life.

Author:
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ARTIFICIAL INTELLIGENCE IN MILITARY

Artificial Intelligence has always been thought of as a Job-killer. However, when we think of automation, factories, agriculture, mining and industries come to mind. But robots, it seems, are now coming for military jobs too.

An AI program developed by a University of Cincinnati PhD graduate was recently tested by subject-matter expert and retired United States Air Force Colonel Gene Lee. He holds extensive aerial combat experience as an instructor and Air Battle Manager with considerable fighter aircraft expertise. The tests were carried out in an air combat simulation and the results were extremely good, which doesn't bode well for military experts.

The artificial intelligence, dubbed ALPHA, was the victor in that simulated scenario, easily beating out its human competition. According to Colonel Lee, it is "the most aggressive, responsive, dynamic and credible AI I've seen to date." With further testing by the US military imminent, it is only expected to improve and leave combat situation experts further behind.

Details on ALPHA were published in a recent issue of the Journal of Defence Management, as this application is specifically meant for use with Unmanned Combat Aerial Vehicles, better known as Drones, in simulated air-combat missions in research purposes.

The tools used to create ALPHA as well as the ALPHA project have been developed by Psibernetix, Inc., recently founded by UC College of Engineering and Applied Science 2015 doctoral graduate Nick Ernest, now president and CEO of the firm, as well as David Carroll, programming lead of

Psibernetix, Inc.

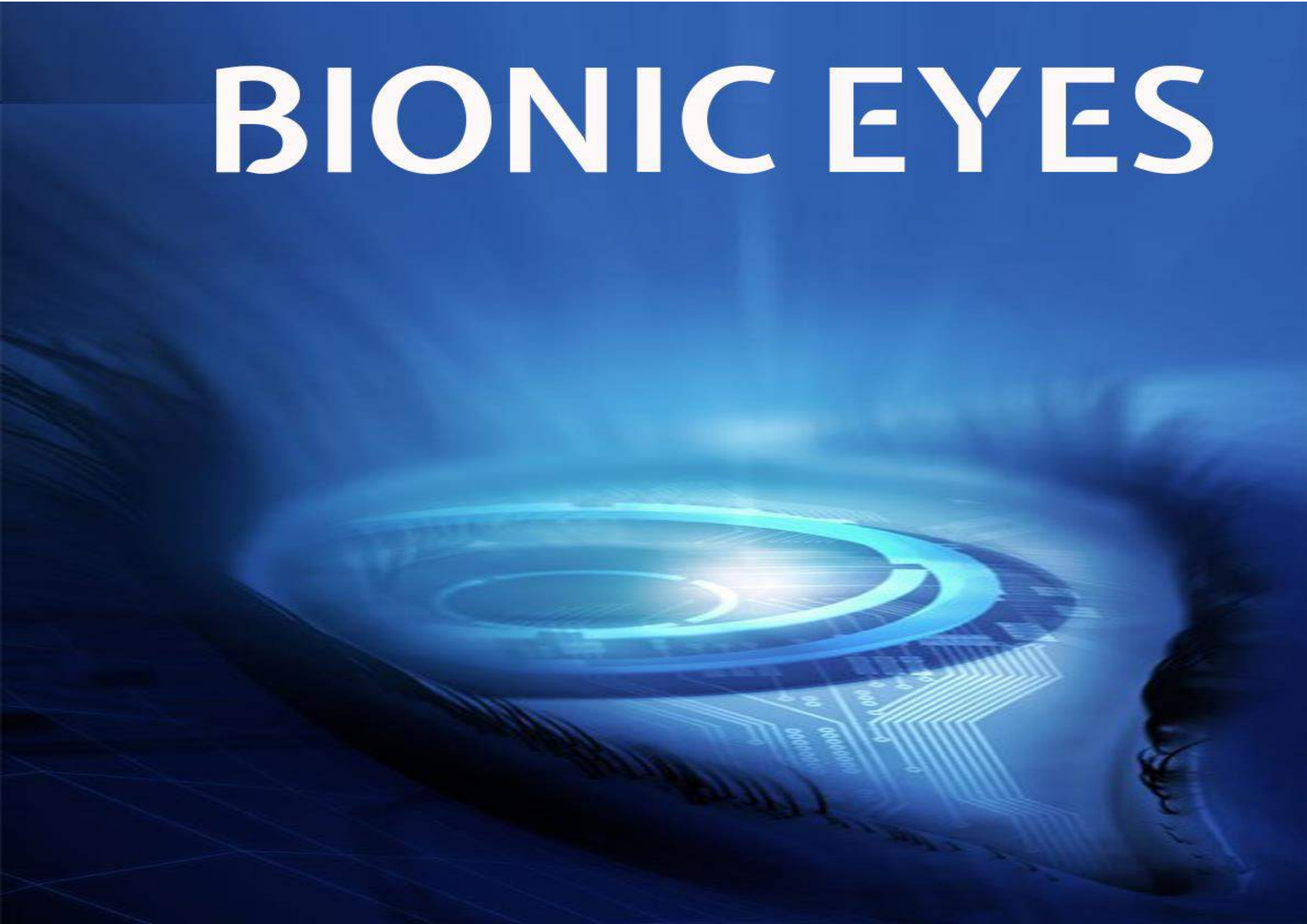
ALPHA is currently viewed as a research tool for manned and unmanned teaming in a simulated combat environment. In its earliest iterations, it defeated other AI opponents.

Since that first human vs. ALPHA encounter in the simulator, this AI has repeatedly bested other experts as well as other AI's, and is even able to win out against these human experts when it's aircrafts are deliberately handicapped in terms of speed, turning, missile capability and sensors.

With AI only expected to improve even more, it remains to see how much more of human involvement in wars are reduced.

Compopsed by -Varun Mishra (SE IT A)

BIONIC EYES



Vision can be affected in a number of ways. According to the recent reports published by the vision council, the major reason being a part of the enhanced digital world, majority of people experience symptoms of digital eye strain such as blurred vision, double vision, headache, itchy and irritated eyes along with back and neck pain. How long has it been since you got your eyes checked? Did you talk with your ophthalmologist about the hours you spend in front of a computer?

In past 20 years, Biotechnology has become the fastest growing area in scientific researches. And many new biotechnical devices such as Bionic Arm that allows amputees to control movements of the artificial body part with their thoughts, Brain Port that lets people with visual and balance disorders bypass their damaged sensory organs and instead send information to their brain through the tongue. One such significant breakthrough that Scientists may have made in restoring human sight is the bionic eye implant.

Common vision problems

Some areas within the eyes may not be ideally formed, or may have been damaged, hindering their function. Corrective eyewear and laser eye surgery can put an end to some problems with the light-focussing functions of the eye such as cataracts, astigmatism and myopia. These problems are usually a result of structural abnormalities within the eye and its component parts.

Problems with the light-processing functions of the eye are usually caused by abnormalities of the retina and macula such as retinitis pigmentosa and age-related macular degeneration. Globally, over one and a half million people have progressive

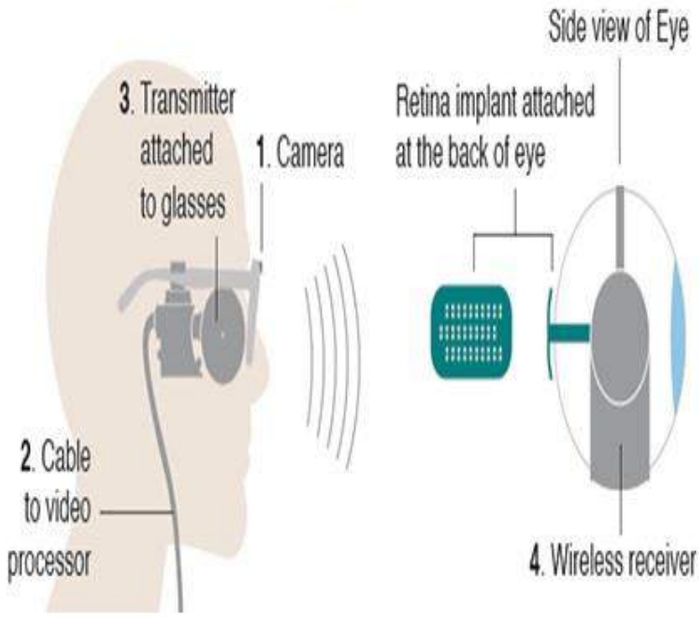
vision loss as a result of retinitis pigmentosa, the primary cause of inherited blindness. They cannot be addressed with corrective eyewear or laser eye surgery and it is these problems that we are seeking to address with a retinal implant.

What is a Bionic Eye?

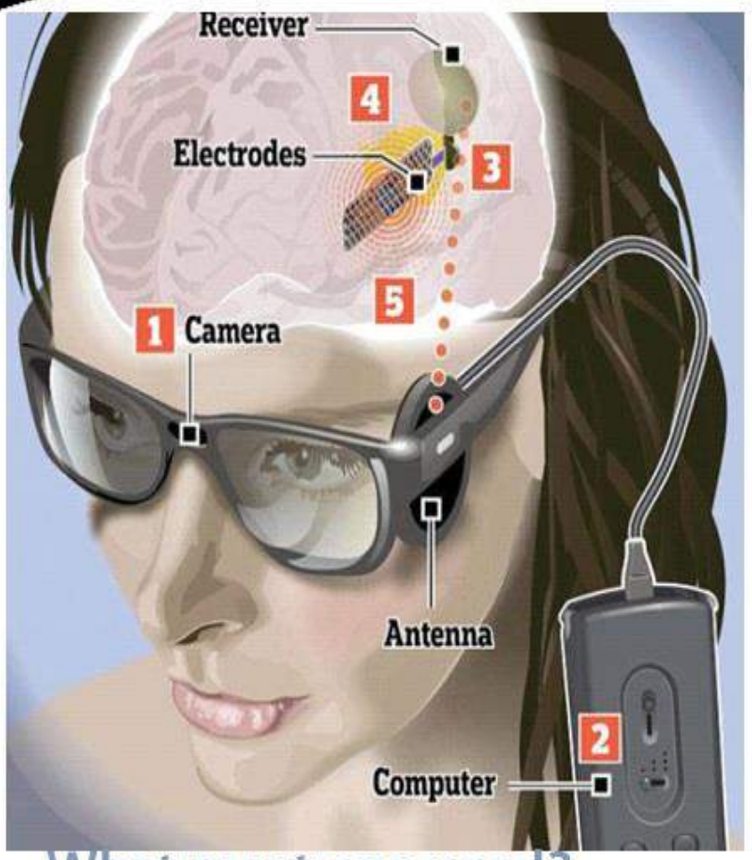
Bionic eye also called as Visual Prosthesis is a visual device intended to mimic the function of the retina to restore sight for those with severe vision loss due to degenerative eye diseases like macular degeneration and retinitis pigmentosa. Both diseases damage the eye photoreceptors, the cells at the back of the retina that perceive light patterns and pass them on to the brain in the form of nerve impulses, where the impulse patterns are then interpreted as images. The bionic eyes takes the place of these photoreceptors.

How does it work?

The bionic vision system consists of –



1. Digital camerasfor converting light into electrical signals
2. Cable to video processor
3. Transmitter attached to glasses
4. Wireless receiver to receive input from the absent photoreceptors
5. An antenna for reception of electrical signals



- A tiny video camera in the bridge of the glasses captures moving images and sends them via a wire to the computer.
- The computer unit carried in a pocket transforms the images into electrical signals and sends them back to an antenna on the glasses.
- The signals are then transferred wirelessly to a receiver implanted on the back of the skull.
- They are sent on to the electrodes placed on the surface of the brain.
- The electrodes stimulate the neural cells in the visual cortex, enabling the wearer to see.

What must one need?

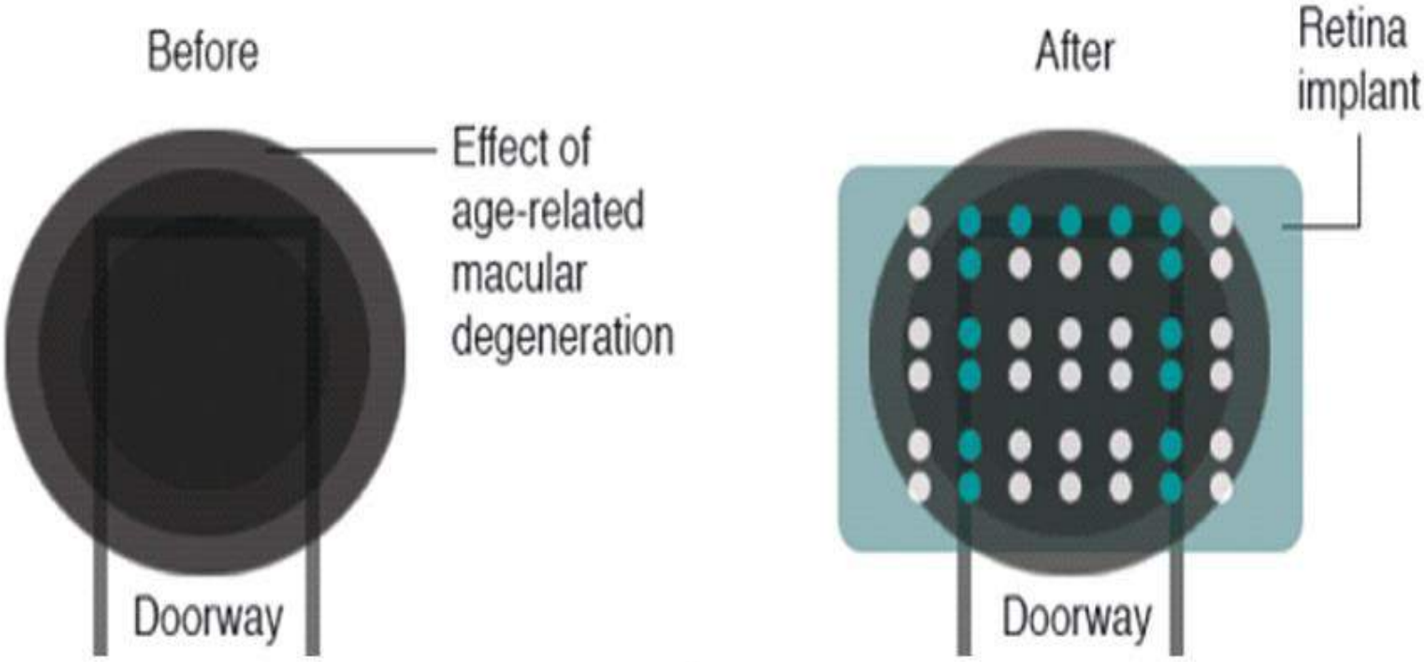
To benefit from this technology, patients need to have a functional visual pathway from the retina to the brain along the optic nerve, as well as some intact retinal cells. And also

- Some remaining retinal ganglion cells
- A healthy optic nerve and visual cortex
- Very low or no vision

What might I see?

A person using a retinal implant to see will not experience vision in the same way a person with healthy vision does. Vision will be quite basic to start with and people will need training to adapt to the implant. With time, training and patience, people will be able to use this visual information to be more independent and mobile.

How an image might look when viewed with the help of a retinal implant



Conclusion

Of course, this process is complex and development of bionic eyes is growing in demand. Importantly, it requires a large amount of knowledge about the retina and about how prosthetic devices interact with the retina. Not surprisingly, in the last few decades vision scientists have been focused on understanding how photoreceptors and visual nerve cells respond to light: most research has been focused on understanding normal visual function. Only in recent years, with the intention of developing bionic eyes, have the electrical properties of the retina become a topic of interest to scientists.

Author
-Anushi Doshi
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BLUETOOTH

Bluetooth is a wireless technology standard for exchanging data over short distances from fixed and mobile devices, and building personal area networks (PANs). Invented by telecom vendor Ericsson in 1994, it was originally conceived as a wireless alternative to RS-232 data cables. It can connect up to seven devices, overcoming problems that older technologies had when attempting to connect to each other.

