KARPAGAM
COLLEGE OF ENGINEERING
Rediscover | Refine | Redefine
Coimbatore - 641 032

Autonomous | Affiliated to Anna University, Chennai
Accredited by NAAC with 'A' Grade | Accredited by NBA (ECE, EEE, CSE and IT)

INFOFLAME

INFORMATION TECHNOLOGY

2020-2021

VISION

To provide reliable and modern technology resources to the faculty and students to develop the competence in Information Technology and to endure with the rapidly changing world to serve the mankind.

MISSION

• Imparting technical knowledge through innovative teaching and research for budding professionals.

• To equip the students with strong fundamentals, programming and problem solving skills with an exposure to emerging technologies and inculcate leadership qualities with a passion to serve society.

DEPARTMENT OF INFORMATION TECHNOLOGY

Programme Educational Objectives (PEOs)

1. PEO1: Graduates will be able to comprehend mathematics, science, engineering fundamentals, laboratory and work-based experiences to formulate and solve problems in the domain of Information Technology and acquire proficiency in computer-based engineering and the use of computation tools.
2. PEO2: Graduates will be prepared to communicate and work effectively on the multidisciplinary engineering projects and practicing the ethics of their profession.
3. PEO3: Graduates will realize the importance of self-learning and engage in lifelong learning to become experts either as entrepreneurs or employees in the field to widen the professional knowledge.

Program Outcomes

- PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO12: Life-long learning:Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO-1 Ability to organize an IT infrastructure, secure the data and analyze the data analytic techniques in the field of data mining, big data as to facilitate in solving problems.

PSO-2 Ability to analyze and design the system in the domain of Cloud and Internet of Things.

INFOFLAME MAGAZINE 2020–2021

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STUDENTS ACTIVITIES

TOP 10 TECHNOLOGY TRENDS IN 2019

IEEE Computer Society (IEEE-CS) tech experts unveil their annual predictions for the future of tech, presenting the most widely adopted technology trends in2019.The forecast by the world's premier organization of computer professionals consistently ranks as one of its most anticipated announcements.

Top 10 technology trends predicted to reach adoption in 2019 are :

➢ **Deep Learning Accelerators**

Many companies have been announcing plans to design their own accelerator, like GPU's, FPGA's, which are widely used in data centers. This also includes accelerators for very low power devices. The development of these technologies will allow machine learning to be used in many IoT devices and appliances.

➢ **Assisted Transportation**

Increasingly automated assistance is taking place in both personal and public vehicles, the idea of fully automated, self-driving vehicles be a few years away .Assisted transportation is already very useful in terms of wide recognition and is paving the way for fully autonomous vehicles.

➢ **Internet of Bodies**

IOT and self-monitoring techniques are moving closer to human body and even inside!! .Digital pills are entering mainstream medicine and body attached implantable IoB devices are also beginning

to teract with sensors in environment.

➢ **Social Credit Algorithms**

These uses facial recognition and advanced biometrics to identify a person and retrieve data about that person from social media and other digital profiles .Combination of biometrics and blended social data streams can turn a brief observation in judgement of whether a person is a good or bad risk or worthy of public social sanction.

➢ **Advanced materials and devices**

Advanced materials and devices for sensors, actuators and wireless communications will create an explosion of exciting applications in healthcare, packaging, appliances and more. These technologies will also pervasive, immersive computing, such as the recent announcement of a cellular phone with a foldable screen.

➢ **Active Security Protection**

A new generation of security mechanisms is emerging that uses the active approach, such as hooks that can be activated when new types of attacks are exposed and machine learning mechanism to identify sophisticated attacks. Attacking the attacker is a technological possibility as well, but still illegal.

➢ **Virtual Reality and Augmented Reality**

These have been hitting the mainstream. Producing ultra-high quality content is the next-grand challenge for VR industry. Creating a virtual reality that even the human eye cannot distinguish from real world will require light-field technology 3D imaging technology. When combined with computer vision, and machine learning, light-field technology provides a variable path for producing high quality, low cost VR content.

Chat bots

These AI programs stimulate interactive human conversion using key pre-calculated user phrases and auditory or text-based signals. Chabot's have recently started to use self-created sentences, providing better results. They are frequently used in basic customer service on social networking hubs and are often included in operating systems as intelligent virtual assistants.

Automated Voice Spam preventions

Spam phone calls are an ongoing problem of increasing sophistication, such as spoofing the caller Id number of the victim's family and business associates. This is reading people to regularly ignore phone calls, creating risks such as true emergency calls going unanswered. However emerging technology can now block spoofed caller ID and intercept questionable calls so the computer can ask questions of the caller to access whether he or she is legitimate.

Machine learning

Large scale use of machine learning robots and drones will help improve agriculture, ease drought, ensure supply of food and improve health in remote areas. Some of these activities have already started, but we predict an increase in adoption rate and the reporting of success storied in the next year. "Sensors everywhere "and advances in IoT and edge computing are major factors contributing to the adoption of this technology.

18F203_Akash

THE POWER OF YOUR SUBCONSCIOUS MIND

We think that we are in control. We believe that our conscious mind directs air through and somehow controls our subconscious mind. We are wrong. In Richard Rasta's The Brain has a Mind of its Own

"At the moment of decision we all feel we are acting freely, selecting at will from an infinity of choices. Yet research suggest this sense of freedom may be merely an illusory by-product of the way human brain operates"

- Richard Rasta's Article

The interval sequence, from this is, You think

1. You make a concern decision to read

2. That decision triggers your brain into action

3. Your brain then signals the hands to stop turning pages, focus the eyes

on the paragraph and so on.

But it's wrong.

Believing the conscious mind calls the shots prevents us from understanding ourselves, other and how to make better decisions to name but a few things Breaking codes in World War 2 was perhaps the largest big data project ever to happen in the World up until that point.

The concern mind could only do so much. One German cryptanalyst recalled,

"You must concentrate almost in a nervous trace when working on a code. It is not often done by conscious effort. The solution often seems to crop up from the subconscious"

By the time you reach the age of 21 You gave already permanently stored more than 100 times the entire encyclopedia The functions off your subconscious mind is to store and retrieve data Its programmed exactly the way you respond.

"Your self-concept is your 'master program' "

You can actually reprogram your own thought pattern by stopping in positive and success oriented sound bites Your conscious mind commands and subconscious obeys An unquestioning servant that works the

whole life to make your behavior fits a pattern consistent with your emotionalized thoughts, hopes and desires your subconscious mind grows either flowers or weeds in the garden of your life. Whichever you plant by the mental equivalents you create.

The more in tune with your subconscious you became, the closer you will be to breaking through to success.

Remember:

Taking immediate action on your ideas is a powerful key to success yourself from self-limiting beliefs-or doubts is the first step to being primed for action.
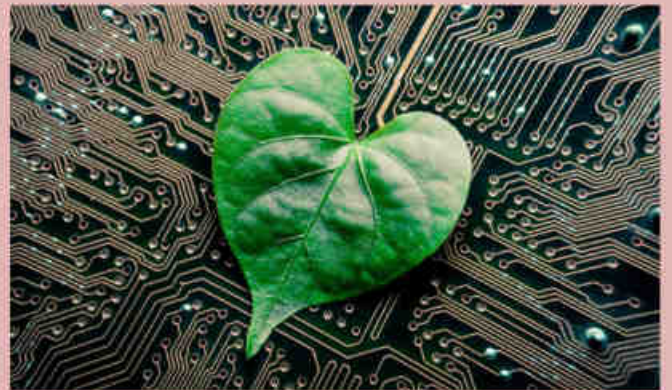

18F205_Archana R

FUTURE IN AI

In the field of computer science, artificial intelligence (AI), sometimes called machine intelligence, is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans and other animals. Computer science defines AI research as the study of "Intelligent agents".

Artificial intelligence in the last two decade has greatly improved the performance of the manufacturing and service systems. Study in the area of artificial intelligence has given rise to rapidly growing technology known as expert system. The areas employing the current technology of artificial intelligence have seen an increase in the quality and efficiency looking at the current scope include error reduction and also it increases the chance of reaching the accuracy with the greater degree of precision. As we explore the benefits of AI, there are few risks of AI too, which include its cost; its creation requires huge cost as they are very complex machines. Also, repair and maintenance require huge costs. Intelligence is often believed to be a gift of nature, and an ethical argument will continue on whether the human intelligence is to be replicated or not.

The scope of AI in the future is being considered as the largest.

Recently 'EVE' was in the news for discovering that an ingredient found commonly in toothpaste, is capable of curing Malaria. Here the subject in appreciation 'EVE' is not a human scientist, rather a Robot created by a team of scientists at the University of Manchester, Aberystwyth and Cambridge.

EVE's example hints at the possibility of AI playing a bigger role in science in future, not just merely for augmentation. Automation using AI for drug discovery is a field that is rapidly growing , mainly because machines works faster than humans.AI is also being applied in related areas such as synthetic biology for the manufacture and rapid design of microorganisms for industrial uses. Taking all this in stride, AI is sure to transform science as we know it.

Although, we don't know the exact future it is quite evident that interacting with AI will soon become an everyday activity. These interactions will clearly help our society evolve particularly in regards to automated transportation, cyborgs, handling dangerous duties,

solving climate change, friendships and improving the care of our elders.