Bluetooth is managed by the Bluetooth Special Interest Group (SIG), which has more than 30,000 member companies in the areas of telecommunication, computing, networking, and consumer electronics. The IEEE standardized Bluetooth as IEEE 802.15.1, but no longer maintains the standard.The Bluetooth SIG oversees development of the specification, , manages the qualification program, and protects the trademarks. A manufacturer must meet Bluetooth SIG standards to market it as a Bluetooth device. A network of patents apply to the technology, which are licensed to individual qualifying devices.

Origin

The development of the "short-link" radio technology, later named Bluetooth, was initiated in 1989 by Nils Rydbeck, CTO at Ericsson Mobile in Lund, Sweden, and by Johan Ullman. The purpose was to develop wireless headsets, according to two inventions by Johan Ullman, SE 8902098-6, issued 1989-06-12 and SE 9202239, issued 1992-07-24. Nils Rydbeck tasked Tord Wingren with specifying and Jaap Haartsen and Sven Mattisson with developing. Both were working for Ericsson in Lund. The specification is based on frequency-hopping spread spectrum technology.

Etymology of the name

The name "Bluetooth" is an Anglicised version of the Scandinavian Blåtand/Blåtann (Old Norseblát□nn), the epithet of the tenth-century king Harald Bluetooth who united dissonant Danish tribes into a single kingdom and, according to legend, introduced Christianity as well. The idea of this name was proposed in 1997 by Jim Kardach who developed a system that would allow mobile phones to communicate with computers. At the time of this proposal he was reading Frans G. Bengtsson's historical novel The Long Ships about Vikings and King Harald Bluetooth. The implication is that Bluetooth does the same with communications protocols, uniting them into one universal standard.

List of applications

1.Wireless Bluetooth headset and Intercom. Idiomatically, a headset is sometimes called "a Bluetooth".

2.Wireless streaming of audio to headphones with or without communication capabilities.

3.Wireless streaming of data collected by Bluetooth-enabled fitness devices to phone or PC.

4.Wireless networking between PCs in a confined space and where little bandwidth is required.

5.Wireless communication with PC input and output devices, the most common being the mouse, keyboard and printer.

6.Transfer of files, contact details, calendar appointments, and reminders between devices with OBEX.

7.Replacement of previous wired RS-232 serial communications in test equipment, GPS receivers, medical equipment, bar code scanners, and traffic control devices.

8.For controls where infrared was often used. And there are many more applications

Author
-RAHUL
GUPTA
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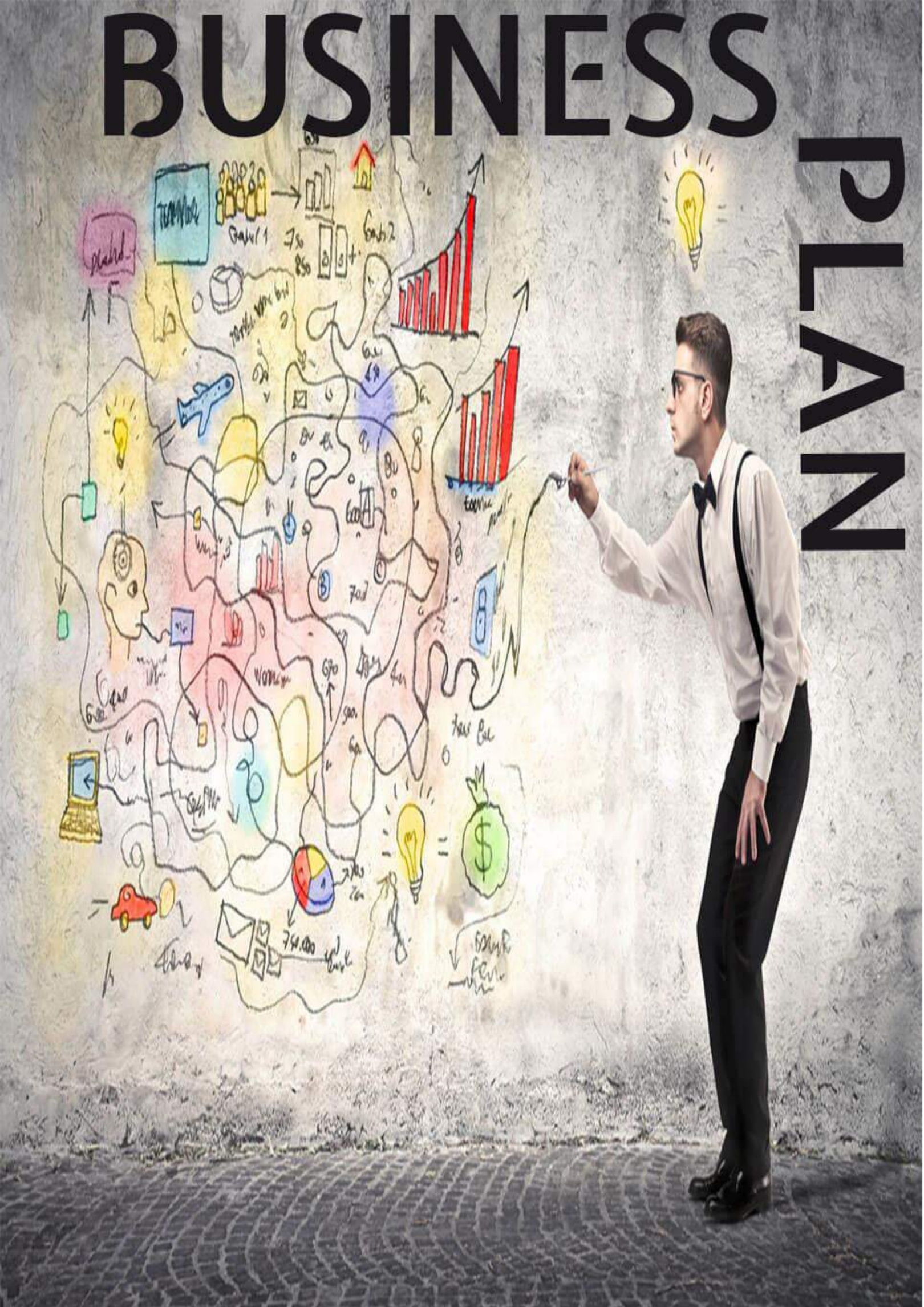
BUSINESS PLAN



One may have the greatest idea in the world but if he is not able to convince enough other people, then that idea is worthless. In order to do that, we need to come up with an effective business plan. Here are some points that would guide you in coming up with a successful business plan:

1. Know your audience.

The first thing that one should know about is the audience they are going to target for presenting the business plan. Business plans take many forms in length and sizes and shapes and media. Be it Venture Capitalists or Company Managers or others, a business plan should always be as brief as possible in the shortest length possible. Many people hate to waste their time reading and analysing long business plans. You will get the biggest advantage if you analyse the audience well and plant your ideas in their minds.

2. Executive summary.

Most business plans start with an executive summary in a specific format. This plan gives an insight of the company's vision and goals, market opportunities, value proposition and plans to grow further in the future. These are the basic things that would build up a great business plan and would act as the key components for convincing the audience. The layout of the summary should be simple and elegant focusing on every aspect of the business plan in distinct sections. For example, the opportunities of the company should not be proposed

with the company risks.

3.Company overview.

The next thing we should focus on is showing what the company really stands up for and how it works, its management and other key information. Once you've shown what the company is really all about, propose the market opportunities and how the company would take an advantage of it. This needs to be explained with more details along with the help of statistics and market and industry research which would be critical here.

4. The Solution.

After defining the various aspects of the market, its time to present your audience with the solution that your company has come up with to take complete advantage of the market opportunities. The solution may be a product or a service. The description of the solution should be written in such a way that your business model becomes perfectly clear to the audience. Leave no gaps and take complete advantage of this in drawing out your business plan. Then, lead into the financial model which would highlight the growth and expense projections. The thing that would make you different and better here would be the way you identify and explain the audience how effectively you are going to use their cash to grow your company. This requires a clean and clear strategy in going to market. Detailed market study is a must in order to achieve that.

5. The Distribution.

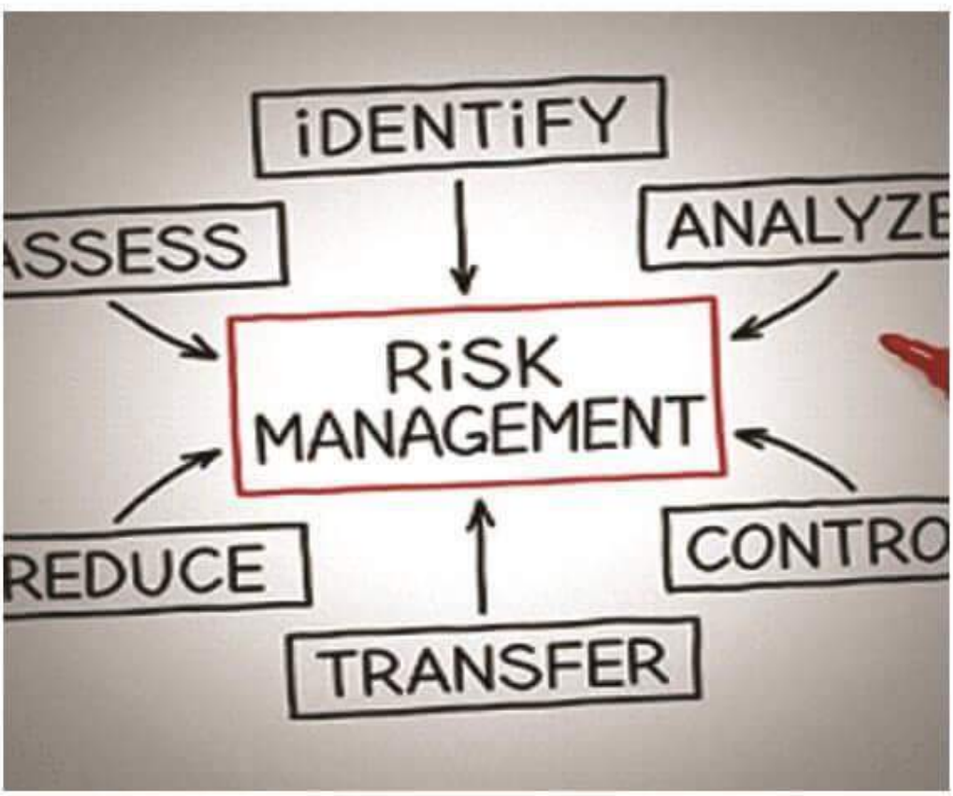
The Distribution Section would include the details of how you plan to sell the solution and acquire consumers. It should focus on the various media you plan to publicise your solution to the consumer viz. public relations, digital marketing, offline marketing, through partnerships and more.

6. The Big Difference.

Till now, the main focus was on the company operations. But, every business plan needs to include an analysis of the market competition. Unless you've got a new market, there's always competition from different companies focusing on the similar market. This is where you present the idea of the solution being different and better than the rest. Its very easy to be different but its quite complicated to be better. The Big Difference helps you in getting the upper hand in the market and this is the secret of the trick. But you have to pull it off in the proper way.

7. Potential Risks and Threats.

Finally, you need to define the potential risks and threats that your company has. There should be a detailed section about these and the creative ways that your company would solve them. This is the final stage that really convinces the audience. This is where the reality distortion field would come in handy. Just like Jobs!



When composed in a simple and elegant manner, The Business Plan convinces not only the audience but also yourself. This is all about Planning The Business Plan

Author
-Vedant
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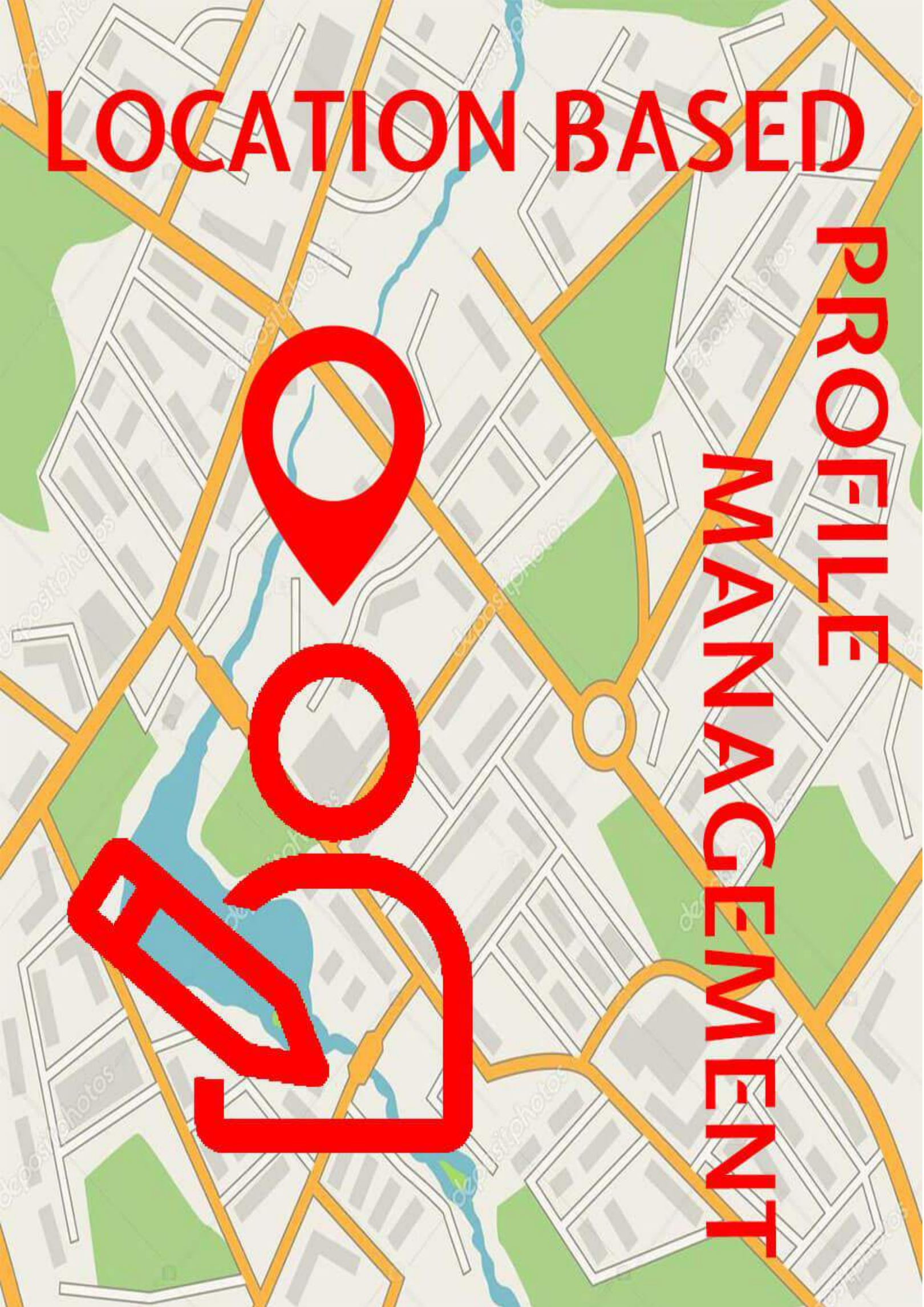
(SE IT B)

LOCATION BASED



PROFILE MANAGEMENT

Location based Profile Manager

INTRODUCTION:

Mobile has become a vital communication tool which everyone prefers to possess and carry along. This technology has laid a foundation to overcome the traditional desktop based approach of obtaining information. This project has been developed for Android driven Smartphone's. Global Positioning Systems (GPS) is a top priority technology used for locating a device position accurately. Methodologies for tracking can be done using a GPS receiver which is an additional hardware integrated in most of mobile equipment. We have used GPS as the approach idea for location tracking. "Location Based Profile manager" is an android application that can perform various tasks according to your location. According to the detected location profile settings are applied on the phone.

PURPOSE:

Aim of the project is to make the mobile phones more user friendly for the users to use it. The main purpose of the project is to allow user to change the settings of his/her mobile phones which has Android operating system in it, according the places which the user give as a input. It is done in clean, efficient and rapid manner. The developed application provides an easy interface of the system with the user through a simple and systematic Graphical User Interface (GUI). The main motto of this application is to provide an automated environmental change in the clutch.Automation of systems is reaching too the peak of serenity in the technical world.

Things which are been done manually is soon going to end. This application proves the automation change in the tech-world.

PROJECT DESCRIPTION:

The project Location Based Profile Manager will be a cost-effective GPS based system which will make use of GPS to track the mobile phone and change the settings as per the user choice. The project will consist of an android application which consistently get location from GPS satellite and apply the setting as per user pre stored settings.

This system is especially developed for students to automatically set their phone to silent before enter in the college and the employs can have their Wi-Fi on once they enter in the Wi-Fi network.

To develop an application in android that senses user location and apply profile settings specified by user. The application is named "Location Based Profile Manager" as the name suggests- it will save settings in database and apply those settings on your phone. Location tracking is performed using the GPS service.Changes in location can be emulated with the help Google map in Android

Android Platform-

Development of Android applications is done in the Java programming language using the Android SDK which provides the tools and APIs necessary for development . The developer is hence required to be familiar with Java.

This is followed by the build process. During the build process, an archive containing application resources is also created automatically by the "aapt" utility.application.

CONCLUSION:

An android application for tracking user current location and apply the settings which are already specified by user. This settings consists of various profile settings like media volume, silent, vibrate and other settings such as Bluetooth and wifi toggling. Other functions provided by application are sending sms to specified number , notify user and launch the application according to the user location. It also provides additional functionality such applying settings depending on the time of the day or day of the week. Application also provides with Google maps where user can specify the settings for remote location (ex. By sitting at home user can specify settings for his/her office) by pin-pointing the required location and also can view the location on the map

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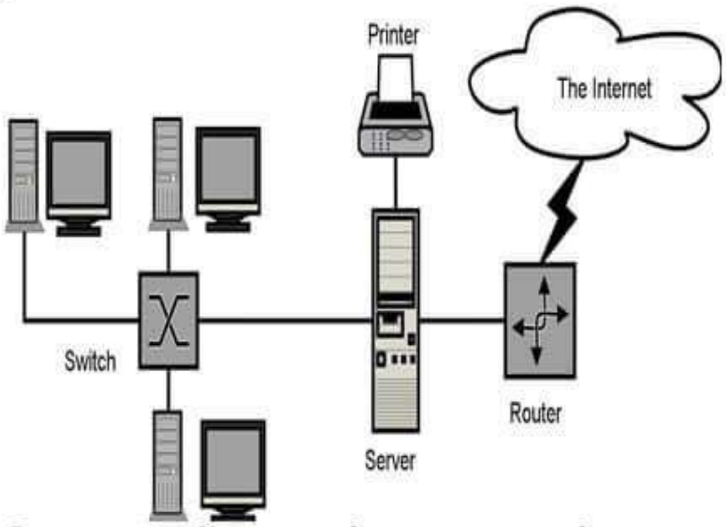
NETWORK DESIGN TO

STRENGTHEN CLOUD COMPUTING

Cloud computing is a general term for the delivery of hostage services over the internet. In the simplest terms, cloud computing means storing and accessing data and programs over the Internet instead of your computer's hard drive. The cloud is just a metaphor for the Internet. When you store data on or run programs from the hard drive, that's called local storage and computing. Everything you need is physically close to you, which means accessing your data is fast and easy, for that one computer, or others on the local network. The cloud is also not about having a dedicated network attached storage (NAS) hardware or server in residence.Storing data on a home or office network does not count as utilizing the cloud. For it to be considered cloud computing,information over the Web.

In computing, you need to access your data or your programs over the Internet, or at the very least, have that data synced with other information over the Web. Technically, cloud computing is a internet-based computing which provides resources ,information and data to other devices based on their need. Cloud computing provides us with the storage solution for the user and companies to with capabilities to store and process their data to provide it to the third-party that may be located far away from the user in any part of the world. Sometimes it happens that the physical data on our PC or Laptop gets lost or destroyed and this can't be recovered but using cloud we can recover this data anytime and anywhere.



But according to the experts the amount of data stored in the cloud will quintuple in the next five to ten years .So whether it is sending images, videos all of this data will be available for transmission and can be accessed with the help of lasers sending pulses of light through long bundles of flexible optical fibers.

Traditionally, the rate at which information is transmitted does not consider the distance that data must be travelled, despite the fact that shorter distances can support higher rates. Yet as the traffic grows in volume it uses increasingly more of the available bandwidth or capacity to transfer bits of data, which have made the researchers more aware about the limitations of this mode of transmission.

There are basically two types of traffic:

1. Flow of traffic transferring bits of data
2. Flow of traffic between data centers.

This second type of traffic, between the data centers, represents about one-third of total cloud traffic. It includes activities such as data backup and load balancing, whereby tasks are completed by multiple servers to maximize application performanceThe solution two both the types of traffic can be given in a continental-scale network with optimized data center placement and bandwidth allocation, distance-adaptive transmission can use 50

percent less wavelength resources or light transmission, and reception equipment, compared to fixed-rate rate transmission, On a functional level, this could allow cloud service providers to significantly increase the volume of traffic supported on the existing fiber-optic network with the same wavelength resources. Other important factors that have to be considered include the proximity of data centers to renewable sources of energy that can power them, and latency , the interval of time that passes from when an end user or data center initiates an action and when they receive a response. American researchers have developed Other important factors that have to be considered include the proximity of data centers to renewable sources of energy that can power them, and latency -- the interval of time that passes from when an end user or data center initiates an action and when they receive a response.

So we can all expect to see more development in cloud computing and we have given some of the ways to strengthen the network design of the cloud computing system. But we all know that the cloud represents one of the most significant shifts that computing has gone through. As we move towards the cloud, we will discover a new service-based world, where many words that were once common in the average IT shop – like servers, data centers, OS, middleware.

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BIRCS3

(BIOMETRIC IDENTIFICATIO
AND REAL TIME CONTROL
AND SMART CARD SECURITY SYSTEM)

Our Project aim is to improve Anti-Theft system and controlling car automatically for various security system

.Functionality of our Project:

When a person enters in a car he or she may be a car owner (family member) or a stranger .

- There are 3 possibilities:

i) if the person who enter in the car is owner then the security system will be enabled that is the scanner will scan the image of a person because as he/she is an owner his image will be already stored in database. So the system will consider him/her as a authorized person then the car will start automatically.

ii) if the person is relative , the owner of the car will give finger print authentication to allow that relative to use the car. The scanner will scan the image of a relative and store that information in database. Whenever in future that person wants to use car he will be considered as authorized person by system.

iii) if the person is unknown (stranger/thief) , the security system will be enabled i.e, the scanner will scan the image ,if the scanned image is not matching with the images stored in the databasethe system will consider the person as unauthorized and then immediatetly the control system will enabled which will lock the doors and windows of the car and the alarm will ring and the scanned image of the unauthorised person will be send to the owner to his mobile app and to the police.

Speciality in our project is that we are adding artificial intelligence,
As the sensors attached to the automobiles will determine the depth of the damage of
the cars which will be directly connected to the server through GPS for emergency rescue by leaving a message to the nearby hospitals and police station's and family
members will be informed automatically through the server with a precise location and also when the level of fuel will decrease automatically a message will be received
on the application that is installed on the smart phone of the driver with the nearby location of the petrol station.

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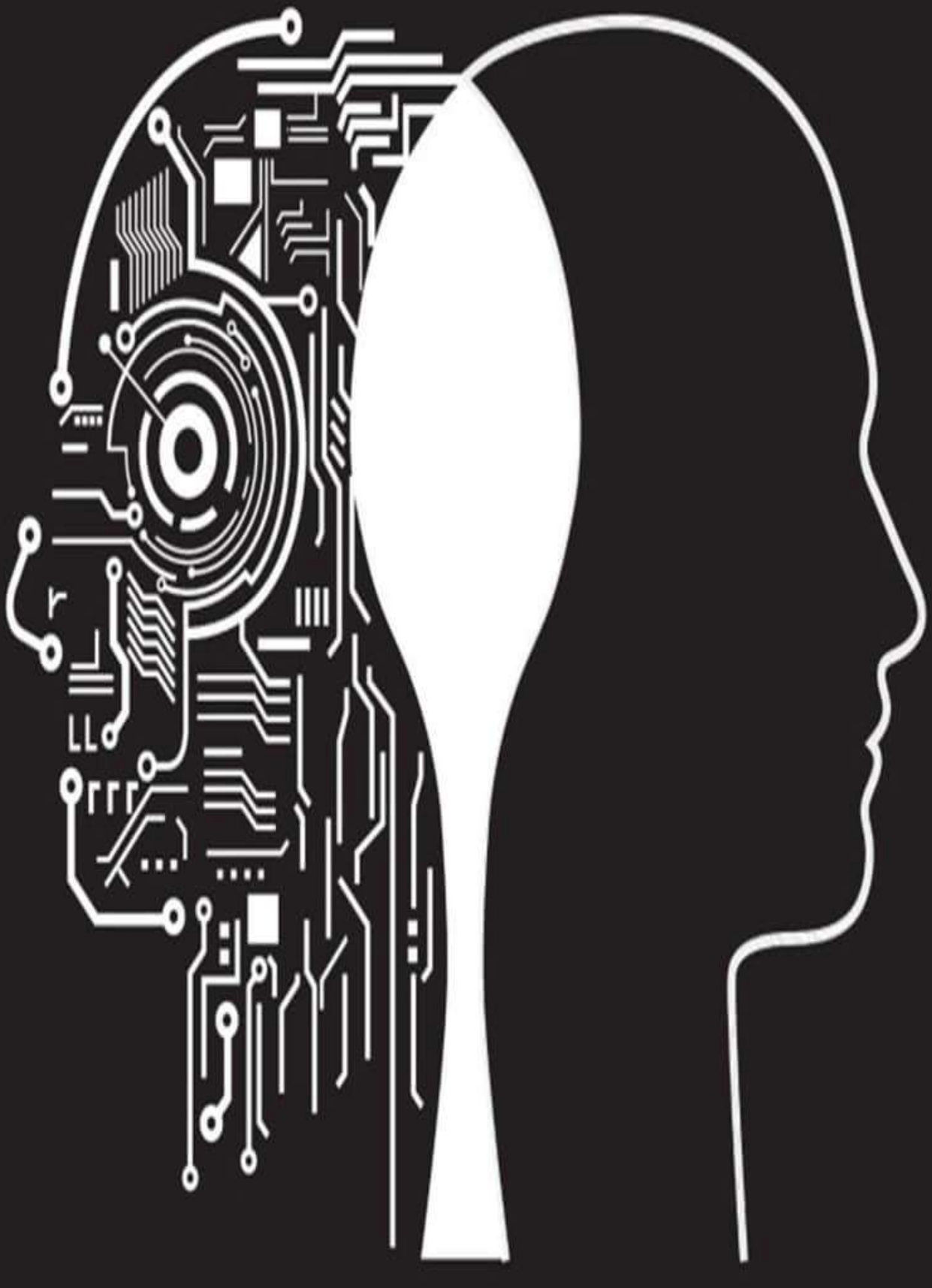
AI'S LINGUISTIC PROBLEMS



About halfway through a particularly tense game of Go held in Seoul, South Korea, between Lee Sedol, one of the best players of all time, and AlphaGo, an artificial intelligence created by Google, the AI program made a mysterious move that demonstrated an unnerving edge over its human opponent.

On move 37, AlphaGo chose to put a black stone in what seemed, at first, like a ridiculous position. It looked certain to give up substantial territory—a rookie mistake in a game that is all about controlling the space on the board. Two television commentators wondered if they had misread the move or if the machine had malfunctioned somehow. In fact, contrary to any conventional wisdom, move 37 would enable AlphaGo to build a formidable foundation in the center of the board. The Google program had effectively won the game using a move that no human would've come up with.

One reason that understanding language is so difficult for computers and AI systems is that words often have meanings based on context and even the appearance of the letters and words. We need to demonstrate the use of a variety of visual clues to convey meanings far beyond the actual letters.

AlphaGo's victory is particularly impressive because the ancient game of Go is often looked at as a test of intuitive intelligence. The rules are quite simple. Two players take turns putting black or white stones at the intersection of horizontal and vertical lines on a board, trying to surround their opponent's pieces and remove them from play.

Playing well, however, is incredibly hard.Whereas chess players are able to look a few moves ahead, in Go this isn't possible without the game unfolding into intractable complexity, and there are no classic gambits. There is also no straightforward way to measure advantage, and it can be hard for even an expert player to explain precisely why he or she made a particular move. This makes it impossible to write a simple set of rules for an expert-level computer program to follow.

AlphaGo wasn't told how to play Go at all. Instead, the program analyzed hundreds of thousands of games and played millions of matches against itself. Among several AI techniques, it used an increasingly popular method known as deep learning, which involves mathematical calculations inspired, very loosely, by the way interconnected layers of neurons fire in a brain as it learns to make sense of new information. The program taught itself through hours of practice, gradually honing an intuitive sense of strategy. That it was then able to beat one of the world's best Go players represents a true milestone in machine intelligence and AI.
A few hours after move 37, AlphaGo won the game to go up two games to nothing in the best-of-five match. . AlphaGo's surprising success points to just how much progress has been made in artificial intelligenceover the last few years, after decades of frustration and setbacks often described as an described as an "AI winter." Deep learning means that machines can increasingly teach themselves how to perform complex tasks that only a couple of years ago were thought to require the unique intelligence of humans.

Self-¬driving cars are already a foreseeable possibility. In the near future, systems based on deep learning will help diagnose diseases and recommend treatments.

Yet despite these impressive advances, one fundamental capability remains elusive: language. Systems like Siri and IBM's Watson can follow simple spoken or typed commands and answer basic questions, but they can't hold a conversation and have no real understanding of the words they use.

Machines that truly understand language would be incredibly useful. But we don't know how to build them.
Even though AlphaGo cannot speak, it contains technology that might lead to greater language understanding. At companies such as Google, Facebook, and Amazon, as well as at leading academic AI labs, researchers are attempting to finally solve that seemingly intractable problem, using some of the same AI tools-including deep learning—that are responsible for AlphaGo's success and today's AI revival. Whether they succeed will determine the scale and character of what is turning into an artificial--intelligence revolution. It will help determine whether we have machines we can easily communicate with—machines that become an intimate part of our everyday life—or whether AI systems remain mysterious black boxes, even as they become more autonomous. intimate part of our everyday life—or whether AI systems remain mysterious black boxes, even as they become more a autonomous.

Perhaps the same techniques that let AlphaGo conquer Go will finally enable computers to master language, or perhaps something else

will also be required. But without language understanding, the impact of AI will be different. Our relationship with AI may be far less collaborative and perhaps far less friendly. "A nagging question since the beginning was 'What if you had things that were intelligent in the sense of being effective, but not like us in the sense of not empathizing with what we are?'

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DIGITAL PARKING & RESERVATION SAFETY SYSTEM USING IOT

The present private/public parking system depends a lot on human resources. Hence there is a requirement of many workers. But one should realize that most of the functionality of these spaces is that to just park your vehicle for a stipulated time for a certain cost.

Lot of workforce is needed to manage the space and do variety of jobs and still the efficiency is low. Thus, this project proposes replacement of major workforce with a low-cost as well as low-power consuming device, which can be designed u
using Raspberry Pi and Intel Galileo Generation 2 Board.