Beyond these six impacts there are even more ways that AI technology can influence our future, and this very fact has professionals across multiple industries extremely executed for the ever-burgeoning future of artificial intelligence.
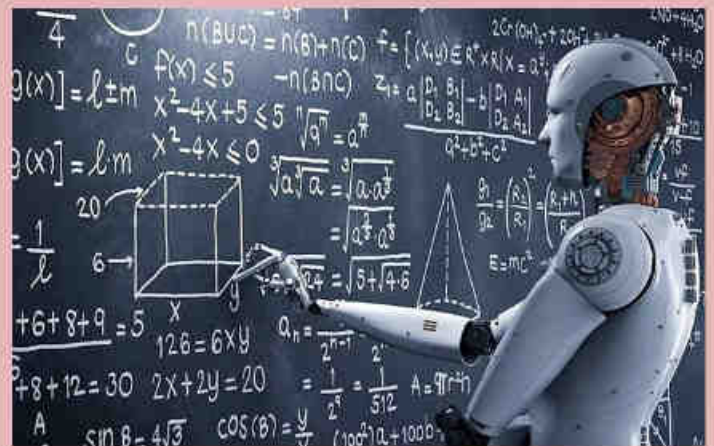
18F220 Kaaviyah

Google
Fuchsia OS

Fuchsia is a capability- based OS currently being developed by Google. It first become known to public when the project appeared on GitHub in Aug 2016 without any official announcement .In contrast to prior Google developed OS such as Chrome OS & Android ,which are based on Linux Kernel.

Fuchsia is based on a new microkernel called Zircon. Fuchsia is written in C,C++,Go ,Rust and Dart. It is open source model. Google's intentions with the OS, including the possibility of it replacing Android. Fuchsia's user interface and apps are written in Flutter , a software development –kit allowing cross-platform development abilities for Fuchsia's ,Android & iOS.Flutter produces apps based on Dart, offering apps with high performance that run at 120 frames/sec. It also offers a Vulkan-based graphics rendering engine called "Escher", with specific support for 'Volumetric soft shadows'.

The OS is even used in driverless car by Google. Zircon is derived from "Little Kernel", which was developed by Travis Geiselbrecht, a creator of the New OS kernel used by Haiku. Thus, it is the future OS going to replace Android OS.

THE GIFT

I walked alone in a dark street
With my hands tied and with a broken heart
I walked through many places having street lights
But I couldn't find anything in my sight.

I sat on a wall like my ruined dream
Which fell on me like a silent scream
I tried to catch the rain drop from the sky
But I failed to stop the ruin in me, which makes me die.

I tried to sleep, but I failed to search a bed
At last , as the Almighty said
I closed my eyes, to see my dark heart
And I never wished to open it, ever even a short.

Then I heard a voice, of a heart
That coming with a Gift through the same street
The gift is actually the one that stops,
The ruin in me and convert my dreams into hope.

I opened my eyes by ending the dark
And I saw a wall, that is stronger than a rock
The Gift is a language of heart, like Almighty said
You have to wake up,
Because your friend has arrived .

18F231 Mohamed Bilal

I do see it

I don't see it,
When the morning sun shines bright.
Yet I feel its reflection, even at night.

When the million stars twinkle as it should.
Yet I imagine the day, to have gone good.

I don't see it,
When the roaring sea rises up so near.
Yet I open my ears for striking waves, to hear.

When the restless wind brushes by my side.
Yet I stretch my hands to its strength, I pride.

I don't see it,
When the thundering clouds decide to stay.
Yet I wish the rain down-poured, straight away.

When the thoughtful crowd thinks it's alright.
Yet I ask myself if it is for me, without eyesight?

So as you realize..
I don't see it with my eyes.
For don't you all depart..
I see you all in my heart !

18F208 Chandru

LATEST TRENDS IN WEB DEVELOPMENT

■ *Progressive Web App*

If you are going to develop an application for your mobile-based customers then you have three choices: build a responsive website, develop a native app or create a progressive web app (PWA).

Responsive websites are quick and easy to get to, but they tend to be less pleasant in terms of user experience. Native apps provide the finest user experience, but they are limited to certain devices and have high barriers to adoption. Native apps require a download, which means generating considerable buy-in from consumers first and losing the benefit of impulse behavior. Sitting between these options is the newest mobile solution: the PWA. It combines the best elements of mobile sites and native apps while mitigating their disadvantages.

Put it simply, Progressive Web Apps are web applications that load in a web browser just like web pages or websites.
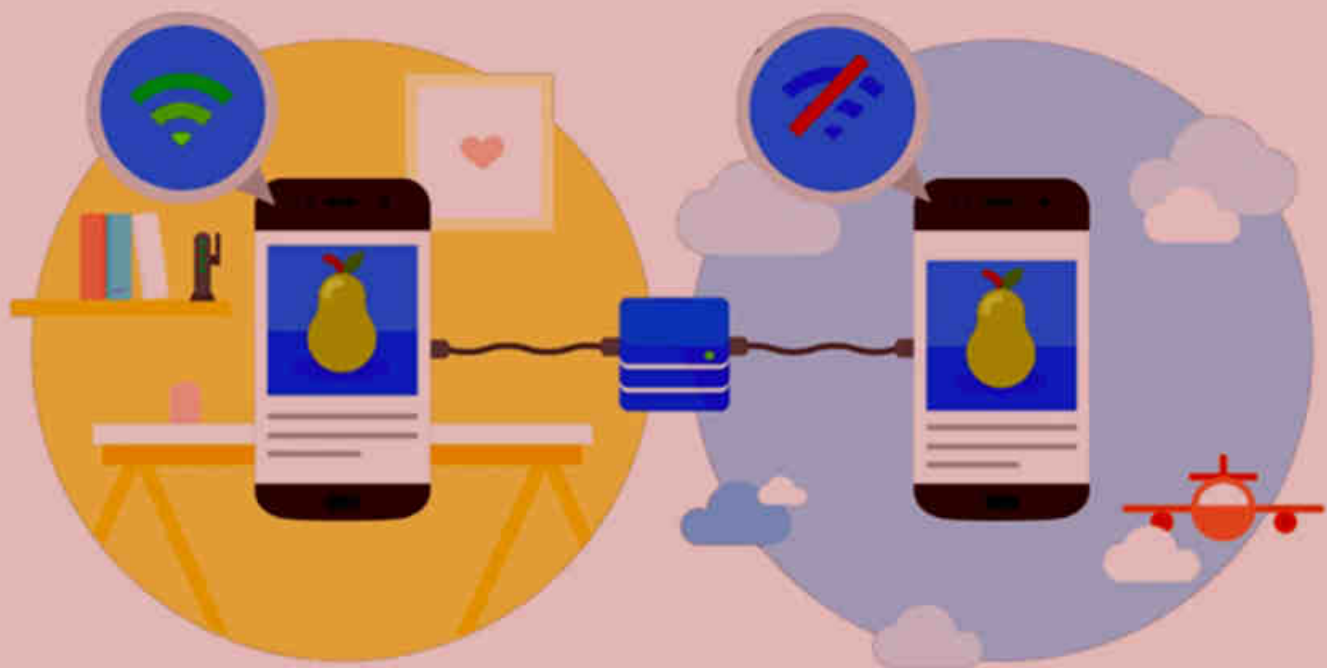
PWAs are capable of providing similar functionality and seamless user experience to traditional native apps. It gives you a rich mobile experience via native-like functionalities such as the ability to work offline, push notifications, and device hardware accessibility.

> - Flipkart triples time-on-site with Progressive Web App
> - BookMyShow's new Progressive Web App drives an 80% increase in conversions

- *Accelerated Mobile Pages*

The Accelerated Mobile Pages Project (AMP) is a Google-run website publishing technology designed as a competitor to Facebook's Instant Articles

The AMP Project is an open-source initiative aiming to make the web better for all. The project enables the creation of websites and ads that are consistently fast, beautiful and high-performing across devices and distribution platforms.

Accelerated Mobile Pages developed by Google with only one major target in mind, because mobile users are growing day by day, AMP is quick loading mobile sites. Google AMP pages are developed in a new HTML language to consume page loading speed and reliability, AMP web pages are 85% faster than non-accelerated mobile pages.

18F241 Saravanakumar

PATTERN RECOGNITION: AN OVERVIEW

Pattern recognition is the automated recognition of patterns and regularities in data. It is a tough problem for computers, although humans are wired for it. And it is becoming increasingly important in the age of automation and information handling and retrieval. *The field of pattern recognition is concerned with the automatic discovery of regularities in data through the use of computer algorithms and with the use of these regularities to take actions such as classifying the data into different categories.* The general processing steps of pattern recognition are pre-processing, feature extraction, and finally the classification. Several methods were used for each step of pattern recognition such as segmentation and noise removal in pre-processing, Gabor wavelets transform for feature extraction, Support Vector Machines (SVM) for classification, and so forth.

➤ Machine Learning Approach

Machine learning (ML) is the scientific study of algorithms and statistical models that computer systems use to effectively perform a specific task without using explicit instructions, relying on models and inference instead. It is seen as a subset of artificial intelligence. Machine learning algorithms build a mathematical model of sample data, known as "training data", in order to make predictions or decisions without being explicitly programmed to perform the task. Pattern recognition is closely related to artificial intelligence and machine learning, together with applications such as data mining and knowledge discovery in databases (KDD), and is often used interchangeably with these terms. In machine learning,

pattern recognition means the assignment of a label to a given input value. An example of pattern recognition is classification, which attempts to assign each input value to one of a given set of classes. However, pattern recognition is a more general problem that encompasses other types of output as well. Other examples are regression, which assigns a real-valued output to each input; sequence labelling, which assigns a class to each member of a sequence of values; and parsing, which assigns a parse tree to an input sentence, describing the syntactic structure of the sentence.

(a) Patterns to be classified to two classes, healthy and unhealthy.

(b) Classification by using two features independently. The patterns with a green arrow are to be misclassified.

(c) Linear classification. The classification boundary is plotted by dash lines. In this case, the classification is done considering the dependency between height and weight.

(d) Nonlinear classification. Classification boundary can be an arbitrary curve.

(e) A linear discriminate function for the linear classification of (c)

> **Pattern Recognition System**

A pattern recognition system can be regarded as a process that allows it to cope with real and noisy data
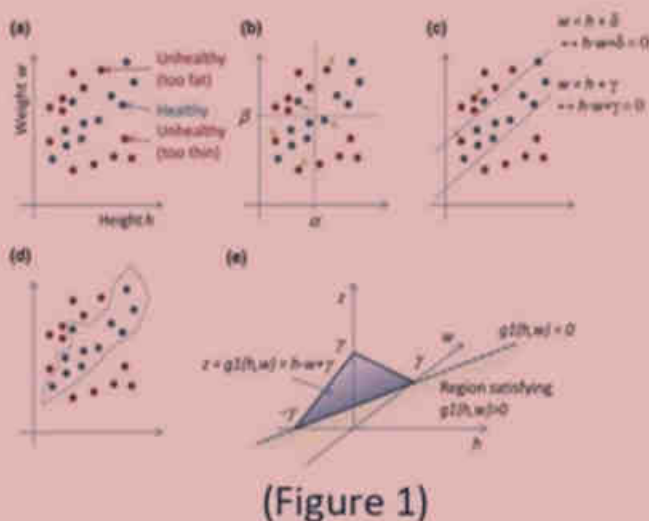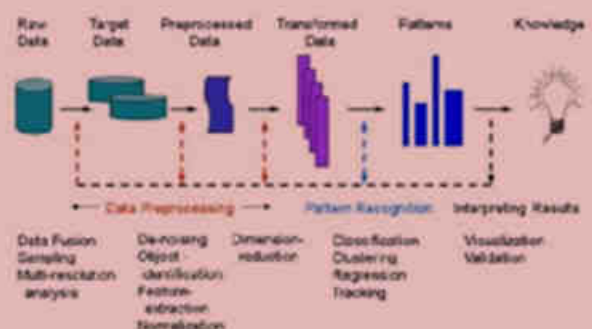

(Figure 1)

Figure 1 is an example of 'Classification in pattern recognition.'

A pattern recognition system mainly includes three mutual-associate and differentiated processes. One is data building; the other two are pattern analysis and pattern classification. Pattern analysis' task is to process the data, such as feature selection, feature extraction, data- dimension compress and so on. The aim of pattern classification is to utilize the information acquired from pattern analysis to discipline the computer in order to accomplish the classification. The Classification of Pattern Recognition System:

- Rule based system
- Classical fuzzy System
- Bayesian system
- Neural networks system
- Fuzzy neural networks systems

➢ **Features of Pattern Recognition**

Pattern recognition completely relies on data and derives any outcome or model from data itself. Pattern recognition system should recognise familiar pattern quickly and accurate. Recognize and classify unfamiliar objects very quickly. Accurately recognize shapes and objects from different angles. Identify patterns and objects even when partly hidden. Recognize patterns quickly with ease, and with automaticity.

➢ **Applications of Pattern Recognition**

Engineering: Speech Recognition Civil Administration: traffic analysis Economy: Stock exchange forecast Geology: Classification of rocks In its broadest sense pattern recognition is the heart of all scientific inquiry, including understanding ourselves and the real-world around us. And the developing of pattern recognition is increasing very fast, the related fields and the application of pattern recognition became wider and wider.

18F223 Kaviya

SOCIAL ENGINEERING AWARENESS

Social engineering is the term used for a broad range of malicious activities accomplished through human interactions. It uses psychological manipulation to trick users into making security mistakes or giving away sensitive information. The attacker first studies his victim by gathering information about them from various sources. This background information is then used against them by gaining their trust and making sure it happens in a way that the victim will not be able to identify it as an attack. The main goal of the attacker might be access to some sensitive information like bank details or confidential data regarding a firm etc.

Social engineering is an attack that cannot be easily identified or rectified as real humans are involved and their actions cannot be predetermined. This is also different from virus attacks as it does not have much to do with vulnerabilities in the system rather it leverages human error. The various methods employed by the perpetrators are;

➢ **Baiting**

This is the practice where that are intentionally left for people who are prime targets. They can come in many forms like physical devices like flash drives and compact discs, ads that prompt users to download malicious software, infected emails, and a host of other ways that aim to be effective by luring unsuspecting targets.

➢ **Scare ware**

This is a form of baiting where users are spammed with a lot of false alerts to make them install or download applications and files that are useful for the attacker or the malicious software in the system.

➢ **Pre-texting**

Impersonation and other tactics to gain trust of employees or officials to get them to do what the perpetrators want is another form. Here it's a planned out process that leverages human error. Although harder to execute, this is almost undetectable as it happens over the course of time as what seems to be normal course of action.

➢ **Phishing**

As one of the most popular social engineering attack types, phishing scams are email and text message campaigns aimed at creating a sense of urgency, curiosity or fear in victims. It then prods them into revealing sensitive information, clicking on links to malicious websites, or opening attachments that contain malware. Creating false front end pages by using similar domain names that people do not notice are also employed. Here users type in login credentials to a site where they trust and in turn their information is sent to the one who created that false page. This can occur in a variety of scenarios and can be prevented if the users are careful about checking the domain names of

➢ **Overloading**

Here users are bombarded with a lot of information and questions which make their sense of decision making poor. Most of this is through spam mails, calls and messages.

➢ **Reciprocation**

People tend to return a favors. So if an attacker gains trust and is able to do some trivial favors, he is in a position to ask for a return to that favors. This is successful most of the time due to the next flaw.

➤ Integrity and Consistency

People often approach others from the perspective of their own honesty and consistency. There is a natural tendency to measure others with what we know and expect from ourselves. These psychological loopholes are common and are the basic premise in which cyber attackers thrive. Manipulation and deception can be carried out by using one or more of these human feelings, such as curiosity or fear, to carry out schemes and draw victims into their traps. Whenever you attracted to an offer displayed on a website, or when you come across stray digital media lying about. Being alert can help you protect yourself against most social attacks taking place in the digital realm. Steps to remember while in a potentially suspicious situation are: Slow down spammers want you to act first and think later. Never let their urgency influence your careful review.

➤ Email awareness

Hackers, spammers, and social engineers taking over control of people's email accounts are widespread. After having access to emails there are a lot of ways to misuse it. Contacts, personal information, linked accounts all are in danger. Reset passwords or use a password manager.

➤ Fake offers

Do not take click baits telling you about the million dollar lottery you just won. The first line of defense should always be a clear and rational mind. Know your rights and responsibilities so others cannot influence your actions. Keep yourself from harm by taking preventive measures.

18F211 Gokulakrishnan

S'PARK

Day by day world's population is increasing as well as the vehicles with them are also increasing tremendously. Technology and our industries are grown widely, but still problems with our vehicles are not solved.

One of the major issue we are facing with our vehicles is parking, in our day to day life we faces such awkward moments in different situations. If we goes to a metropolitan city it's guaranteed that we get blocked in traffic jams and and we can't Find a suitable space for parking vehicles. With the high ownership of vehicle ownership in the world parking has become a conflicting and confusing situation for a number of people. Whether at an airport, bus stations, and shopping centers, problems with parking area an everyday occurrence. Lack of accessible parking can hurt local business and decrease the quality of life for residents. Due to the importance of parking, cities stud analyze parking problems and performing on an ongoing basis. The following list identifies the kind of problems that typically occur in a community.

1. Inadequate information for motorists
2. Inefficient use of existing parking capacity
3. Environmental and aesthetic impacts of parking facilities
4. Lack of sufficient parking at event site
5. Inconvenient parking options

One of the good solution to these problem is the efficient use of public transport system, butIt's not possible in all the time...in this faster world things are not wait for us, so it can't be taken as a solution.

So the only solution is the effective use of parking spaces and creating new more space in a more convenient manner. We are presenting our new innovation as a solution for all the parking problems we face today. Spark is not just a smart parking system, but Something more than that..It can take care of your all vehicle related Problems.

First install spark app on your phone or go to the website Then, sign up with your vehicle registration Number & uidai. That's it... now go wherever you want without Worrying about your vehicle's parking and Security. Let's think about the situations you need help from spark... suppose if you are going to any metropolitan cities or to any very congested places...you may see more "no parking "boards than any other signal... but you can easily find your nearest parking area through the spark app. For this first step is to identify and integrate more spaces , Spark makes a network of parking places with the available spaces in a city, and it can be good source of income for those who can donate Bits of land for this network. Anyone can be a part of s'park network by providing a secure parking space temporarily or permanently for which they will get paid differently. So if there are no such places we have to create it. So buildings with the hydraulic lift technology are the best for it. The can include hundreds of cars in each floor! And we create parking buildings in the area where no parking spaces are easily available or in the more congested places. So anyone can easily access nearest parking slot or parking building Through his Smartphone.

18F132 Prabhakaran S

RECRUITMENT REVOLUTION

Introducing Automation has lead to significant evolutions within the IT Industry. With the advancement of AI, Machine Learning and Robotics in non-routine tasks, up gradation of these tools would potentially transform future jobs, including the structure of labor force. It is noted that, this technology wave will pave the path in aspects of Services, Manufacturing, Sales and Transportation.

AI has proven to be such a specific tool in the recruitment market, buzzing with innovative power solutions for every phase of the hiring procedure.

Why?

1. There is reduction in face evaluation, and biasing through recommendations.

2. Improvement in matching of candidate's experience with the demand.

3. Focusing on the "Human" element in HR.

With a war of talent brewing for employment, the power is naturally in the hands of those more informed, advanced and proactive. However, the 1.7 million engineers released into the industry, 60% of them are unemployable. Despite focus on the trending technologies, the coding languages in play, identifying the work culture, scope of work and growth prospects, 80% of the turnover results in poor hiring decision.

This is because; companies still keep the parameters of potential candidates within the limits of resumes and work experience. Adopting AI, the recruitment results in matching of the produce accordingly with the demand. The need for skill based hiring is also fulfilled for strategic business goals. Recruitment spaces would focus more on optimizing new innovations and platforms. The merging of data with recruitment tools have contributed to a higher success rate over the traditional processes.