A user interface can be designed for this device for remote access, thus adding to user's / Administrator's convenience. Moreover, this device can also be controlled by using a smart phone application for easy navigation. This device can be used for finding and reserving a parking space for the user through their smartphone via an App. Also, data generated through this device would be used to for storing/updating data on the cloud through an interface which has been sent from various remote locations where the main system infrastructure has been set-up.

All in all, this device and Concept offers features Finding and Reserving and navigating to a nearby parking space remotely through the application (Maps API) (Parking Space check through- Pi Camera) and support to contact emergency services through the application.

The ability to reserve a parking space depends on the users current location and registered parking places listed on the map. The reservation amount depends on the actual amount of the parking space per hour and will be finalised on basis of minimal token amount required for user

to reserve a parking space at that location.

The user will be provided with a QR code once he reserves a parking space. The QR code will be verified at entrance and then the user will be navigated to the reserved space. (The management of the space should agree to comply some percent of the space for reservation purposes as they will be configured with additional object blocking/detection sensors.)

Current Details:

- Development/Configuration of Admin Area Dashboard for real time parking detection done.
- Object Detection Algorithm using MATLAB for Vehicle Detection Designed.
- Android Application basic UI for end user developed.
- Basic Server Configuration for Gathering Data through Admin Dashboard under process.

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AUTOMATIC PROJECT ALLOCATION SYSTEM

Automatic Project Allocation System as the name suggests will be allocating the title of the project automatically according to the preferences given by the groups on the basis of parameters decided.It is system where only the initial stages the data is entered by the student and the faculty.Project allocation system can be used by organizations to make the entire process online.The allocation of the title and the guide will be performed by the system itself.The allocation of the project will be decided on certain parameters like attendance, marks, certification, seminars and various courses.The system avoids cross allocation of projects, groups and guides.It is designed to help manage the process of undergraduate projects, and the students viewing and selecting them.Although build on foundations of generic project allocation functionality and reporting options, Automatic project allocation system recognize the departments organise and process their projects and student selections in different ways.To this end Automatic project allocation system provides a flexible platform upon which custom design project forms, student selection options and reports can be used, with the final system being tailored to closely match the departmental requirements.

Till now there where many colleges and universities which manually allocate projects assigned to the students. This process is basically carried out for the final year students. It means that the college allocate student group id, project details and a mentor who monitors student's progress. The entire job manually become tedious and time consuming. This project aims at making this job well-based so its saves time and efforts both on students' side as well as

on faculty's side. It reduces time of the guide who allocate project to each and every student. Next thing that motivates us from the project is,there won't be a situation where biasing is done because it will allocate project automatically on the given criteria. The student he or she should fulfil the criteria required to receive the project of their choice. Another motivation is to increase efficiency of current system so that it becomes easy for students as well as faculty to manage and use it.

Automatic Project Allocation System allocates the project title automatically, so as to reduce the manual work of faculty in the college. Once the initial data like over all attendance of the student, cgpa obtained by the student and certification done by the student is received. Then students can register in this system and get user id and group id. This system works according to information received from the guide and the student and allocate the project to each and every student.

The first step to this system is the group formation by the students, where students will enter the details asked and group id will be generated for that group automatically.During the group formation process, if one or more people enter the same co-members for the group then, an email will be sent to those members whose name has been repeated for the same group and an option for and c
reject will be given.The next step that takes place is the details to be entered by the faculty about the choice of the domain and topics. After which the students gett o select three topics from the available list of topics and also can enter a project topic of their own interest.The core part of the system to allocate topics automatically takes place on parameters such

student's cgpa, certification and attendance.If two or more groups submit the same project then apart from these parameters, the first come first serve technique is used for allocating using the timestamp.All the initiation of the allocation is done through the project co-ordinators in the form of news feed. This news feed contains a link with the further instruction for the process.

The traditional way of allocating the projects in universities and college can be replaced by Automatic Project Allocation System in order to ease the task. This system will help reduce the major manual work of the faculties to allocate the project. Efficient allocation of the project will be carried out using this system.

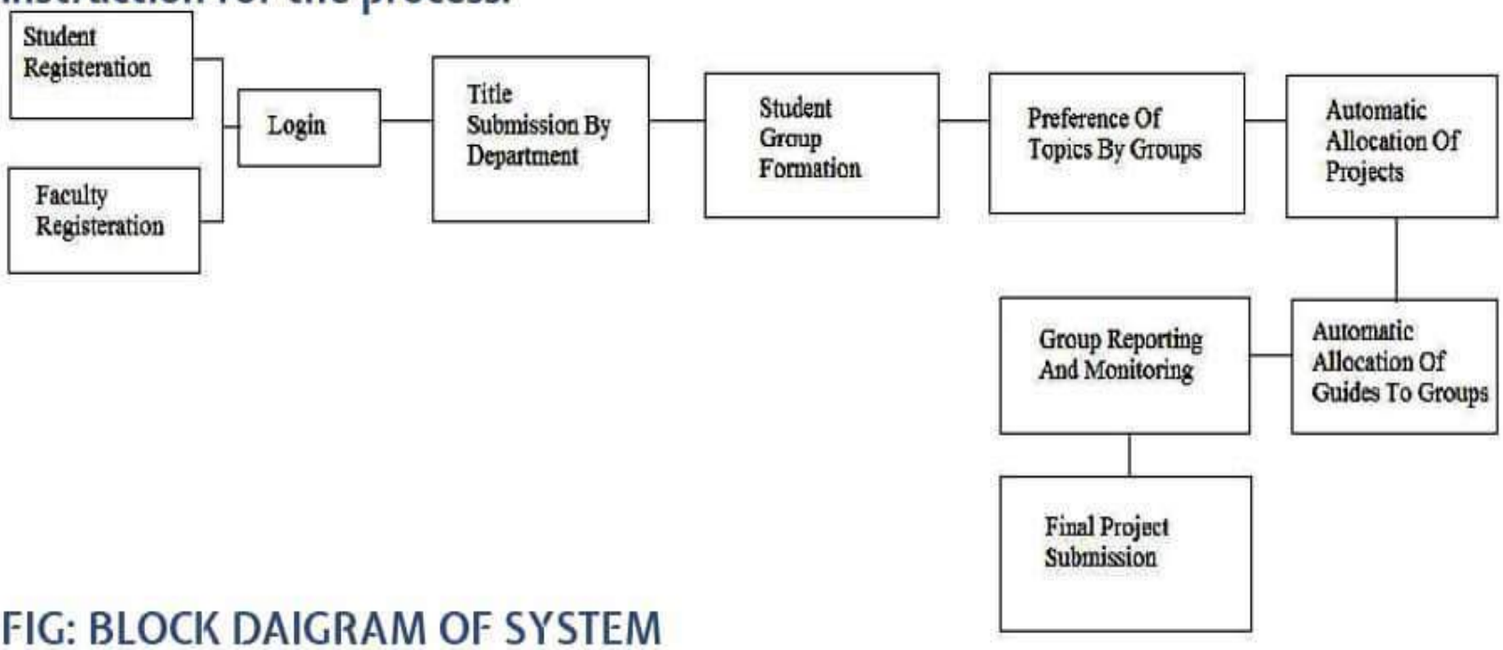

FIG: BLOCK DAIGRAM OF SYSTEM

CONCLUSION:

Automatic Project Allocation System will be allocating the title of the project automatically according to the preferences given by the groups on the basis of parameters decided.Project Allocation system can be used by organizations to make the entire process online.The automatic project allocation of the project will be decided on certain parameters like attendance, marks, certification, seminars and various courses.This project works automatically, so as to reduce the manual work of the faculty in the college.Once the data is entered according to the parameter then, the project is automatically allocated to the particular group.As the entire job manually become tedious and time consuming, so we have decided to create an automatic project allocation system.

. The planning of the project starts with the software models and its breakdown structure. We have also considered the feasibility study of the project. Efficient allocation of the project will be carried out using this system. All these conclusion were drawn according to the results derived from this process.

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ARTICLES

INTERNET OF THINGS

Reality is beginning to bite the Internet of Things (IoT). Though everyone knows managing data will be a problem once the IoT is up and running at full scale, few have really considered the potential data storage problems.

The Problem with Data

Where is all the data provided by those processors going to be stored and what are the problems around them?

It is a very practical and real problem. After all, if enterprises are to get the bountiful insights into customer activity like the IoT promises, they are required to keep all that information somewhere while it is being analyzed. IoT deployments will generate large quantities of data that need to be processed and analyzed in real time. Processing large quantities of IoT data in real time will increase as a proportion of workloads of data centers, leaving providers facing new security, capacity and analytics challenges."

Connecting Remote Assets

The problem lies in the nature of the IoT itself. It will connect remote devices and systems and provide a data stream between devices and decentralized management systems. The data or even the devices will be incorporated into existing organizational processes to provide information on the location, status, activity and functionality of those systems, as well as information about the people who own and operate them.

The amount and type of information differs than other sets of big data that comes from social media, for example, in the following ways:

It tends to arrive as a steady stream and at a steady pace, although it can arrive in batches like test logs that can be processed and passed on

straight away

It comes in very large quantities and accumulates very fast

The real value can only be uncovered using analytics

It is rarely used for production purposes

It is deleted very quickly, unless it is needed for compliance reasons.

The IoT Data Challenge

The technologies to address the big data challenge already exist, like Hadoop or NoSQL, providing horizontal scalability, high capacity and parallel processing at prices that make them affordable and economical.

For the moment, though IT departments in enterprises have not had to deal with IoT data as a unique dataset in its own right. For the moment at least, the first sets of what will make up IoT data are arriving in the storage layer in the same way other unstructured data does. The result is that traditional storage architecture and management software can treat IoT data the same way as they treat other unstructured data. However, this is all changing rapidly.

The enormous number of devices, coupled with the sheer volume, velocity and structure of IoT data, creates challenges, particularly in the areas of security, data, storage management, servers and the data center network, as real-time business processes are at stake.

IoT is identified with the following challenges:

1. Security: If the digitalization and automation of millions of devices will create a whole new security landscape as enterprises attempt to protect themselves, it will also create new opportunities for operational technology security providers. The industry-specific security platforms are being developed for specialist areas like industrialized systems,

medical equipment, and air & defense sectors, in many cases it is being integrated into the platforms developed by equipment providers for those industries. Such solutions are aimed at securing various aspects of specific devices, such as smart meters, or focusing on tackling platform-specific vulnerabilities.

2. Enterprises: There is a need for significant security challenges from the increasing amount of data with the myriad of devices increasing security complexity. This, in turn it will have an impact on availability requirements, which are also expected to increase, putting real-time business processes at risk.

3. Consumer Privacy: The challenge of securing personal data of individuals as the consumer goods they use become increasingly digitized. The issues around metering equipment and digitalized automobiles are drastically increasing. This is particularly challenging as the information generated by IoT is a key to bringing better services and the management of such devices. Security will have to be integrated as part of IoT infrastructure.

4. Data: The impact of IoT on storage is two-pronged in types of data to be stored: personal data (consumer-driven) and big data (enterprise-driven). The use in key verticals such as healthcare and financial services, big data is transforming how and why companies collect and store data.

IT administrators that are already tasked with keeping the storage centers running, are required to figure out mechanism to store, protect and make all the incoming data accessible. Managing them, however, is an entirely different problem.

5. Storage Management: However, even if the capacity is available now, there will be further demands made on storage and one that will have too be addressed as the need is to access this information becomes more important. Businesses will have weigh up the economics of storage against the value of IoT information.

6. Server Technologies: The impact of IoT on the server market will be largely focused on increased investment in key vertical industries and organizations related to those industries where IoT can be profitable, or add significant value. The organizations that manage and consume data collected from a huge array of devices will require additional compute capacity and may well increase server budgets if there is a business case for it.

7. Data Center Network: Existing data center WAN (Wide Area Network) links have been built for moderate-bandwidth requirements created by our current use of technology. However, as the amount of data being transferred is set to increase dramatically, the need for expanded bandwidth grows.

The result of all this, the research points out, is that because of the scale of the data being created it will no longer be economically feasible to store data at a single location.

The Implications for Enterprises

This flies in the face of a trend in recent years to centralize applications in a single center to reduce costs and enhance security. The result is that enterprises will be forced to aggregate data to multiple distributed data centers where processing of that data can take place. This implies a re-architecturing of the systems that are managing data as well as

2. How do devices communicate with each other?

The issue of naming evokes an even more important question: will devices even offer services that would require contacting them in the first place? A common model now requires devices to be clients that rely on the manufacturer's cloud-based servers to function. For example, Internet-enabled thermostat and the app on my phone that controls it don't communicate directly, peer to peer. Instead, each communicates independently with the cloud and rendezvous there. In other words, my thermostat doesn't need a name because it offers no services -- it's a client and only needs to know how to phone home to the cloud.

3. How are devices tracked and monitored?

The commercial applications of IoT are both wide and deep. Obviously IoT is more than just devices at rest; there are also wearables, implants, cars, and flying devices like drones. Virtually every machine that operates in every market and sector can be connected to the Internet. How do we track these devices, ensuring these billions of "things" are up? What will be best practices for monitoring for hijacks or outages? There are also privacy issues around tracking and monitoring that will likely dominate the discussion as these technologies proliferate.

4. How is performance measured and optimized?

Not only is the number of connected devices growing, but also the amount of data that they send. An article in Telematics Wire predicts that by 2017, four out of five cars will have an Internet connection and send 25

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GB of data to the cloud per hour. (Any network engineer will tell you that data transferred eventually expands to fill all capacity.) These devices will become an increasing stress on the network. How will companies and consumers ensure they're getting the best performance? How will device makers ensure the performance of their devices is optimized?

5. How is security and privacy safeguarded across billions of connected things?

Every device that uses electricity gathering data and connected to the Internet -- what could go wrong? The security and privacy issues surrounding IoT are so immense that they're almost overwhelming.

This topic is huge, but one aspect to highlight relates to the monitoring theme of the previous items -- at a minimum, we need to know when a security incident is occurring. Big data tools can help here to alert when attacks are potentially happening or are in progress. We also need monitoring systems to ensure threats are addressed in real time. What will these tools and systems look like, and who can step up to help fill this demand?

6. How will these devices be maintained?

Maintenance is a critical issue to understand as billions of new devices flood the Internet. We all know that unmaintained computers spew all manner of stuff onto the Internet, and most of those have an operating system that is maintained by someone. In contrast, many IoT vendors have already gone out of business, and their devices may well be full of bugs that nobody will ever be able to fix. What does that do to the Internet's ability to deal with malicious actors? And how will performance and optimization issues across the Internet be identified and resolved in

such a robust and fast-changing environment?

The number of devices connected to the Internet will only increase faster as more and more objects become Internet-enabled.

Let's be sure we think about some of these fundamental issues such as a billion refrigerators start telling us to buy milk on the way home, that where IoT will help common man for use of technology.

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KNOWLEDGE

MANAGEMENT

Knowledge Management has its roots in organizational learning and innovation. Successful managers have used intellectual assets and recognized their value. Forrester Research, IBM and Merill Lynch estimate that 85 percent of a company's knowledge assets are not present in relational databases but are dispersed in e-mail, Word documents, spreadsheets and presentations on individual computers in an organization.

The application of information technology tools to facilitate the creation, storage, transfer and application of previously un-codifiable organizational knowledge is a new and major initiative in organizations.

Knowledge management (KM) is a process that helps organizations identify, select, organize, disseminate, and transfer important information and expertise that are part of the organization's memory and that typically reside within the organization in an unstructured manner.

This structuring of knowledge enables effective and efficient problem solving, dynamic learning, strategic planning and decision making. An organization can bring its entire organizational memory and knowledge to bear upon any problem anywhere in the world and at any time.