In order to find the "Human" part in HR, three main objectives of a

candidate are taken into account. Re-skilling: where new skills and new tools are tested on new platforms and processes.

Relearning: where the learning of new concepts is implemented by picking up skills beyond their job description.

Rehearsing: where a revisit of skills is needed for recalling and formulating them into the ever growing work culture. It is therefore, high time for candidates to work on their communication and writing skills for abortion process by companies.

These skills will give assurance to employers about, how their employee hits straight at the point where he/she is proven best in a particular field, in parallel to a key worded resume and an inquisitively filled interview.

FUN ZONE

18F219 JOHN THOMAS

TONGUE TWISTERS

Let's try it!

1. Peter piper picked a peck of pickled pepper

2. Rubber baby buggy bumbers

3. She sells seashells by the seashore

4. The sinking steamer sunk

5. The sixth sheik's sixth sheeps sick
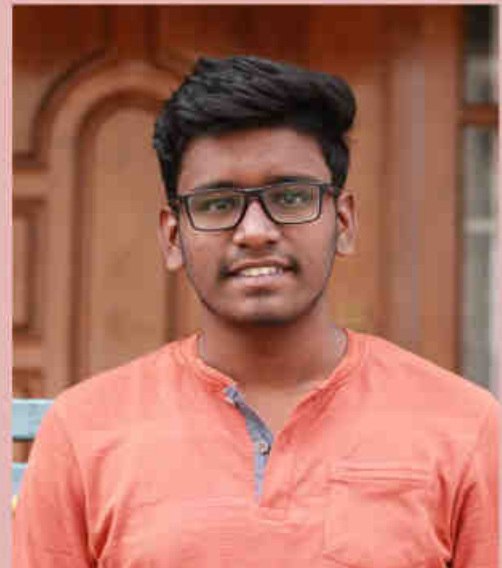
MY LOVELY MOM

When I came to earth
I was crying
I saw her face and I understood
It was she, my Mom
When she came near me, I cried loudly
But she smiled at me.
It was the first time when
She smiled , when I cried
She cares for me a lot and
She loves me a lot like an angel.
She is the only one who loves and cares,
Like nobody can do.
When I'm ill, she cares me
When I feel gloomy, she comforts me
I understood the real meaning of love in her,
I find the word Mom is beautiful.
And the meaning of Mom is love
The word Mom is amazing
Mom I love you and I can't live without you...

18F230 Mehana Pournami
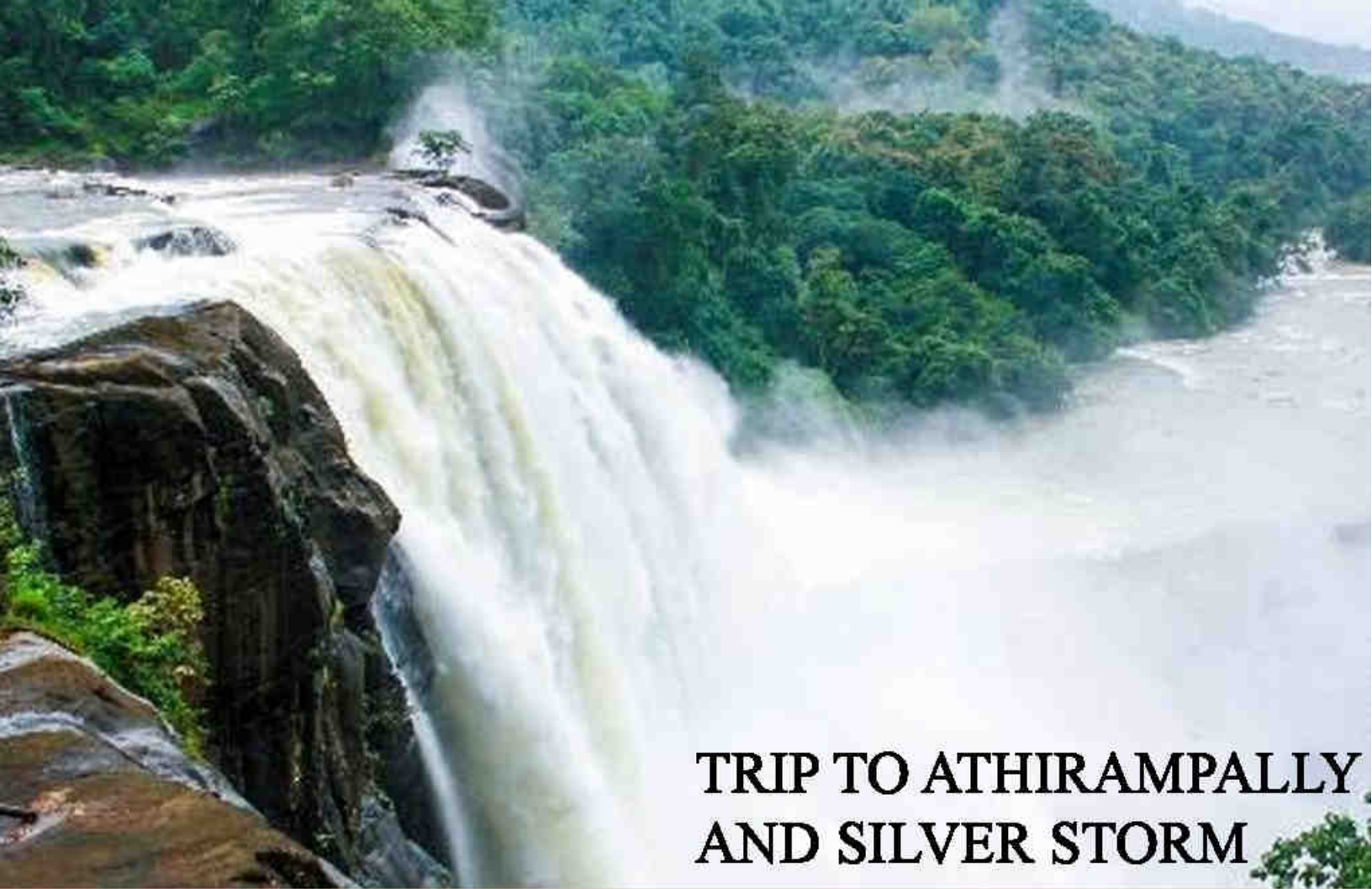
TRIP TO ATHIRAMPALLY AND SILVER STORM

A trip is always the right thing which relieves you from stress and tiredness of studying. Such a trip was planned and made possible by my chunks and our precious gift we got from school, our second mom Faridha Mam, during the leave after 12th standard exam that day day was 16th May 2017.

The reporting time of our trip was 6am .We arrived early and by 7am we settled at our bus. Our mom guided us and was with us during the whole trip. We started our wondrous trip to Athirapally and Silver Storm ,Thrissur. We danced as pair till we were tired and we had a lovely breakfast of chappathi and beef curry. We had it by arranging a game .it was boys should feed us and vice versa .We realized the care among ourselves during each time the protection we had under the hands of our chunks.,Sreekutty, Bharathi, and myself were the only three girls among the 45 students of our lovely class. We again resumed our trip and reached a dam with butterfly park in Athirampally . There was a big long hanging bridge which was surrounded by a dam and some sedimentary rocks.

We started our trip to Silver storm which was the main attraction to our trip. After a long journey of twists and turns we reached there by 11am. The main attraction of the place where the wave pool, slide winder, Chinese village and mirror maze. By 6:30pm, we knew it was time to say goodbye to Silver storm.

While going back, we saw thick slanting forests and monkeys, we stopped there to have ice cream. One of my buddy ,Adhil bought us ice cream but monkey took the ice cream from Ram, and we had a great laugh there. We started the bus, danced, filled our stomach with masala dosa.

We reached back red-eyed and tired. Our buddies Adhil and Vyshakh took responsibility of Farida Mam to safely land to her home . Raja and Navaneeth followed all three of us back to our home. I cannot forget this day in my life, even during my school trip I haven't enjoyed like this. "Friends are not relations, but it's an emotion that they keep us safe in their hands"

18F224 Kishore

COLLEGE LIFE

4 years and 8 semesters decide our lives,
which gives many opportunities to swim and drive.

It all started with a 'hard to concentrate ' lecture,
Hard are all the concepts which are yet to be captured.

Modules, series and tutorials surrounded us the whole day,
But we know that it is all college things by the way.

Practicals and workshops have their own 'style and grandeur',
Which imbibe us knowledge and are an another name for 'file and submission' .

Music, sports, arts and dance are the best part,
Which are soothing and refreshing for our minds and hearts.

Fests bring a new life to the campus,
Which unite us together also makes us famous.

Every sixth month comes up with terrifying horrifying examinations,
Plethora of syllabus and results gives us goosebumps and tensions.

But in all these teachers are always a guiding light,
They help us to achieve even greater heights.

Seniors for us are a big helping hand,
Their constant support for us is like a friendship band.

Friends made forever gives us the reason to come,
For lots of gossips and studies for some.

Words are never enough to describe these years,
They give us the best memories to always 'cherish and cheer'.

18F205 Archana R

Steve Jobs in India

Steve Jobs visited India as a teenager in search of enlightenment. He returned disappointed, following a brush with lice, scabies, dysentery and a near mob thrashing after he protested at being sold watered-down buffalo milk.