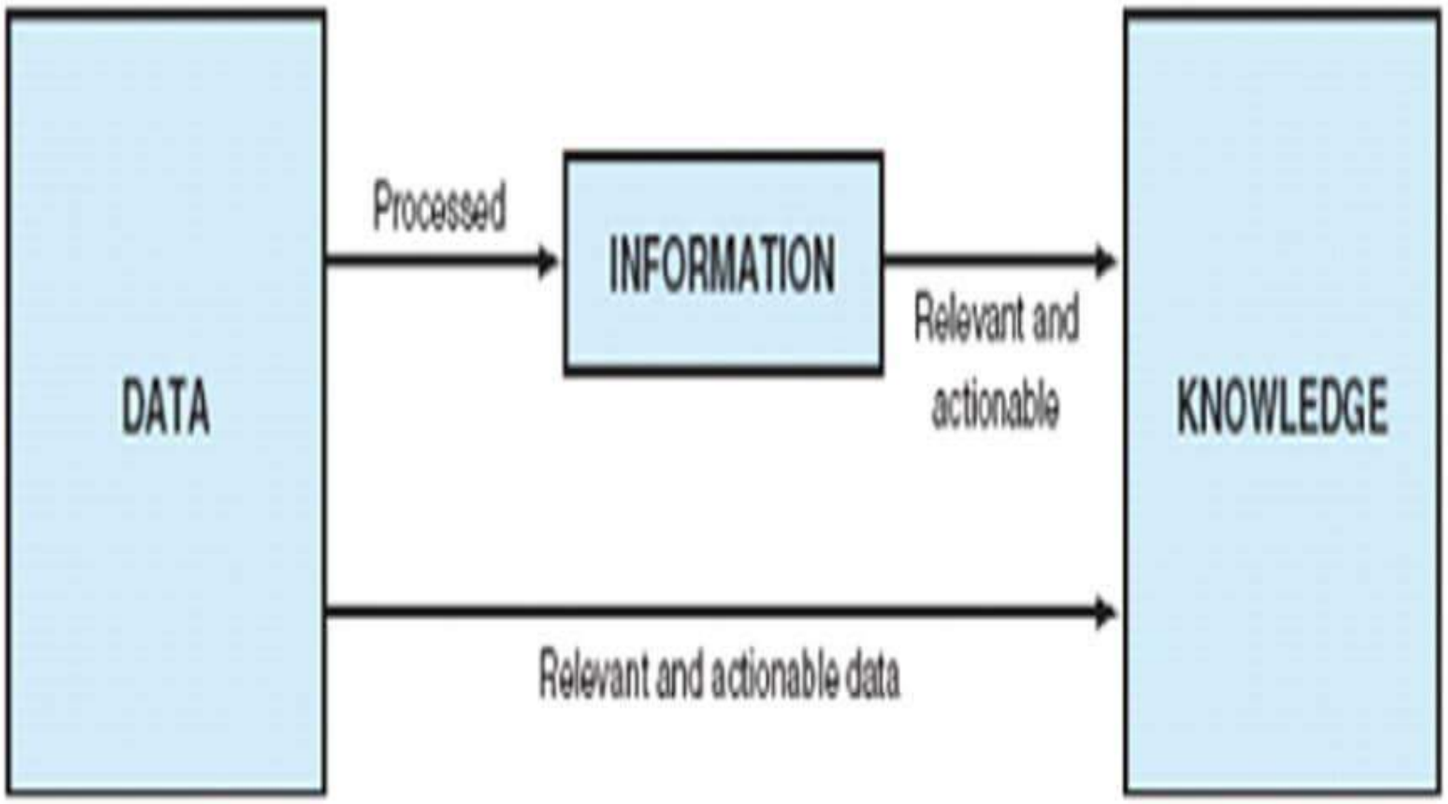
Difference between Data, Information and Knowledge:

Data is a collection of facts, measurements and statistics. Data is unorganized and in the raw form.

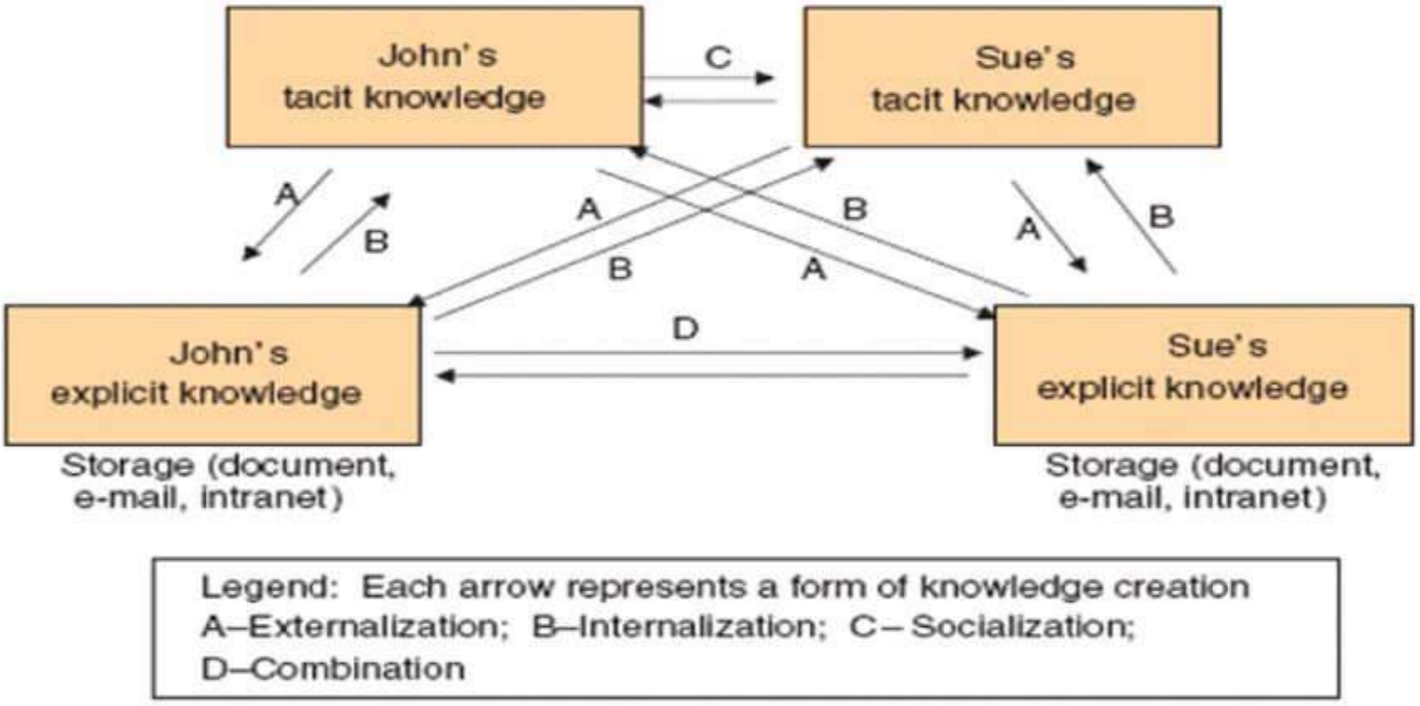
Information on the other hand is organized or processed data that are timely and accurate.

Knowledge is information that is contextual, relevant and actionable.

For example, a map giving detailed driving directions from one location to another is considered "data". An up-to-the-minute traffic bulletin along the highway that indicates a traffic slowdown due to construction is considered "information". Awareness of an alternative, back-roads route is considered "knowledge".



Types of Knowledge



Socialization: Socialization mode refers to the conversion of tacit knowledge to new tacit knowledge through social interactions and shared experience.

Combination: Combination mode refers to the creation of new explicit knowledge by merging, categorizing, reclassifying, and synthesizing existing explicit knowledge

Externalization: Externalization refers to converting tacit knowledge to new explicit knowledge

Internalization: Internalization refers to the creation of new tacit knowledge from explicit knowledge.

Characteristics of knowledge:

Knowledge has the following characteristics that differentiate it from an organization's other assets:

Extraordinary leverage and increasing returns: Knowledge is not subject to diminishing returns. When it is used, it is not consumed. Its consumers can add to it, thus increasing its value.

Fragmentation, leakage, and the need to refresh: As knowledge grows, it branches and fragments. Knowledge is dynamic; it is information in action. Thus, an organization most continually refreshes its knowledge base to maintain it as a source of competitive advantage.

Uncertain value: It is difficult to estimate the impact of an investment in knowledge. There are too many intangible aspects.

Uncertain value of sharing: Similarly, it is difficult to estimate the value of sharing the knowledge, or even who will benefit most.

Rooted in time: The utility and validity of knowledge may vary with time; hence the immediacy, age, perishability, and volatility of knowledge are important attributes.

Explicit and Tacit knowledge:

Explicit knowledge: Explicit knowledge deals with more objective, rational, and technical knowledge (data, policies, procedures, software, documents, etc.). Explicit knowledge includes the policies, procedural guides, white papers, reports, and the information technology infrastructure. It is the knowledge that has been codified in a form that can be distributed to others or transformed into a process or strategy without requiring interpersonal interaction. Explicit knowledge is also known as leaky knowledge because of the ease with which it can leave an

individual, document, or the organization, after it has been documented.

Tacit knowledge: Tacit knowledge is the cumulative store of the experiences, mental maps, insights, acumen, expertise, know-how, trade secrets, skills sets and learning that are past and present experiences of the organization's people, processes, and values.

Tacit knowledge is also known as embedded knowledge, it is usually either localized within the brain of an individual or embedded in the group interactions within a department or a branch office. Tacit knowledge typically involves expertise or high skill levels. It is generally slow and costly to transfer and can be plagued by ambiguity.

Tacit knowledge also has been called sticky knowledge because it may be relatively difficult to pull it away from its source.

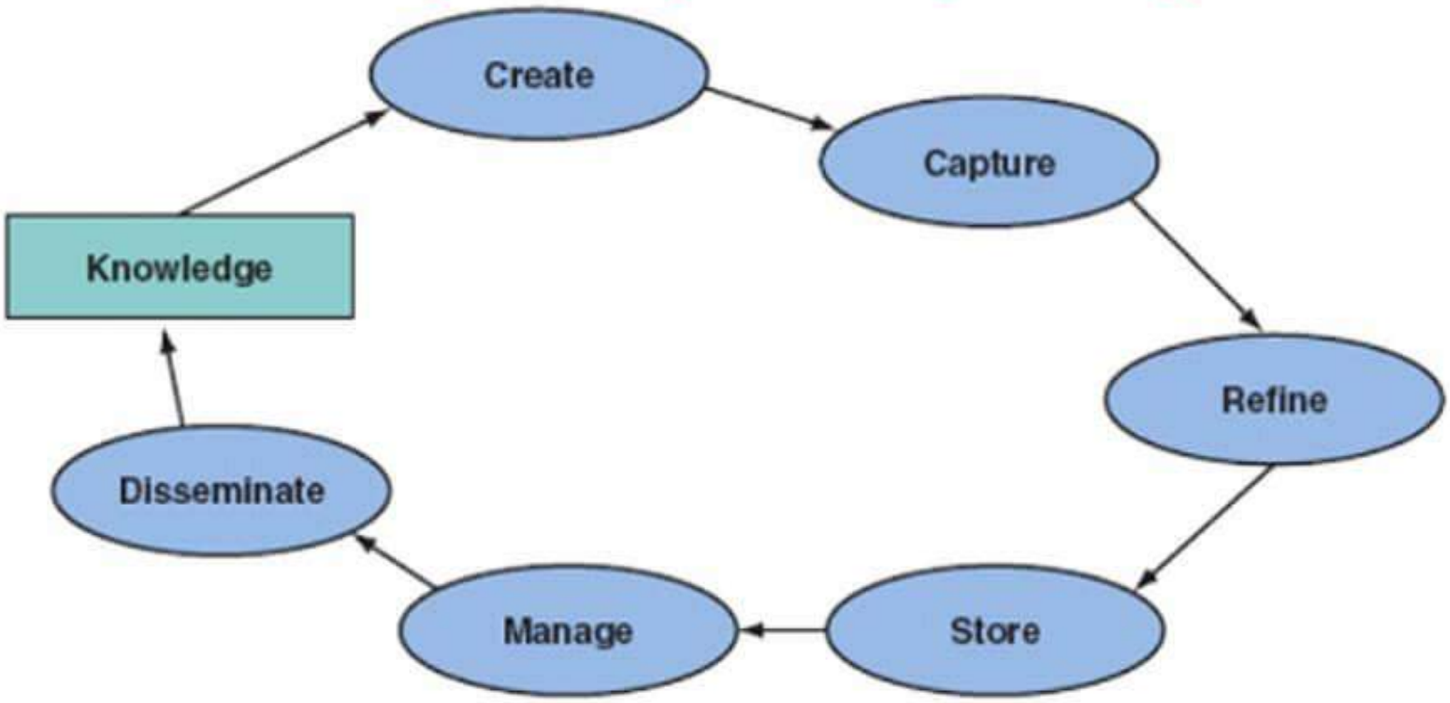
Need for Knowledge Management Systems :

Historically, MIS has focused on capturing, storing, managing, and reporting explicit knowledge. Organizations recognize the need to integrate both explicit and tacit knowledge in formal information systems.

Knowledge management systems (KMSs) refers to the use of modern information technologies (e.g. the Internet, intranets, extranets, Lotus-Notes, software filters, agents, data warehouses) to systematize, enhance and expedite intra- and inter-firm knowledge management .

KMSs are intended to help an organization cope with turnover, rapid change, and downsizing by making the expertise of the organization's human capital widely accessible.

Knowledge Management System Cycle



The Knowledge Management System cycle has following six steps:

Create knowledge: Knowledge is created as people determine new ways of doing things or develop know-how. Sometimes external knowledge is brought in.

Capture knowledge: New knowledge must be identified as valuable and be represented in a reasonable way.

Refine knowledge: New knowledge must be placed in context so that it is actionable. This is where human insights (tacit qualities) must be captured along

Store knowledge: Useful knowledge must then be stored in a reasonable format in a knowledge repository so that others in the organization can access it.

Manage knowledge: Like a library, the knowledge must be kept current. It must be reviewed to verify that it is relevant and accurate.

Disseminate knowledge: Knowledge must be made available in a useful format to anyone in the organization who needs it, anywhere and anytime.

AUTHOR
-Aaditya A. Desai

Assistant Professior
IT

TOWARDS SOFTWARE DEVELOPMENT

AGILE APPROACH

Agile Approach towards software development

The mechanism which attracts me towards agile approach for development of software product is one of the characteristic of this methodology: "Drawing the customer onto the team; eliminating the "us and them" attitude&Rapid, incremental delivery of software product thereby including easy adaptation to changes.

This article is a basic introduction to agile software development methodologies.

· The " Manifesto for Agile Software development: We are uncovering better ways of developing software by doing it and helping others do it" Through this work we have come to value:

· Individuals and interactions over processes and tools
· Working software over comprehensive documentation
· Customer collaboration over contract negotiation
· Responding to change over following a plan

So the Manifesto for Agile Software development and thestated "Principles behind the Agile Manifesto" are generally considered to be representative of agile values.

The word "Agility" indicates quickness of action or understanding. Agility for a software development methodology is its facility to absorb change and its effects. So the question is changes in what? Changes primarily in requirements and its knock-on effect downstream.

Agile processes are people based rather than plan-based methods. The agile process forces the development team to focus on softwareproduct itself rather than design & documentation. This methodology believes in iterative method. Goal of agile approach is to deliver the working model of software quickly to the customer.

Scrum is one of the most mature and the best known agile processes. It allows us to rapidly and repeatedly inspect actual working software (every two weeks to one month) delivering the highest business value in the shortest time. This is done by setting the priorities self-management of team to determine the best way to deliver the highest priority features.

Core roles & terms used in scrum framework for managing the software development process:

Each individual iteration phase is termed as a sprint, Deliverable product is created during each sprint.

Product backlog: prioritized list of requirements that provides business values for the customer. Items can be added anytime.

Scrum meetings: are short (15 minutes) meetings held daily by the scrum team.

Scrum master:A team leader, maintains the processes.

Demos: delivering software increment to the customer.