But the trip did mark a turning point in his life. Jobs' India connection, though, preceded his trip. As a penniless college drop-out , he would walk seven miles every Sunday to get a free meal at the Hare Krishna temple. He also retained a lifelong admiration for Mahatma Gandhi. In 1997, Apple's 'Think Different' ads, which featured his personal idols, included the Mahatma. Steve Jobs' trip to India was eventful, to put it mildly. He arrived in India, accompanied by his friend Dan Kottke, who later became Apple's first employee.
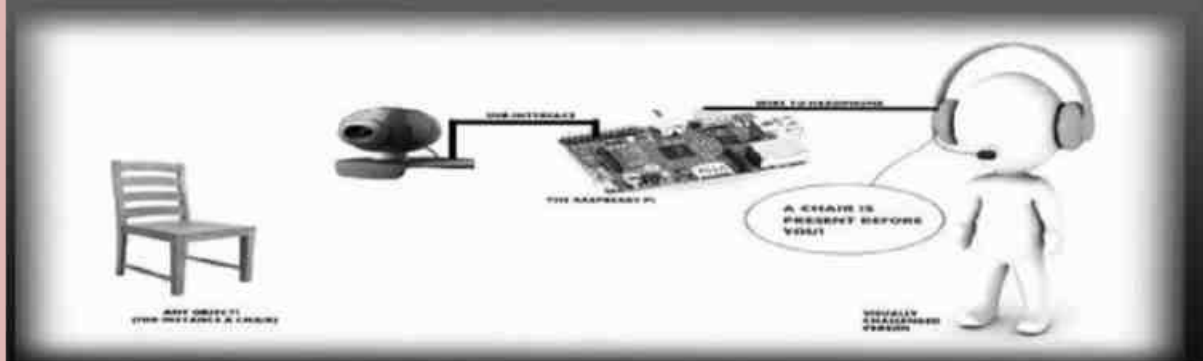
Soon, he had swapped his jeans and T-shirts for lungis as he set out from Delhi for the Himalayas. Along the way, Jobs and Kottke slept in abandoned buildings and survived on local food. "He looked at prices everywhere, found out the real price, and haggled. He didn't want to be ripped off." While he was searching for Neem Karoli Baba, Jobs chanced upon a mendicant who laughed uproariously at the sight of him, led him up a mountain path, dunked his head in a pond at the top of the mountain and shaved his head. Jobs and Kottke then set off to meet one Harikan Baba, but came away unimpressed. On the way back, while sleeping in a dry creek bed, they were trapped in a fierce thunderstorm.

As Kottke narrates in 'iCon', "I remember us praying to any god that could hear us, 'Dear God, if I ever get through this, I'll be a good person, I promise'." Having picked up lice and dysentery, the two set off to see Tibet, but contracted scabies near Manali. Worse, Kottke's traveller's cheques got stolen, which ended their trip. "The hot, uncomfortable summer made Jobs question many illusions he had nursed about India. He found India far poorer than he had imagined and was struck by the incongruity between the country's condition and its airs of holiness," author Michael Moritz wrote in Jobs' biography, as he was quoted as saying in his biography, 'The Little Kingdom — The Private Story of Apple Computer'.

However, Jobs retained his interest in spirituality. In fact, he suggested the name Apple to Steve Wozniak after a visit to a commune in Oregon which he referred to as an "apple orchard". More than a quarter century later, Jobs thought of setting up a facility in India. But it didn't pan out as he found the costs higher than expected.

DHARSHINI A II IT -A

VISION ASSIST: A Computer Based Vision Aid for the Blind

We have developed a system which can be used to aid the blind, by providing auditory guidance regarding the objects present before a blind person. Machine learning based classifiers are created and used in this system, which facilitates the system to detect and identify a few well known objects. Additionally, the proposed system is capable of identifying most of the readable printed text such as notices, banners or even a page from a book that is present before a blind person using Optical Character Recognition based algorithms, and reads out the identified text through earphones to the blind person. The project exploits OpenCV based techniques to implement a prototype of a real life solution which partially provides a sense of vision to a visually challenged person through his/her ears. Since object detection is a processor intensive task, the number of objects that can be recognized locally is limited, hence the system utilizes CloudSight, an online API for object recognition. The software technologies used are OpenCV (C++) , Cloudsight API using Ruby Gems, Pyhton, O.S : Linux (Debian) and the hardware components used are Raspberry Pi Mod B – Handheld PC, VGA camera – Logitech, Earphones. It is notable to mention that the Raspberry Pi used here is a handheld mini pc, which houses a quad core processor with 1GB of RAM.

PC or Mac?

Try this scoring model, to know which best suits you?
- DHNESH S,FOURTH YEAR IT

2 Points — Yes — **Are you a gaming fanatic?** — No — **1 Points**

1 Points — Yes — **Do you like editing graphics?** — No — **2 Points**

1 Points — iPhone — **What Phone do you have?** — Android — **2 Points**

2 Points — Myself or friend — **Who would you ask for support?** — The Store — **1 Points**

2 Points — Budget — **When it comes to finance?** — No Concern — **1 Points**

2 Points — Freedom — **What is more important?** — Safety — **1 Points**

9 - 12 Points

6 - 8 Points

PC

Mac

Acquisition of Valued Customers

Machine Learning is an interesting field to dive into as it gives us the power to predict future and understand things. When heard, we were completely overwhelmed by the possibilities that ML offers. From business to medicine to space, ML helps us to improve and excel in everything. Most business entities now use ML to improve their business, like targeting users, recommendations etc.

One of the problems faced in business is disloyal customers. In the world, that is rigorously moving with e-commerce the most intriguing aspect to each and every customer in any type of shopping is "offers". Research tells us that customers tend to buy more in a shop where they have more offer than the other which has even high quality products. Knowing this, the business entities are giving offers to the customers extravagantly. But some customers exploit these online discounts and coupons and cause considerable losses to the firms. The only way to stop such losses is by giving offers only to the loyal customers. How do we achieve that? And ML comes to save the day. From the past transactions of the customer we can predict if he is a loyal customer or not and provide our offers only to the loyal customers and classify the disloyal customers as defected and let them be. By doing this we can save tremendous amount of money involved in giving offers to customers with no business value. We can also use this saved cost to improve the experience of the loyal customers by giving them more offers.

As a proof of concept, We started with retail shops. We have one year of transactional data from an anonymous retail shop that includes offer details and the purchase details. Quantile regression was applied on this data and the users were classified into repeat buyers(loyal) and non-repeat buyers (disloyal). The choice of quantile regression is due to the fact that, the leverage percentile between loyal and disloyal will be different for each type of business and we wanted the system to be compatible for all kind of business. On our 22 GB training and test set we achieved a accuracy of about 93%.We are focusing on further improving the accuracy by starting again from feature engineering and adding a functionality like suggesting the offer best suited for loyal customers.

CHANDHINI.F IV IT A

EVOLUTION OF ARDUINO

2005   2006   2007   2008

In 2005, a group at Italy's **Interaction Design Institute Ivrea** developed Arduino as a low-cost, easy-to-use electronics platform for students and artists. It borrows its name from nearby watering hole **Bar di Re Arduino**. Since exploding onto the maker scene, Arduino has cultivated a flourishing community of inventors, engineers, and hackers dedicated to sharing code and developing hardware under an open-source banner.

Old-style RS-232 serial port rather than USB. — **Serial**

Designed to be built on a home-etched PCB. — **Single-Sided Serial**

Adds female pin headers, data transfer LEDs. — **Extreme**

USB — First board to bear the Arduino name.

NG (Nuova Generazione)

Severino (aka S3V3) — Most advanced etch-it-yourself PCB design.

ATmega8 — Atmel's 8-bit megaAVR microcontroller family is an Arduino signature.

First to ship with ATmega168. — **NG+**

Bluetooth

Sew-through contact pads for connecting conductive thread. — **LilyPad**

Nano — Underside pins for breadboard connection.

ATmega168 — The ATmega168 doubles on-board memory to 16KB, but is otherwise nearly identical to the ATmega8.

Large 28-pin Plastic Dual In-line Package (PDIP-28) for through-hole soldering.

Thin Quad Flat Package (TQFP) designed for surface-mount soldering.

Very thin Quad Flat No-lead (VQFN) package replaces leads with underside pads.

Mini — First board to use surface-mount processor.

Diecimila   **Duemilanove**

Auto-selects power supply. First to ship with ATmega328. — **Duemilanove**

Designed for battery-powered wireless projects.

Fio   **Bluetooth**

LilyPad

ATmega328 — On-chip memory doubles again to 32KB.

LilyPad Simple

Replaces sew-through contacts with button snaps.

LilyPad Simple Snap

Designed for semipermanent installation. — **Pro**

Mini form-factor compatible. — **Pro Mini**

Uno — Official reference model for Arduino platform.

Ethernet

ATmega1280 — The Mega took Arduino to a new level, quadrupling on-chip memory to 128KB and more than tripling the total number of I/O and input pins in a significantly larger form factor.

ATmega2560 — With the Mega2560, memory doubled again to 256KB. Though larger, the new form factor remains pin-compatible with the standard Arduino shield footprint.

ATSAM3X8E — The Due marks Arduino's first departure from the AVR architecture. The ATSAM3X8E is an ARM Cortex M3 processor with twice the memory and four times the clock speed of the ATmega2560.

Mega

Leonardo — Emulates mouse and keyboard over USB.

LilyPad USB

ATmega32u4 — Integrates USB controller into processor chip.

Micro   **Yún**

First dual-core model, combining ATmega32u4 with MIPS embedded Linux machine.

Mega2560

Mega update for use with Android Accessory Development Kit (ADK). — **ADK**

First Arduino to mount 32-bit processor. Runs at 3.3V rather than 5V. — **Due**

Co-founder Baron interviewed on TWiT.

Arduino IDE begins rapid development.

300,000 Arduinos "in the wild."

2009   2010   2011   2012   2013

NET NEUTRALITY LAWS AROUND THE WORLD

The Netherlands

United States of America

Mexico

Ecuador

Brazil

Chile

*Interpretations of net neutrality vary from country to country

CHILE

Net neutrality regulations adopted: 2010 (the first country in the world to do so)

What the law says:
Organisations like Facebook, Twitter and Wikipedia cannot strike deals with network providers to promote their services for free as it violates net neutrality.