Other Agile process models are:

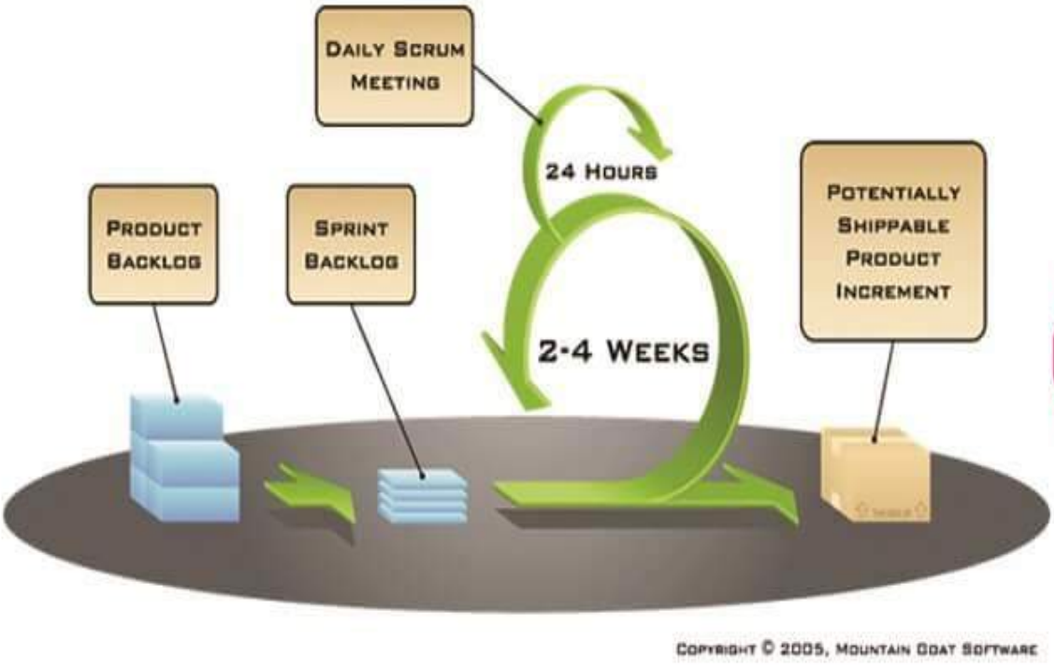
Extreme Programming (XP)

Adaptive Software Development (ASD)

Dynamic Systems Development Method (DSDM)

Crystal

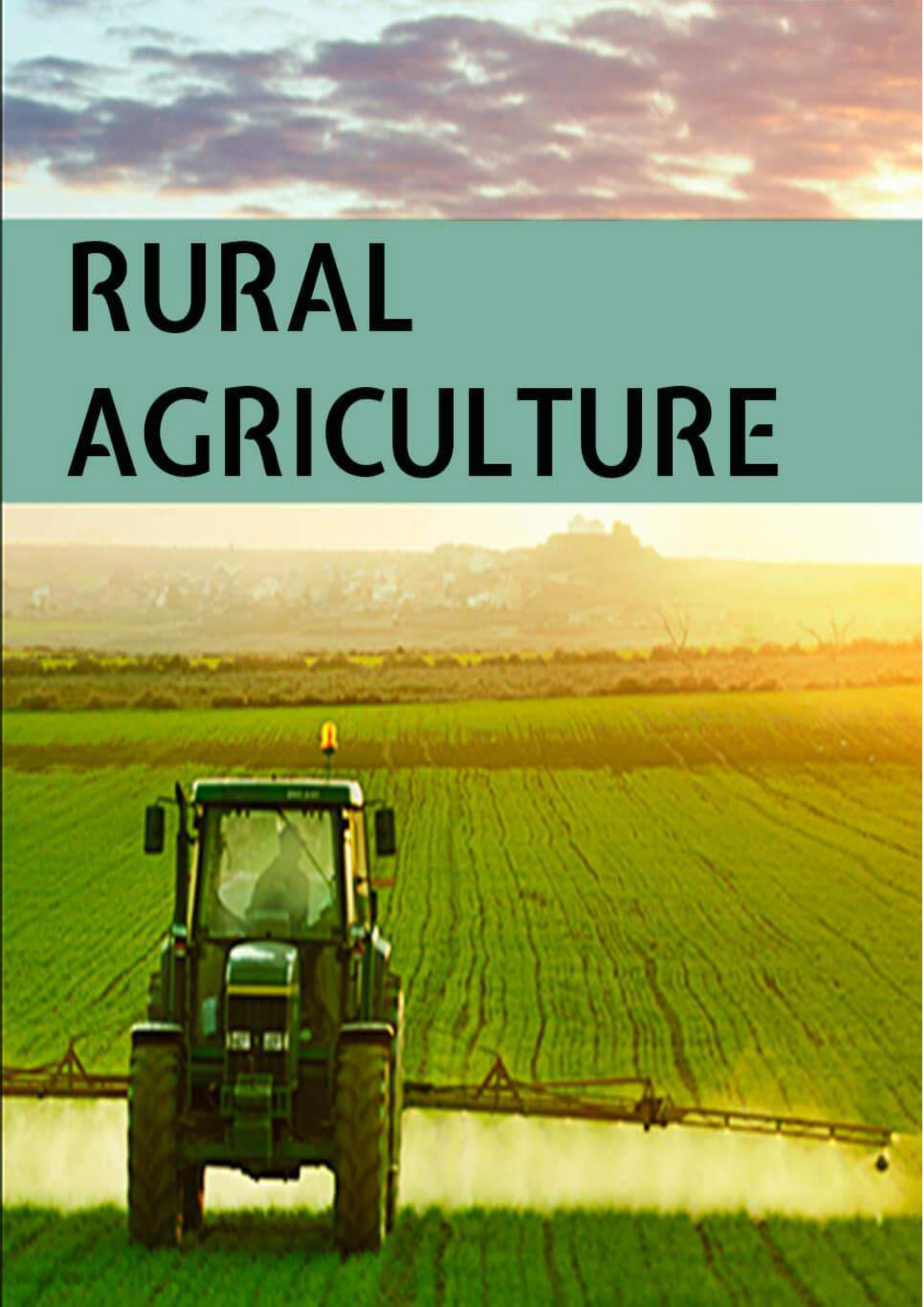
Feature Driven Development (FDD) etc...



So the conclusion is Agile methodology enables project's where the bussiness requirements, documentation is not considered very significant for the successfully development whereas it concentrates on delevering working models of software product in short span of time thereby adapting changes.

Mrs.
Purvi Sankhe
(Assitant
Profressior
-IT)

RURAL AGRICULTURE

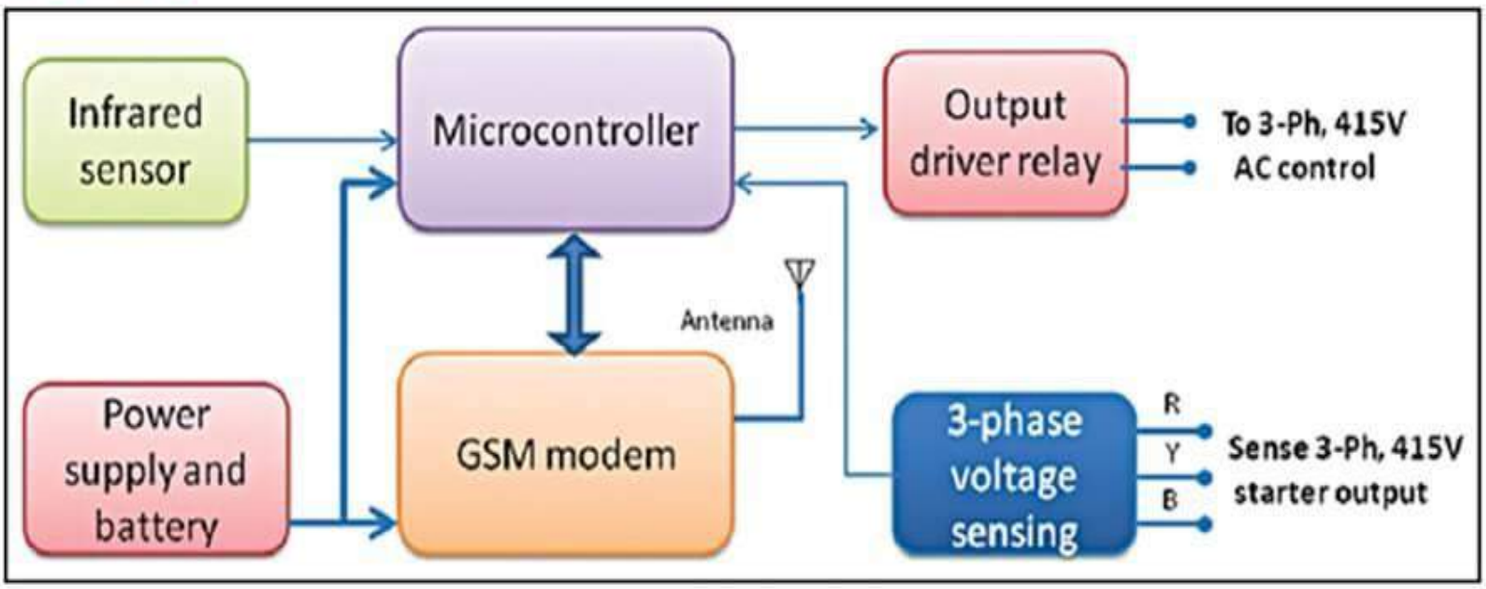


Rural agriculture : Can IT be a saviour ?

Technological innovation in farming has been happening since ages. From the hand held tools to the tractor to the harvesting machines . IoT is going to push this to the next level. Farmers in India have a long way to go in using these modern and smart farming technology but they have made a beginning.

In the Indian context farmers have just begun using their smart phones to remotely switch on the pumps at their remote farms. This helps them to avoid long travel through tough terrain to switch on the pumps at odd hours as the electric power supply is erratic in the rural areas.

The block diagram shown below is of a typical system used by indian manufacturers for enabling farmers to switch on or off the pumps remotely with their mobile phones.



Power requirement conditions for sensitive electronics goods are quite stringent. Care hasto been taken to ensure that the system works satisfactorily in extremely low, high and imbalanced voltage conditions as well.

Microcontroller and allied circuitry. Microcontroller being an intelligent device, it can help anyone easily optimise the system at very low cost. It intelligently replaces hardware logics built around diodes and transistors with simple software simulations.

Tone generator. Tone generator is also a low-cost astable mode clock wave generator built around IC 555. It is effectively used to deliver different tones using a single IC and multi-switching logics.

Driver stage and relay with isolation circuits. Driving the output relay requires special skills as it is really important to prevent the resetting of the microcontroller circuit when the system is doing a high-power application. Optical isolator circuits have been built around standard components available in the market.

Output sensing stage. It is important for the farmer to understand whether the pump is really on or off after sending the 'on' command. Many systems in the market provide a feedback from the motor-on relay as soon as it is activated by the microcontroller command. This is a virtual acknowledgment before the pump starts.

There is a possibility that due to low voltage or single phasing, auto switch does not start the pump and the farmer still gets the motor-on feedback. The system actually senses the output voltage of the starter and converts the signal into a digital form with the help of voltage converters. Hence, the farmer gets the motor-on SMS or call only after the pump has been actually started and has picked up speed.
Infrared sensing and processing stage. It uses a special infrared diode circuitry to sense the opening of the panel door and physical movement of a person standing in front of the panel. This allows the farmer to get an alert call when an unauthorised person opens the panel door.

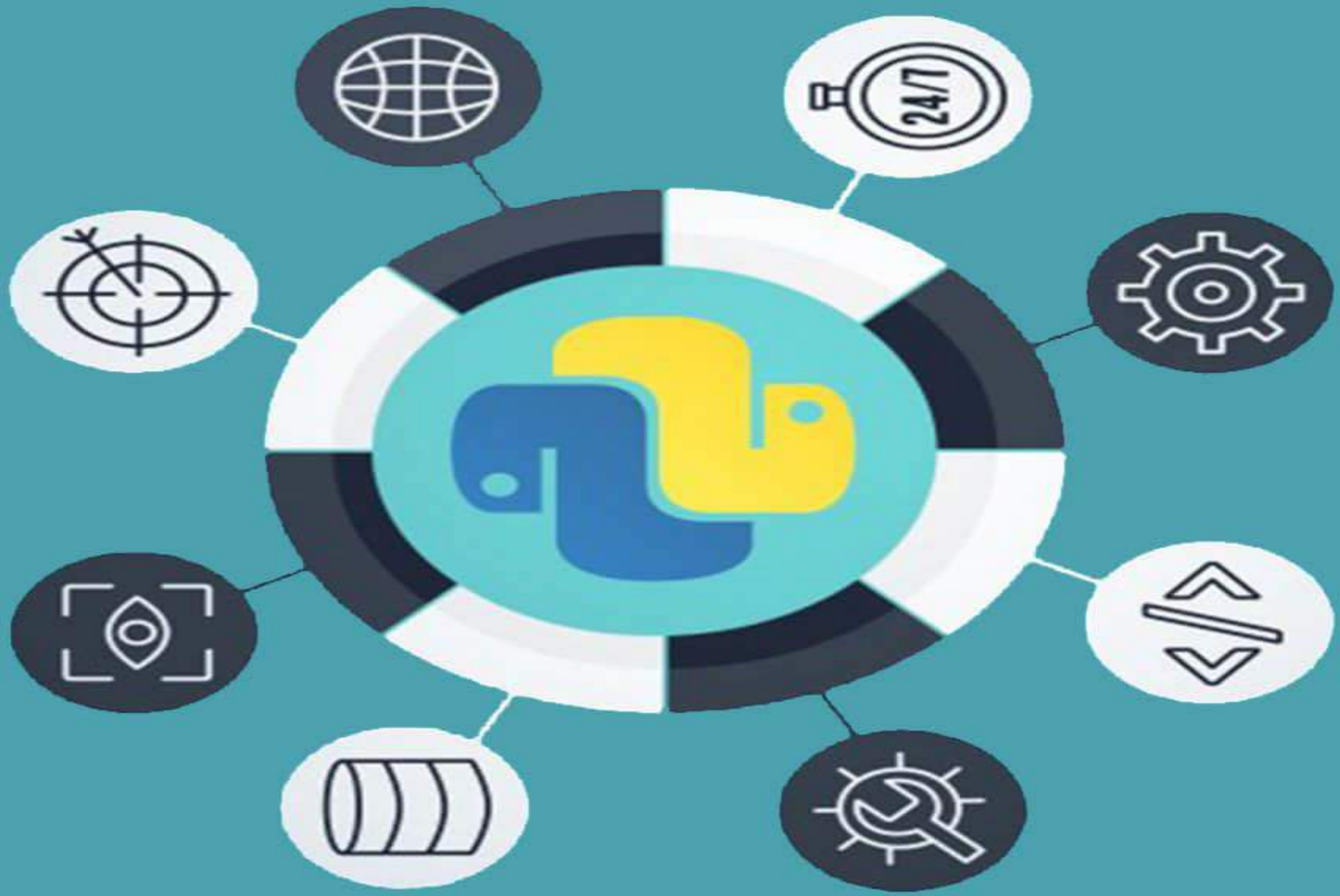
Antenna for GSM modem. As the whole system is installed inside a metal box, there is a strong need to boost the GSM signals with adequately matching antenna. Many GSM modems available in the market provide antenna by just winding a coil of 14/36 SWG wire without appropriate connectors. Due to this, 80 per cent of the transmitted and received signal power is wasted or leaked. To provide strong signals, irrespective of low GSM signals in the rural area, a 50-ohm matching antenna and circuitry is incorporated in the antenna stage.
Several manufacturers in India viz. Nano Ganesh, Kisan Raja are front runners in this area.