MEXICO

Net neutrality regulations adopted: 2011

What the law says:
Non-discrimination, privacy and transparency are some of the key principles it upholds as far as data goes. Mexico has one of the strictest net neutrality frameworks in the world.

BRAZIL

Net neutrality regulations adopted: 2014

What the law says: Service providers must honour any data packages, regardless of content, origin and destination, service, terminal or application. They are not allowed to charge higher rates for bandwidth intensive services like video conferencing and streaming video

ECUADOR

Net neutrality regulations adopted: 2014

What the law says: Providers may not block, interfere, discriminate, hinder or restrict the right of its users or subscribers to use, send, receive or offer any content, application, development or legal service through Internet or networks in general or other forms of information and communication technologies

UNITED STATES OF AMERICA

Net neutrality regulations adopted: 2015

What the law says:
Broadband is a "public utility". Content cannot be blocked and the Internet cannot be split into paid "fast lanes" and slow lanes for companies that don't pay service providers.

THE NETHERLANDS

Net neutrality regulations adopted: 2011

What the law says:
Internet service providers are not allowed to slow down access to services or apps on the Internet. The Netherlands is the first country in the EU to adopt net neutrality regulations.

BLOOMING TECHNOLOGIES

HOLO LENSE 2

Holo lense 2 is a pair of mixed reality smart glasses developed by Microsoft. Mixed reality is a very interesting concept where the real and virtual world coexist there by creating an entirely new environment.

This takes the experience of users to next level. It provides a whole new level of virtual assistance which will be of great use in field of education and engineering. I'm pretty excited to get hands on experience with this device.

SAMSUNG'S NEW NEON PROJECT

Neon is an upcoming project from Samsung Technology and Advanced research lab. This technology is developed with a goal to provide humanly chatbots. They are not just an AI machine.They are developed with a motive of creating virtual humans. By the term 'Virtual Humans', what I meant, is that they have emotions. They can feel happiness as well as sadness. When feelings are combined, they almost become real humans. This primarily aims at improving chatbot experience to next level.

LENOVO'S THINKPAD X1 FOLD

This is an upcoming product of Lenovo which is a PC with foldable screen. What's unique is that the screen is made of OLED.The OLED panel is provided by LG which is the pioneer of OLED technology. This device is powered by Windows 10x which is developed by Microsoft for dual screen and foldablescreen devices. This device is same as 9.7 inch iPad and it looks pretty great as well.

What's even more special is that, in portrait mode this device got a feature to bring keyboard on screen. This feature will give the feel of a laptop to its users. Another bonus is that the keyboard fills in the gap between the two halves of the screen when the device is folded up. This device runs on Intel's hybrid technology and its priced around 2499 USDs. This device gonna give new experience to PC users.

MS.SREEJA B.P

ASSISTANT PROFESSOR

GESTURAL INTERFACE

Sometimes life imitates art. Take for example, that scene in the 2002 science fiction film 'Minority Report', where Tom Cruise uses specially designed gloves to maneuver content around wall-sized computer screens just by waving his hands. That is totally doable,

Mike Friedel, director of sales for Oblong Industries. The company's CEO, John Koffler, was science adviser to Steven Spielberg for the sci-fi film. While Oblong's product uses a wand rather than gloves, the premise is essentially the same. Gestural technology seeks to adapt the user interface, to make it more effective, more flexible, more intuitive. The user may interact with a computer monitor, a white board or a big array of screens. Commands may be conveyed through gloves or a wand or simply by waving a pattern in the air. This creates a new dynamic for presentations. Instead of having to click-and-drag on a screen, "now you can grab something, resize it and bring it into the picture from some other place, with simple gestures," said

More than mere convenience, the promise of gestural tech lies in its ability to give people freer access to the vast volumes of data that are growing up in the public realm. "People carry around massive amounts of data on smartphones and tablets and laptops. But can you really solve big problems on a smartphone? No. You need better access to that information," he said. "Sometimes you need access to multiple streams of information, and the ability to manipulate that data is key. It's not just about having the information. It's about being able to combine that data, to cut and paste it and to share it." This raises interesting possibilities for government, said Michael Hong, principal at global management consulting fi rm A.T. Kearney.

When combined with virtual or augmented reality, the technology could open the door to smoother, more effective citizen services. Gestural technology could also help government to better serve those with disabilities. "These are customized, instantaneous, personalized experiences. If someone can move their fingers or arms and you have sensors that pick up on that, now they can interface and engage with government in ways that they haven't been able to in the past," he said. Gestural tech could bring new challenges too, as for instance with the auto industry's interest in establishing hand gestures as a way to simplify the control interfaces in a car.

MS. INDUPOORNIMA R

ASSISTANT PROFESSOR

PROGRA(MEME)MING
ENHANCE PROGRAMMING SKILLS THROUGH MEMES

Who in the world actually likes to sit in a boring lecture to learn something as interesting as programming? The "Ah damn it, here we go again!! I have to attend the class today, I have no attendance" attitude will definitely never help one to learn programming. It is something that one hasto do with his whole heart.

Professional textbooks suggest visual aids such as presentations and videos as tools to better understanding. It is true, to an extent, yet, how many times did we find ourselves dozing off in a lecture that involved presentations?

Crisp content in a presentation help us understand concepts better and of course, programming is no exception to that rule. While thinking about these visual aids being short, crispy and to the point, the idea of memes struck my mind. Well, I'm no professional meme maker, but an admirer of funny and interesting memes.

I started hunting for memes related to programming. I honestly never thought that I would find an ocean of memes and meme pages. There's so much content in them that I actually started learning stuff through memes. For instance, I never knew the meaning of the "sudo" command until I saw a meme about it.

There's this interesting meme that I saw about deadlock. An interviewer asked a candidate, "Explain deadlock and we will hire you." The candidate in turn replied, "Hire me and I'll explain it to you." Could there *be* a better explanation for deadlock?

I recently came across a one line meme that said, "I'm going to tell you a joke on UDP but you may not get it!"

Interesting, right? These are just samples. There is much much more!! Some meme pages on Instagramactually teach programming like never before.
There is a page called "inside code" where there are a lot of posts on optimization techniques along
with the brute force approaches.

A page called "learn machine learning" has an amazing set of posts that almost teach Machine
Learning from scratch!!

The conventional ways of learning obviously help lay a strong foundation for our programming knowledge, constant practice does make it better, and memes provide another perspective from which the (same old) concepts can be seen. If you're someone who does all these, then congratulations!! You're a Programemer!

MR. KARTHIBAN K

ASSISTANT PROFESSOR

THE RISE AND RAYS OF THE GPU

Ray Tracing or so called **"RTX"** is a new feature introduced by NVidia, which is still in developing phase in terms of consumer applications out in the market. It is a technique that produce realistic lighting effect in 3D applications. Substantially, an algorithm can trace the path of light and then simulate the light interacts with the objects in the virtual world of computer.

Over the years, we've seen the lighting effects in video games have become more and more realistic, but the ray tracing is more about how the object interacts with the world and has less about the light itself.
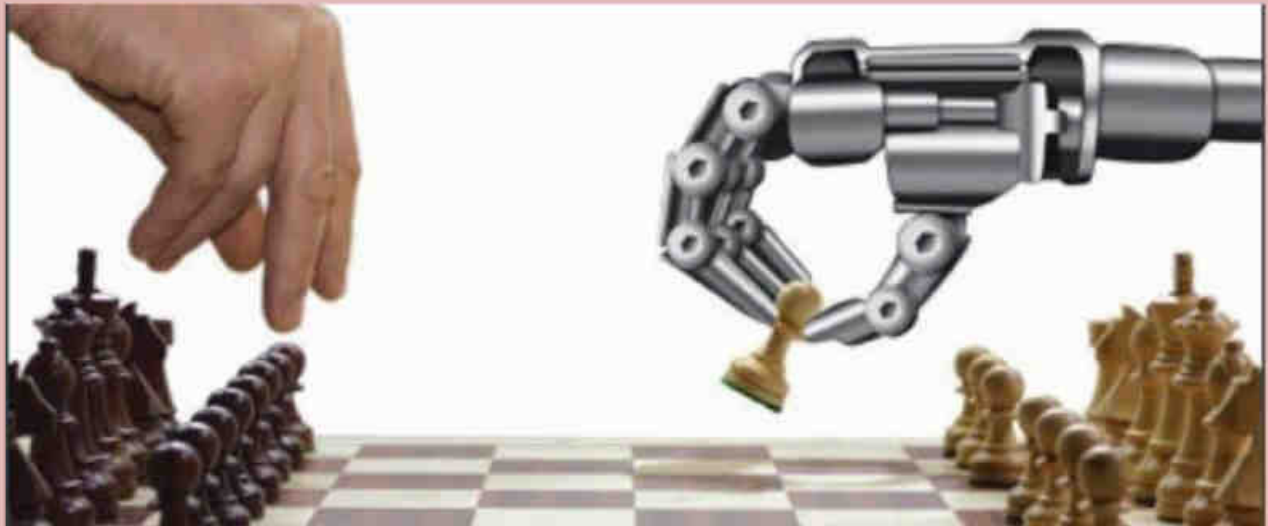
This brings dramatically more lifelike shadows and reflections with improved scattering. The algorithm finds where the light hits and calculates the interaction and interplay it is more like the human eye would see the real light reflections and shadows.Even though, there is enough computational power available, it's possible to render realistic CG images that close in real life.

But with a well-equipped gaming PC only has so much GPU power to work with, let a modern game console. Thus, this is just small beginning to the era of new GPUs which is based

Turing micro-architecture and the end of Pascal based GPUs.

This article is based on a ted talk presented by the famous chess player Garry Kasparov, who was considered to be the world's best, and who lost his match to the IBM's super computer, 'The Deep Blue'.

In 1985, he defeated 22 of the world's best chess playing machines and was the Grand master during that age. He was very proud at that time and stated that the machines were weak those days. After 12 years, in 1997 he played two games with the IBM's super computer The Deep Blue in which he won the first match but lost the second. When he first met Deep Blue, he had a weird feeling, the feeling which we may experience when wetravel on a driverless car for the first time or the feeling we experience on receiving an order from a computer. He wondered on the capabilities of technology. He wondered what a machine can do with him. But when he lost, he was very upset. He worried whether his beloved game of chess was gone. He then understood that he was afraid of his match and he was pretty sureof the fact that his opponent had no such fears.

FEAR INTELLIGENT MACHINES, WORK WITH THEM

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He then thought of playing chess games with computers on his side. Machines have statistics and wehave knowledge. His dream came into existence in 1998 in the name of Advanced machines. But its first experience was a failure, since the collaboration of machine power and human brain was not perfect. He came to a formulation that a machine plus a good process plus a weak player is superior to a strong player and even more superior to a machine plus a weak process plus a strong player.

The technology is growing at a higher pace and it is our responsibility to grow with it. Nowadays machines can work on their own and reduce manual labor. But we should not worry about it. Instead think of the ways in which we can bring the best out of it for the advancement of humanity. We should never worry about what machines can do today instead worry about what machines cannot do today. Machines have calculation and we have knowledge. Machines have objective and have purpose. We should work for the benefit of the society with machines on our side. The only thing, we as humans can do is, to dream. So let's dream and achieve big!!

MR. MANIKANDAN S

ASSISTANT PROFESSOR

GRAPHIC DESIGNING

All article is written based upon something they had inspired through their vision. Thus, we get inspired something by our visual in this visually advanced world. So, the idea of article based on graphical designing is catchier to choose. so basically, what is graphical designing? By the web sources, it has been clearly defined in two ways. One, Graphic design is the process of communicating visually using typography and images to present information. Graphic design practice embraces a range of cognitive skills, aesthetics and crafts, including typography, visual arts and page layout. Likeother forms of design, graphic design often refers to both the process (designing) by which the communication is created and the products (designs) which are generated. Two, Graphic design is a creative process that combines art and technology to communicate ideas. The designer works with a variety of communication tools in order to convey a message from a client to a particular audience. The main tools are image and typography. And its more interesting that there are eight types of graphical designing.They are, • Visual identity graphic design.

- Marketing & advertising graphic design.
- User interface graphic design.
- Publication graphic design.
- Packaging graphic design.
- Motion graphic design.
- Environmental graphic design.
- Art and illustration for graphic design.

Visual identity graphic design:

Visual identity graphic design can be described as the visual elements of brand identity that act as the face of a brand to communicate those intangible qualities through images, shapes and color. Designers that specialize in visual identity graphic design collaborate with brand stakeholders to create assets like logos, typography, color palettes and image libraries that represent a brand's personality.

Marketing & advertising graphic design.

Marketing designers work with company owners, directors, managers or marketing professionals tocreate assets for marketing strategies. They might work alone or as part of an in-house or creative team.Example of Marketing & advertising graphic designis Magazine and newspaper ads. Example for Art and illustration for graphic design are Comic books, Technical illustration and Concept arts.

User interface graphic design.

A user interface (UI) is how a user interacts with a device or application. UI design is the process of designing interfaces to make them easy to use and provide a user-friendly experience. Example of User interface graphic designis Web page design

Publication graphic design.

Publication design is a classic type of design—think books, newspapers, magazines and catalogs.Graphic designers that specialize in publications work with editors and publishers to create layouts with carefully selected typography and accompanying artwork, which includes photography,graphics and illustrations.

Packaging graphic design.

Packaging designers create concepts, develop mockups and create the printready files for a product. This requires expert knowledge of print processes and a keen understanding of industrial design and manufacturing

Motion graphic design.

Motion graphics design is a little new for designers. Formally reserved for TV and film, technological advances have reduced production time and costs, making the art form more accessible and affordable. Now, motion graphics is one of the newest types of design and can be found across all digital platforms, which has created all sorts of new areas and opportunities.

Example for Motion graphic design are animated logos and promotional videos.

Environmental graphic design.

Environmental graphic design visually connects people to places to improve their overall experience by making spaces more memorable, interesting, informative or easier to navigate. Environmental design is a broad type of design, here are some examples:Public transportation navigation and Event and conference spaces.

Art and illustration for graphic design.

Graphic art and illustration are often seen as being the same as graphic design, however they're each very different. Designers create compositions to communicate and solve problems, graphic artists and illustrators create original artwork. Their art takes a number of forms, from fine art to decoration to storytelling illustrations.Example for Art and illustration for graphic design are Comic books, Technical illustration and Concept art.

Mr.V.JOTHI PRAKASH

ASSISTANT PROFESSOR

DARK WEB

When we think of the web, most of us think of sites like Google, Facebook, Twitter. The web that is accessed through search engines like Google and Bing is only a tiny percentage of the "web" that's out there, Known as the "surface web", "indexed web", and "visible web". The current estimated size of the surface web, according to one source, is close to 5 billion pages.

However, the surface web is believed to make up only a tiny percentage of the World Wide Web, with much of it existing on the "deep web" and the "dark web".

No one really knows how big the deep web is, but it is certainly larger than the surface web, with some estimates saying it may be 500 times as large as the searchable web. According to a study published in Nature in 2015, Google indexes just 16 percent of the surface web, and none of the deep web, meaning that a Google search will show up less than 1 percent of the information that exists online.

The analogy of an iceberg is often used to describe the difference between the surface web and the deep web we can see a small part of it on the surface, but a lot more lies beneath.

Websites on the dark web don't end in ".com" or ".org" or other more common web address endings; they more often include long strings of letters and numbers, ending in ".onion" or ".i2p."

HOW DARK WEB ENCRYPTION WORKS

TOR and similar services operate by bouncing your traffic around the web so that your ISP does not know what sites you visit, and the sites you visit do not know your physical location. TOR users do not connect directly to the website or service they want to visit. Instead, they bounce through a series of nodes on the network. Each node only knows the data it receives and the node to which it is passing the data.So while the initial node knows it is being connected to by, for instance, MK's computer, it doesn't know which website MK is planning to visit, as MK's connection will be bounced through further nodes before connecting to its final destination. This website will only know the final node

that connected to it, it will not know that MK's computer was the one that originally sent the request to connect to the service.

This complex encryption model makes it very difficult to trace back who has visited a site using the dark web, guaranteeing users a level on anonymity they do not have on the surface web.

DEEP WEB VS DARK WEB

While the terms are often used interchangeably, the deep web and the dark web are not the same thing.

The deep web refers to the parts of the World Wide Web that are not indexed by search engines. It includes things like databases, email services, online banking services, and other services protected by paywalls or passwords.

The dark web is relatively a small part of the deep web. Websites on the dark web are not accessible through normal browsers and can only be accessed through special software such as TOR or I2P (Invisible Internet Protocol).

The appeal of the dark web is its anonymity.It has a high level of encryption that means it is difficult to identify either those visiting websites or hosting websites on the dark web. TOR is one of the popular services used to visit darkweb sites.

Ms. LAVANYA S

ASSISTANT PROFESSOR

COMPUTER,CHIPS AND CRICKET

The success or failure of any invention, specifically a technological invention, depends on how effectively it serves the society and when the Bat Sense Chip was welcomed by the cricketing fraternity, this technological invention had its mission accomplished. When Bangladesh's Tamim Iqbal scored his first 100 against England, his coaches would have been able to give him some new insight into why he did so well and how he might replicate that performance.

Normally, top-level cricket coaches would give their advice based on what they saw, perhaps helped by video analysis software and some biomechanical analytics about the batsman's movements. Yet Tamim's coaches had some extra help. The Bangladesh star was one of many players using a smart bat with sensor technology in the handle – the first time this had been used at a major cricket tournament.

For a while now, cricket coaches and analysts have, during practice, placed sensors on key parts of batsmen bodies – arms, legs, the abdomen and thighs – that generate movements that determine how efficiently the batter hits the ball. Yet whereas the player's body propels the bat, it's the bat itself that actually speeds through the air and strikes the ball.

The new sensor tech, named BatSense, was devised by Intel, the International Cricket Council's Innovation partner, and sports start-up Specular. The technology sends real-time data of bat speed and angle from the point the batter lifts the bat, through the downward arc, the moment of impact and the follow through, to an analyst's computer.

"A batter needs fast hand-speed to create power through the ball," says England and Wales Cricket Board's lead batting coach, Graham Thorpe.

Thorpeexplains the necessary bat speed can be created by big, tall players with long levers (arms), like England's Alex Hales and Ben Stokes, but also the short snappy arm movements preferred by shorter players like Jonny Bairstow, Eoin Morgan and Thorpe himself. Each BatSense chip weighs less than 25g and fits into a sleeve covering the bat handle beneath the rubber grip. It contains an Intel Curie compute module, which processes wireless data with motion sensors and built-in algorithms.

During the design phase, Specular engineers had to ensure these algorithms produced accurate measures from players' bats. The average batter moves a lot as they wait to hit the ball, like tapping the bat on the ground and shuffling their feet. Some batsmen get rhythm from this, for others it's a habit. From the point of view of the analyst, it's just noise, so the algorithm had to be taught to ignore it.

The smallest errors in a batsman's technique can be the difference between them succeeding and failing at international level. Apart from the information about bat speed and angle, there are more pressing things that they need to know. Balance, coordinating movements, tracking the ball with their eyes from the bowler, off the pitch and onto the bat, keeping their head still as they strike the ball and so on.

PERKS OF USING A BAT SENSOR

At a Champions trophy event, Intel used a Falcon 8 drone to monitor pitch conditions. The drone carried HD and infra-red cameras to monitor and assess grass coverage, grass health and topology. TV commentators used this information to provide insights into how the pitch might affect play.

Bats containing BatSense technology were used in fan zones at the Oval, London, and Edgbaston, Birmingham, during the Champions Trophy. Fans could put on a headset and face virtualreality bowlers.