Farming in rural areas has enormous challenges accessibility, erratic power supply to name a few. The IoT offers a lot of hope for farmers with land in rural areas to remotely monitor soil moisture , pH level of soil, crop growth etc . , along with data from weather servicesusing artifical intelligence based analytics better decision making to operate smart connected irrigation equipment along with pesticide and fertilizer sprayers is a possibility.

The future of agriculture will be IoT, Farm drones and agricultural sensors which will enable collection of operational data from the farms and along with weather data , environmental, economic data etc.and use big data analytics tools for efficient farm management.

Dr.Bijith Marakarkandy (Associate Professor IT , Head Industry linkages and academic alliance)

PYTHON PROGRAMMING



Python is one of the most popular programming languages that we come across in the IT industry. The reason is simple yet very interesting, it is easy to learn, open-source and object-oriented programming language.

Python can be used broadly in a variety of applications, that maybe one of the major reason why it is used in IT companies like Google, Yahoo, IBM and various other companies like Disney and Nokia.

It was traditionally known that Python is a scripting language but gradually it also started supporting Web Development and Database Connectivity.

Some of the worldwide Python users are:

1.For web development: Yahoo groups, Google, Shopzilla

2.Games: Battlefield2, The Temple of Elemental Evil, Vampire

3.Graphics: Walt Disney feature Animation, Blender 3D

4.Scientific Knowledge: National Weather Service, NASA, Environmental Systems Research Institute

If so, How did the language "Python" evolve?

A certain person named, Guido Van Rossum developed the language "Python" in the early 1990s at National Institute of Mathematics and Computer Science, Netherlands.
The name "Python" was named after a circus show called Monty Python show.

Python derives its features from languages like Java, C++, ABC, C, Modula-3, Smalltalk, Algol-68, Unix shell and other various scripting languages.

The Philosophy of "Python"

The core philosophy of the language is summarized by the document "PEP 20 (The Zen of Python)", which includes aphorisms such as:

- Beautiful is better than ugly
- Explicit is better than implicit
- Simple is better than complex
- Complex is better than complicated
- Readability counts

Python is available under GNU General Public License-Free and open-source software.

AUTHOR
-Aaditya Desai, Assistant Professor, IT Dept.

Ok, now what are the features of "Python" language?

Python is High-level, Interpreted, Interactive and Object-Oriented Programming Language.

Features include:

- It can be called a beginners language
- It has an extensive standard library
- It provides cross platform compatibility
- It has an interactive mode
- It is portable and extendable
- It provides connectivity to databases and can be used for GUI programming
- It is scalable and has dynamic semantics
- Like Java, it has automatic garbage collection

DATA MINING

TECHNOLOGY

(From the ALUMNI)

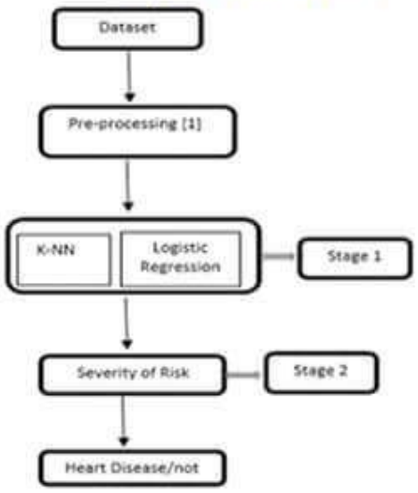
Cardiovascular diseases (CVD) are a set of irregularities of the heart. The number one root cause of death globally are cardiovascular diseases. Coronary heart disease in India, is very peculiar. The medical industry consists of lots of health care data, therefore data mining techniques are needed to determine hidden patterns of heart diseases. Data mining will guide doctors to select useful information from an extremely large dataset. Data mining techniques will assist doctors and patients to accomplish their diagnosis. Mining unknown patterns in Data mining is performed through techniques like classification and clustering. Data mining classification techniques like k-Nearest Neighbor (KNN) and Logistic Regression are analysed in this paper. In proposed research, preprocessing tasks comprises of data cleaning, data integration, data transformation, data reduction and data discretization processes. This paper has forecasted accuracy using a two stage classifier. Output of first stage classifier will predict whether a person has heart disease or not by using algorithms like k-Nearest Neighbor (KNN) and Logistic Regression algorithm. Second stage classifier will predict the severity of risk as low and high.

Cardiovascular disease is an immense unit for a range of diseases involving heart and blood vessels. The different types of cardiovascular diseases are Coronary heart disease, peripheral disease, cerebrovascular disease, rheumatic and congenital heart diseases. A large amount of data is available but people are not capable to extract the essential knowledge. Data mining will assist doctors to forecast the disease more quickly. According to the statistics, in the year 2015 there are 61.5 million cases of cardiovascular diseases.. A challenging effort in medical industry is

to produce effective treatments to patients and to determine the disease accurately. The challenge in data mining is to abstract patterns which are previously unknown. Data mining tasks are divided into two type's i.e. predictive and descriptive task. Predictive tasks covers classification technique and descriptive tasks covers clustering techniques. Various classification techniques in data mining are Decision Tree, Naïve Bayesian, Neural Network (NN), Support Vector Machine (SVM) and k-Nearest Neighbor (K-NN). Various clustering techniques are Apriori algorithm, Fuzzy C-means and K-means algorithm. Data pre-processing uses techniques like noise elimination, removing records with missing data, fill in default values and classification of features for decision making at distinct levels.

In proposed research, the data set of total 303 records with 13 attributes are obtained from machine learning repository of UCI then pre-processing techniques are applied The main objective is to predict heart disease in this research work by using risk factors like age, sex, chest pain type, exang, oldpeak, resting blood sugar, cholesterol, ecg, thalach, slope, fasting blood sugar, number of major vessels colored by flourosopy and thal. The data mining classification techniques like K-Nearest Neighbor (KNN) and Logistic Regression are used in this paper.

Figure 1 describes the proposed system flow.



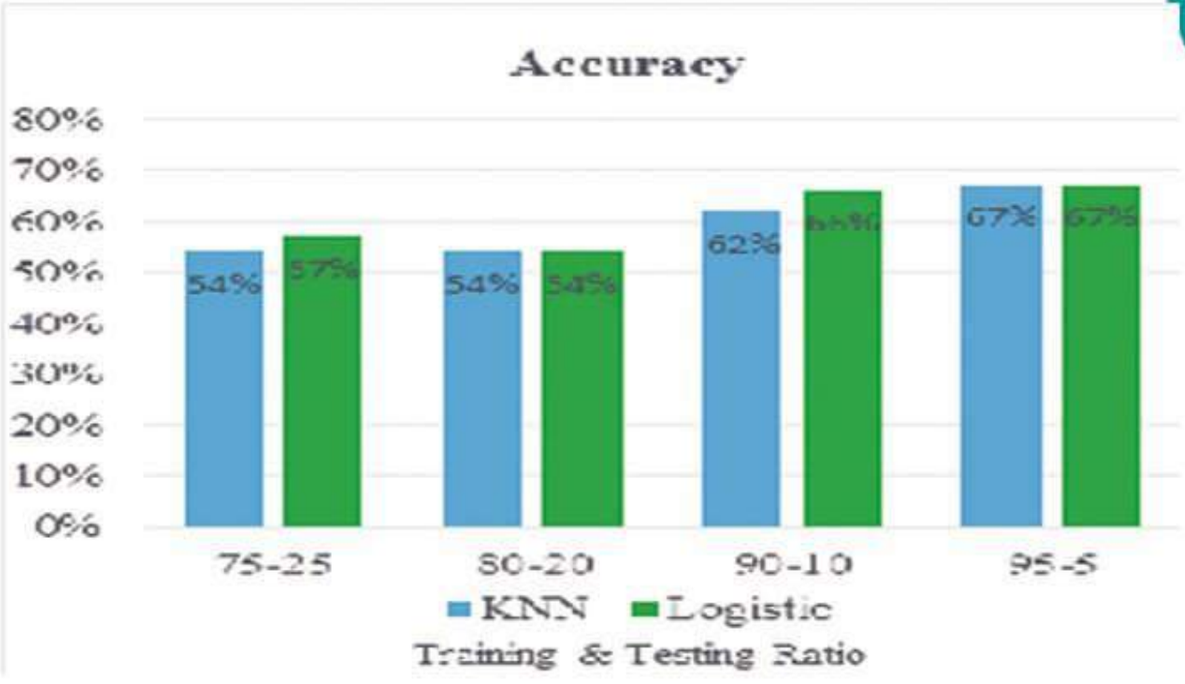
To discover unidentified patterns from the data various mining techniques are utilized and data analysis is implemented by data mining techniques like k-Nearest Neighbor (kNN) & Logistic Regression Algorithm. The k-Nearest Neighbor (kNN) algorithm is a non-parametric process used for classification. k-NN algorithm forecasts both qualitative & quantitative features. k-NN algorithm is very time-consuming because it explores through all the dataset looking for the largest identical examples. Logistic Regression predicts the result of a set of features on a binary response variable and also classifies observations by evaluating the possibility that a conclusion is in a specific category. Logistic regression is robust and needs huge sample size to produce stable conclusions.

Table 1: Results of accuracy of k-NN & Logistic Regression approach for different training and testing data.

Train:Test / Algorithm	75:25	80:20	90:10	95:5
KNN	54%	54%	62%	Vertic
Logistic Regression	57%	54%	66%	67%

Green and blue colour in the graph shows accuracy of k-NN & Logistic Regression algorithm respectively with percentages of accuracy mentioned in the graph with dataset of 75:25, 80:20, 90:10 and 95:5 as training and testing ratio.

Graph of k-NN & Logistic Regression approach



AUTHOR
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M Tech (Computer Engg.) NMIMS University Mumbai, India

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From The INDUSTRY

Technology is changing day-by-day. Who thought of a smartphone with all the day-to-day functionalities in a pocket few years back? All this is because of the hardware-level advancements and thus the performance of the services running on that hardware. The basic hardware is same from the evolution but the hardware got integrated with lots of sensors and external supporting circuits which added the performance of the overall system. Utilizing performance of this powerful device is done by using Software that run on this hardware. Using SaaS frameworks and cloud, the overall data got closely related to the system and syncs on-the-go across multiple devices. Many such technologies evolved and new technologies came into picture. This is how the technologicalrevolution is taking place and here are some of them we heard of, recently.

- **Magic Leap:** A startup is betting more than half a billion dollars that will dazzle you with its approach to creating 3-D imagery
- **Nano architecture:** A Caltech scientist creates tinny lattices with enormous potential
- **Car-to-Car Communication:** A simple wireless technology promises to make driving much safer.
- **Project Loon:** Billions of people could get online for the first time, thanks to helium balloons that Google will soon send over many places cell towers don't reach

- **Liquid Biopsy:** Fast DNA-sequencing machines are leading to simple blood tests for cancer
- **Apple Pay:** A clever combination of technologies makes it faster and more secure to buy things with a wave of your phone.
- **Megascale Desalination:** The world's largest and cheapest reverse-osmosis desalination plant is up and running in Israel
- **Brain Organoids:** A new method for growing human brain cells could unlock the mysteries of dementia, mental illness and other neurological disorders.
- **Supercharged Photosynthesis:** Advanced genetic tools could help boost crop yields and feed millions of people.
- **Internet of DNA:** A global network of millions of genomes could be medicine's next great advance.

Along with all these advancements in various sector, Internet of things and the SMACI framework along with cloud cmputing is creating wonders. Artificial intelligence, Augmented Reality, Virtual Reality and 3D Hologram is no more limited to Sci-fi movies.

Major boost is by the App Revolution which is creating wonders like booking a cab, ordering food, etc. All this Software-as-a-System (SaaS) which is rightly called as, is automating the overall industry and innovation rate going high giving a boom to the IT sector.

Isn't it interesting to know how things are done? Oh we don't even have our basics clear yet!

By
Yash Badani,
TE-Comps
(RGIT,
Andheri)

Twitte@Yash
AbhayBadani

Afterall, our national game is HOCKEY :D

From The Parent

Since it is the Olympics days going on,I wanted to clear people about there misconception of hockey as our national game? .India won six consecutive hockey gold medals at Olympics between 1928 and 1956. It is our national game and that's why whenever the men in blue show their dribbling skill on the green turf at a Games venue, out heart goes out to them. Not just the sport buffs but students in every school have at some point of time learnt these facts. Now, it's time, however for some unlearning.

Hockey is not the national game of the country! And the revelation has come straight from the Union ministry of youth affairs. The ministry says that country does not have a national game as no game has been notified as such.

The response from the ministry has come on an RTI query from a ten-year-old girl, AishwaryaParashar, who has grown learning in school books that hockey is the national game of the country and was the first non-European team to be a part of the Indian Hockey Federation. The Indian men's field hockey team is the most successful team in Olympic history with 8 gold, 1 silver, and 2 bronze medals.

"I wanted to know when did the government issue an order to announce the country's national game," Aishwarya told TOI. And, the candid response from the ministry has already left everybody - she herself, her parents and teachers confused.

"I learnt it from my text books that hockey is our national game," she added. The ministry, on the other hand, said it has not found any official order or notification which calls hockey the national game." I haven't come across any order or notification

in the ministry saying hockey is the national game," said SPS Tomar, under secretary, Union ministry of youth affairs and sports, while responding to the query. "It's known to be a national game in general parlance," Tomar had added.

The ministry has sports disciplines put into different categories. Hockey is one of the priority disciplines but it is not a national game. The response, however, contradicts GoI's own announcement, made on its official website (india.gov.in).

The website does not only call hockey the national game but also talks about India's glorious 'hockey' history. Not only this, the response has left hockey players fuming. "They should then tell us which is the national game and show us the notification which says hockey is not a national game," says Olympian Sujit Kumar.

Since 1928, when India played hockey in Olympics in Amsterdam under the Union Jack, it has been the country's national game. "Instead of talking nonsense, they (govt) should do something to improve the game and work for betterment of hockey players," said another Olympian Syed Ali.