Cricket Australia, the sport's governing body down under, is preparing for the Ashes by using a new Microsoft sports analytics platform to help coaches better understand player performance.

Specular's principal engineer, Nara Sundarajan, thinks it won't be long before someone attaches sensors to cricket balls to record how much a bowler spins, swings the ball, or moves it off the seam.

TECHNIQUE CHECK: SIX THNGS THE SMART BAT MEASURES

1. **Time to impact** Elapsed time between back-lift and the ball impact point.
2. **Follow through angle** Angle of bat from vertical to the rest point or direction change after impact.
3. **Bat speed at impact** The speed of the bat at the time of impact with the ball.
4. **Back lift angle** Angle of bat from vertical to the rest point on the backswing.
5. **Max bat speed** Maximum bat speed within the swing between backlift and follow through.
6. **Impact angle** Bat surface vertical angle during impact with the ball.There's virtually no domain where Computer and technology haven't placed their giant feet on.And the Cricketing field is no exception.Embracing the change and adapting to the 'SMART WAY' is definnitely the way forward!!

Ms. SAKTHIPRIYA K

ASSISTANT PROFESSOR

BIOLOGICALLY INSPIRED OPTIMIZATION TECHNIQUES

FISH SCHOOLING OPTIMIZATION
- Threats detection
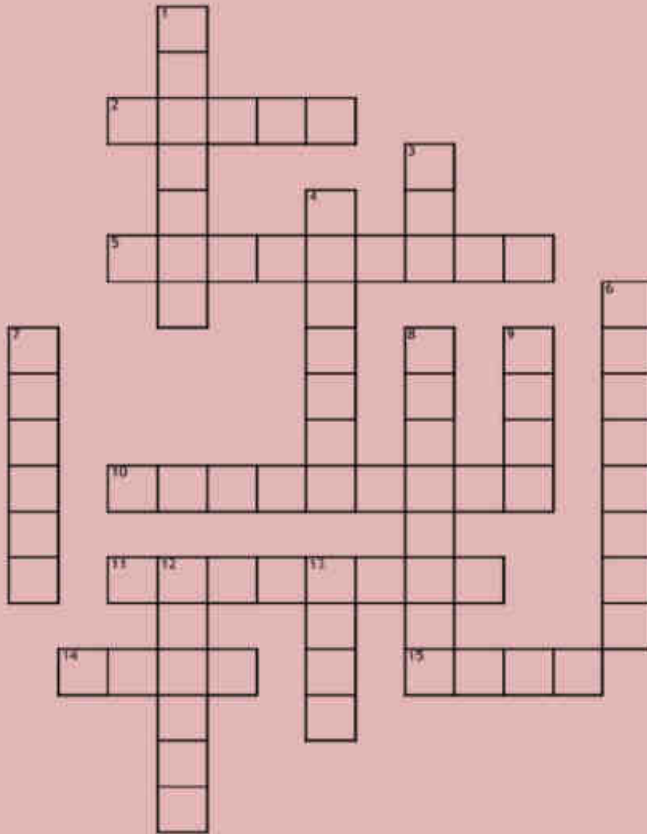- Forecasting stock indices using radial basis
- Knapsackproblem

BIRDS FLOCKING OPTIMIZATION
- Robotics based rescue operation
- Computer animation
- Separation (avoid crowding neighbours)
- Alignment (steer towards average heading of neighbours)

MS.SHERUBHA P

ASSISTANT PROFESSOR

FILL ME OUT

ACROSS

2 . A device type that feeds data into a computer, such as a keyboard or mouse.

5 . The exclusive right, as recognized separately in each country, to publish and sell literary, artistic, or musical materials.

10 . A software system that links topics on the screen to related information and graphics, which are typically accessed by a point and click method.

11 . Copy (data) from one computer system to another, typically over the Internet.

14 . Usually consists of eight bits.

15 . A measure of the amount of computational work that a computer system performs.

DOWN

1. Usually comprises the display device, circuitry, casing, and power supply.

3. An error, flaw, failure, or fault in a computer program or system that causes it to produce an incorrect or unexpected result or to behave in unintended ways.

4. A client software program that runs against a Web server or other

Internet server and enables a user to navigate the World Wide Web (WWW) to access and display data.

6. The collection of physical parts of a computer system.

7. Sending an email, posting photos on a social media site and using your webcam.
A part of a computer system or network that is designed to block

Ms.S. GAYATHRI S

ASSISTANT PROFESSOR

THE BINARY SUDOKU

		0							0		1
	1				0						
				1	1					1	1
0				1			1				
											1
0		0					0	0			
					1						
1	1						0				
			0		1	1					
0		0									
	1			0		0			0		

THE BINARY SUDOKU:

Randall presents a binary sudoku puzzle. The joke is that the binary system has only two digits (0 and 1). Thus, the binary puzzle is a challenging logic puzzle that can be solved just by reasoning. Only zeros and ones occur in the puzzle, but this turns out to be more complicated than it seems to be.

RULES:

Binary puzzle has to be solved according to the following rules:

1. Each box should contain either a zero or a one.

2. More than two equal numbers immediately next to or below each are not allowed.

3. Each row and each column should contain an equal number of zeros and ones.

4. Each row is unique and each column is unique. Thus, any row cannot be exactly equal to another row, and any column cannot be exactly equal to another column

Mr. SURENTHER I

ASSISTANT PROFESSOR

CLOUD HUNT

Inventor of Computer BIOS   Founder of Email

Inventor of Computer Bug   Founder of Internet

Inventor of First Data Base   Father of 'Java'

Inventor of Computer Scanner   Founder of Linux

Inventor of Computer Speakers   Founder of Mouse

Founder of Apple Computers   Founder of Php

Founder of Artificial Intelligence   Founder of USB
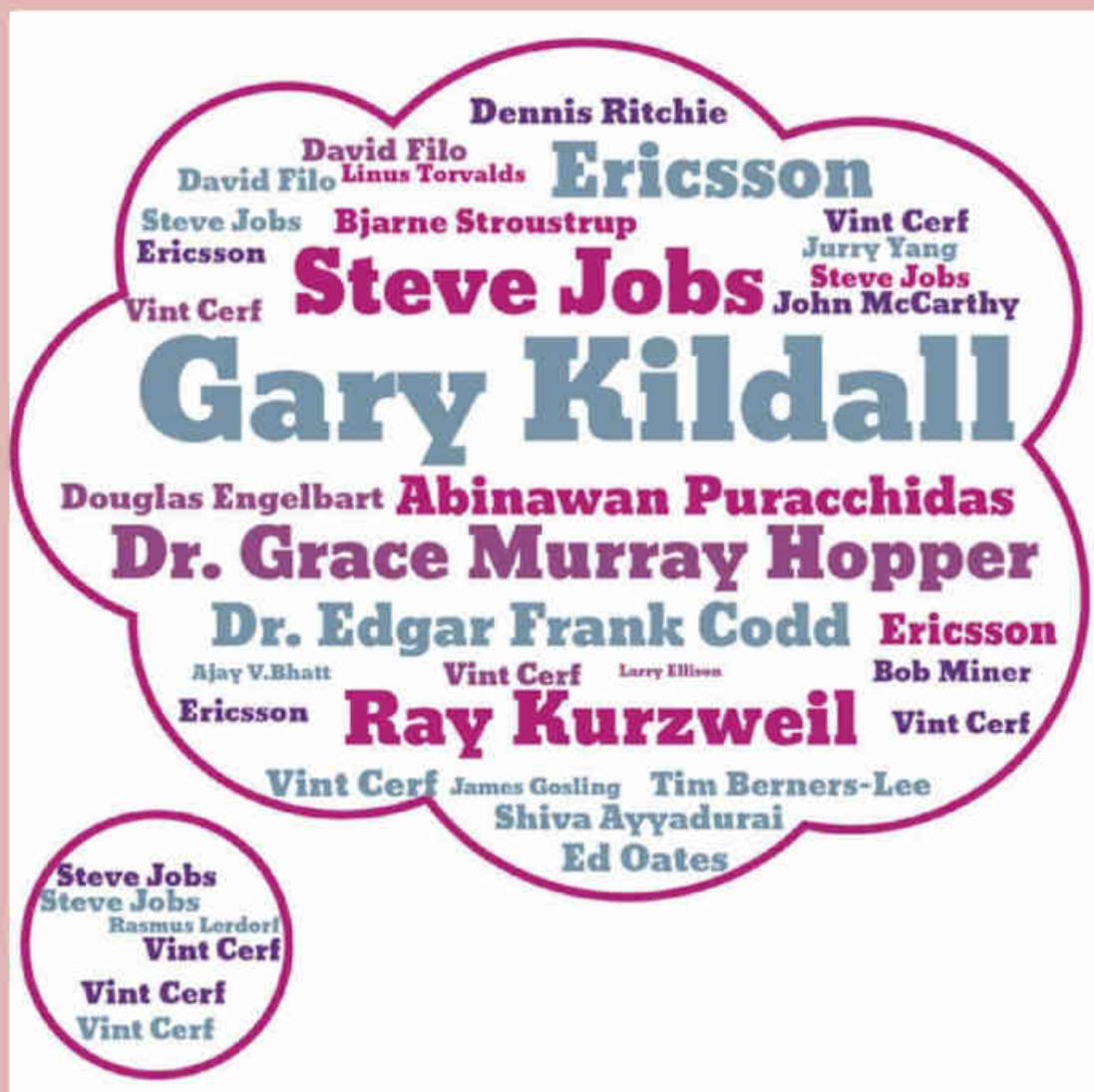
Founder of Bluetooth   Founder of WWW

Ms ANTONITA SHILPA J

ASSISTANT PROFESSOR

NEVER **GIVE UP**
ON YOUR ~~DREAMS~~
BUGS