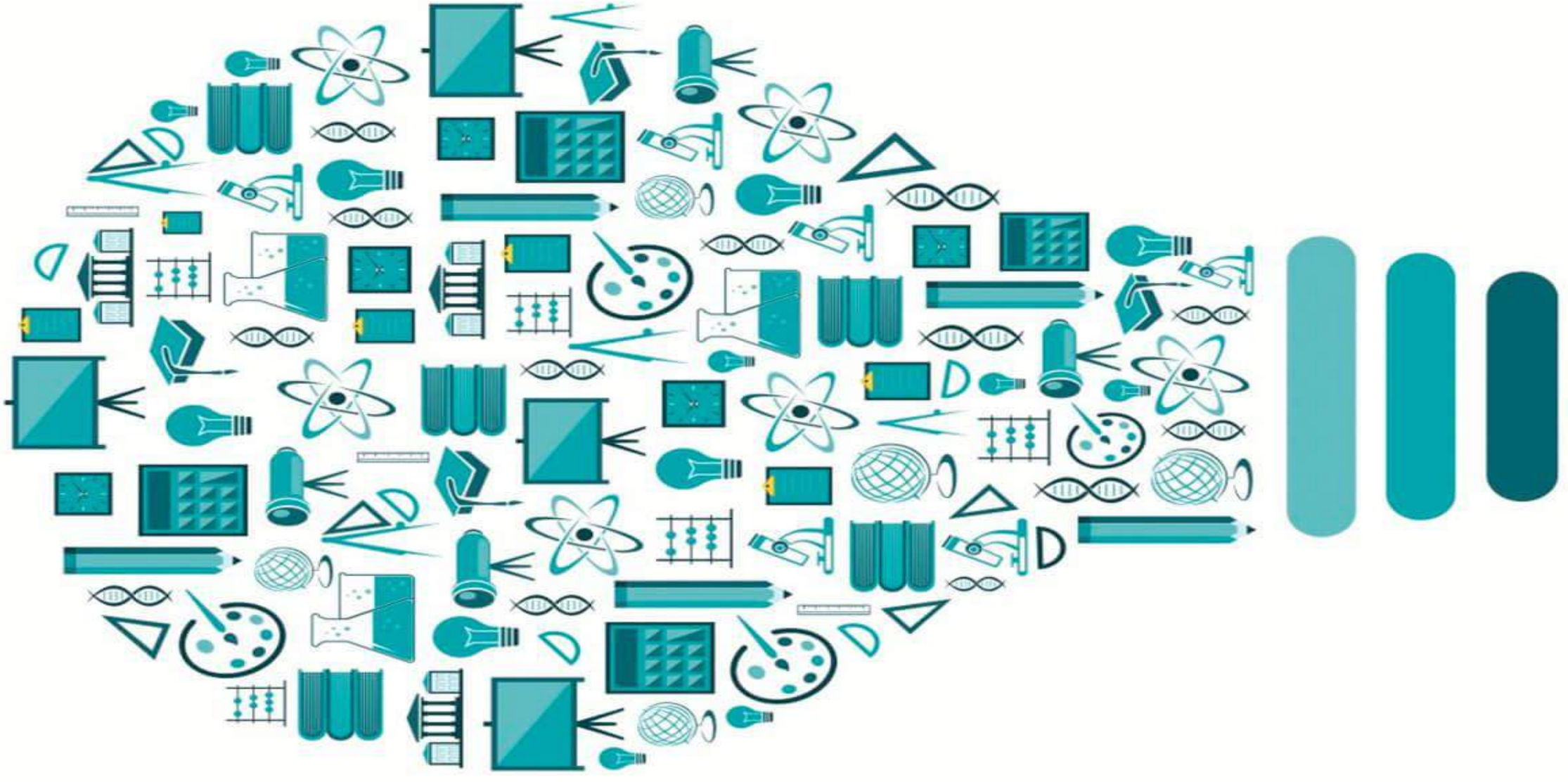
It was when the performance of the hockey team deteriorated, in 1990s, that ministry did consider taking away from hockey the status of the national game but it never happened. "I have played three Olympics and given 14 years to the game, I have always known it to be a national game," says Mohammad Shahid, former Indian captain and one of the greatest dribblers the country has produced.

Composed by

– Reeta Dutta

(Mother Of Ayush Dutta TE IT A)

TEACHING & LEARNING



"You can take a horse to the well, but you cannot make it drink."

A student can be forced to study at a stretch but whether he learns or not is totally upto him. No one can force a brain to function if it's not one's own. This doesn't mean that the entire burden is of the student only, it also requires a great teacher to develop the learning habits of the student.

A great teacher will keep the students wanting to come to school just to see what interesting things they will explore and discover each day. We call this inquiry.

The philosophy that supports such a great teacher is simple. Students learn best when they are in control of their learning. Students must do the heavy lifting of learning and nothing the teacher can say or do will change that. Real learning requires doing, not listening, or observing only. Yet what do we find in every public school and university? Teachers talking, talking and talking while students listen, daydream and doze. We call this lecture.

Great teachers stack the deck so that students have a reason to learn and in the process can't help but learn mainly by teaching themselves. This knowledge then becomes permanent and cherished rather than illusory and irrelevant.

Does a good grade always mean a student has learned the material? And does a bad grade mean a student just needs to study more? How are students supposed to go ahead with the learning?

The first step toward better learning is to simply change your study environment from time to

time. Rather than sitting at your desk or the kitchen table studying for hours, finding some new scenery will create new associations in your brain and make it easier to recall information later.

Studies have shown that for a student to learn and retain information like historical events, vocabulary words or science definitions, it's best to review the information one to two days after first studying it. One theory is that the brain actually pays less attention during short learning intervals. So repeating the information over a longer interval — say a few days or a week later, rather than in rapid succession — sends a stronger signal to the brain that it needs to retain the information.

And last but not the least, sleeping is the finisher of learning. The brain is ready to process and categorize and solidify what you've been studying. Once you get tired, your brain is saying it's had enough.

Composed by - Savita Mehra

(Mother Of Tanishq Mehra TE IT A)

ACHIEVEMENTS

Toppers

9.7

FE IT-A

Yugnesh Murugesan

FE IT-B

Satpal Singh

9.19

9.79

SE IT-A

Swapnil Jaiswal

SE IT-B

Kiran Yadav

10

9.77

TE IT-A

Nishita Desai

TE IT-B

Shweta Mishra

9.69

8.67

BE IT-A

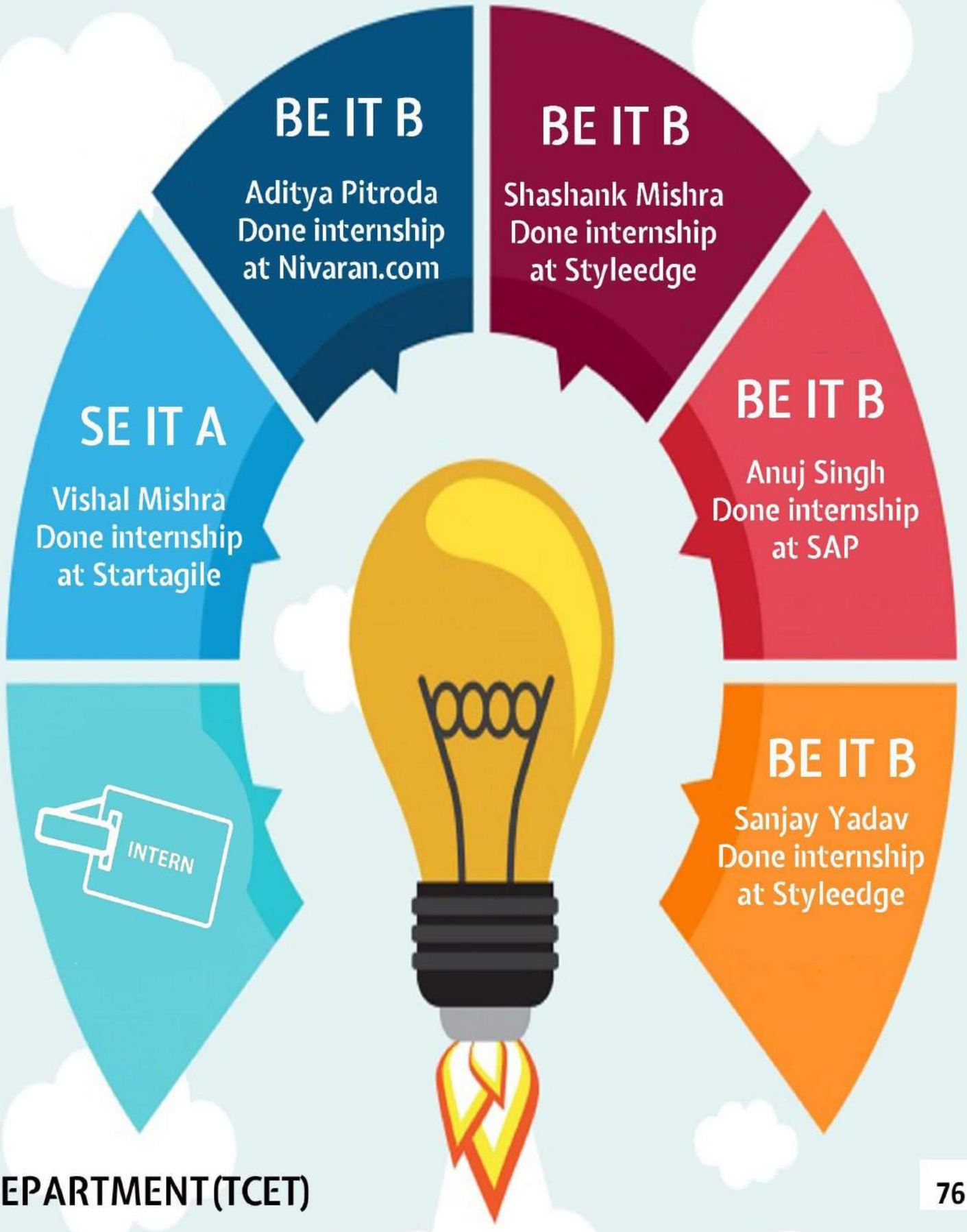
Rutika Harsh

BE IT-B

Divya Sharma

9.19

Internship


BE IT B
Aditya Pitroda
Done internship
at Nivaran.com
BE IT B
Shashank Mishra
Done internship
at Styleedge
SE IT A
Vishal Mishra
Done internship
at Startagile
BE IT B
Anuj Singh
Done internship
at SAP
INTERN
BE IT B
Sanjay Yadav
Done internship
at Styleedge

SPORTS

Gaurav Gupta SE IT A

- Won Bronze Medal in 1st Nation Karate-Do Championship
- Bronze medal in karate BMC Mayor Cup Budo Tournament, 2015-16.
- Bronze Medal in Kick Boxing at Mumbai BMC Mayor Cup, 2016.

Gaurav Gupta SE IT A

- Won Gold Medal in Third Maharashtra State Level MumbaiTaekwondo Championship 2016.
- Won Gold Medal in Karate Mumbai second National Karate Championship 2016

Yash Kanodia SE IT A

- Won runner up prize in Table Tennis, 2016 Intra sports

Atul Mishra TE IT B

- Runner-up in carrom competition of intra college festival

Harsh Singh BE IT B

- (Caption of TCET cricket team) won First prize at Mumbai University cricket championship 2016

Suyash Yadav BE IT B

- Won second prize in football sports at inertia and Father Angnal College (Vashi)

Shubham Sharma BE IT B

- Won second prize in football sports at inertia and Father Angnal College (Vashi) .

CO-CURRICULAR ACTIVITIES

Varun Mishra
SE IT A

- Won chapter level prize at ISTE SRMC in 2016.
- Won second prize in paper presentation.
- Won first prize in Multicon Debate.
- Won first prize at institute level paper presentation.

Vedant Shrivastav
SE IT B

- Chairperson of ISTE CORE COMMITTEE 2016-17
- Published 2 research papers at national and International level
- Certified IOT developer
- Class certificate holder of UN's Green Revolution Movement
- Winner of EWPPC 16

Ankur Singh
SE IT B

- Presentation on COMPETENCY REQUIREMENT FOR INDUSRTY (2nd prize)
- Multicon paper presentation published in NCASH Entrepreneurship Paper Presentation and Idea showcase in SPIT (2nd)
- Presentation at 3rd NATIONAL LEVEL PLATFORM in Universal College of Engineering

Akshat Shah
SE IT B

- First prize in Android Game Development (Multicon)

Dhwani Desai
SE IT B

- Won first prize in state level paper presentation at SHAH & ANCHOR College of Engineering, Mumbai paper presentation competition.

Darshan Vakharia
BE IT A

- Python Certified Trainee -IIT Bombay
- Google AdWords Certification
- I.CET MBA score:95.04%
- Linux Certified Trainee-IIT Bombay
- Published paper in IOSR journal

Nilesh Gupta
BE IT A

- Linux Certified Trainee -IIT Bombay

Aakash Kamble
Rachit Verma
BE IT A

- Published paper in IOSR journal

Vatsal Gandhi
BE IT A

- MBA CET EXAM: 99.1 percentile

Darshak Bohra
BE IT A

- MBA CET EXAM: 91.5 percentile

Yash Jajoo
BE IT A

- GRE 324/340
- TOEFL – 114/120

Abhishek Tiwari
Divya Sharma
BE IT B

- OCPJP Certified Students

Akansha Tiwari, Milan Tank
BE IT B

- OCPJP Certified Students

Sidhart Vyas
BE IT B

- GRE Score:318/340

Anuj Singh
BE IT B

- GRE Score :313/340

Akshdeep Rungta
BE IT B

- GRE Score 309/340

EXTRA-CIRRICULUM ACTIVITIES

Pooja Mistry	TE IT A	College Dance team won First prize at Vartak College, SFIT and TIMSR
Rutika Harsh VastalGandhi	BE IT A	Have won different Prizes for Dance: First prize at SFIT First prize at Nyar college. First prize at TIMSR First prize at Vidyavardhini college Third prize at SPIT First prize at Vartak
Shreya Mishra	BE IT B	Won First prize at Nair College, SPIT, Vidhavardhini college
Nidhi Pandey	BE IT B	Won First prize at Nair College, SPIT, Vidhavardhini college
Milan Tank	BE IT A	Won First prize at Nair College, SPIT, Vidhavardhini college

LONG INDUSTRY IV

Industrial Visit was conducted by Association of Computing Machinery under Department Of IT for 2nd and 3rd year students from 2nd to 10th of January 2017. The visit was at three locations of South India that included Cochin, Munnar and Allepy. First was Cochin where we visited the industry UST Global Netsoft and Hykon India Pvt Ltd. After the visit, the students were taken to a number of tourist destinations such as Lulu Mall, Marine Drive and Boat Cruise. On the 4th day of the IV, we visited the Chinese fishing nets, Vasco Da Gama square, St. Francis church. The next day we reached Munnar where the students were taken to the Botanical Garden famous for its wide variety of masalas. On the 7th day, we reached Allepy and visited the famous Allepuza Lake. The next day the students were provided lunch in the Kerala's traditional way i.e. the students having their food on banana leaves and ate typical Kerala recipes. By the next day, all students safely reached back to Mumbai where the Industrial Visit ended.

From this Industrial Visit, the students gained knowledge as to how the industry works. Alongside having fun, students came to know about the technical skills and modern engineering tools necessary for engineering practice.

SHORT INDUSTRY VISIT (Goverdhan Eco Village)

We went to Goverdhan Eco Village for short IV. We were very warmly accepted there. We reached GEV at around 9am. Thereafter we were given i-cards to visit the place. We were then escorted to the place where we had our breakfast and lunch. After the breakfast we were provided with an instructor who took us on a tour of GEV after a small interaction. He showed us some very amazing and interesting projects that implemented in GEV.

In those projects were waste water treatment plant, plastic disposal plant, decomposition of food particles in the field in form of a manure and bricks making machine. After this tour we went to a seminar hall where all the students were divided in 5 groups and were made to think on some new project ideas that could be implemented in GEV. We then went for lunch at around 2 pm. Post lunch we again went on a tour.

This tour was little different. On this tour we saw horses, donkeys, cows and bulls depicting the natural ecosystem. We then went on to see the largest water storage plant at GEV which could store lakh ton litres of water in all. Our tour then came to an end and we were escorted to the gate where we had to catch our bus.

The short IV was a memorable experience for all of us. We had lots of fun there apart from the tour. Collecting and storing all the good memories of the overall trip with our friends in our heart we reached college at around 7 in evening and thereafter everyone went home.

CORE COMMITE

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Shraddha Paghdar (Secretary)
Ayush Dutta (Chairperson)
Nishita Desai (Vice-Chairperson)
Vamil Gandhi (Event Manager)
Pooja Jain (Sponsarship Head)

(from left to right)

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Akash Naik (Public Relation Head)
Radhika Gokani (Student Development Head)
Tanishq Mehra (Publication Head)
Harsh Raval (IV Co-ordinator)

(from left to right)

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IT DEPARTMENT(TCET)

CODE OF ETHICS

The Department of Information Technology of TCET believes that IT Engineers make a direct impact on almost all aspects of Human Life for its betterment.IT engineers should strictly adhere to the highest pirinciples of the etical conduct .In order to inculcate high standards in professional beaviour.The department advocates the following code of ethics for all the students, Faculty members,& staff of the department:

1. Strive to be professionally competent to provide high quality product & services.
2. To reponsivily make decisions avoiding or minimizing hazards to society and to disclose potential factors that may be a threat to health and safety.
3. Be fare to all inidividuals and not discriminate between indi viduals based on religion, race, sex, age, disability, national origin, etc.
4. Give credit to contibution of others viz. copyrights, patents, intellectual property.
5. Protect and respect privacy and ensure confidentiality of in formation whenever appropriate.
6. The knowledge gaind during the course of study will not be misused for carrying out any illegal activities intruding and hacking of networks