February 2015

/* identITy */

We do not seek, we find!

IT DEPARTMENT HALFYEARLY MAGAZINE

INSIDE THIS ISSUE:

The B.Tech students of IT department have bagged the internal funding projects sponsored by SSN Trust in a broad spectrum of research areas like IoT, Video Processing, Data Analytics and Network Security.

Automated Attendance System

Members: G. Krishna & M.Arun Kumar
Mentor: Dr. R. Srinivasan

The project focuses on developing a mobile based app for paperless, quick and accurate attendance system.

Vacant seat detection System

Members: S. Ananda Subramaniam, T.P. Dwarakesh
Mentor: Dr. T. Sree Sharmila

Focus is to create a software that can help in crowd management & indicate if any available space is left for more people to be accommodated in the vehicle

We thank the

SSN Management for providing an unprecedented financial aid amounting to Rs. 12.3 lakhs for faculties and 1.15 lakhs for students to realize their ideas.

College bus tracking system

Members: R. Jagadeesh & R. Gowtham
Mentor: Ms. S. Sasirekha

Time of arrival of our college buses at the mentioned stops is subject to traffic and weather conditions, among a lot of other factors. This makes students to either get to their stops earlier than the tentative time, or reach later. The proposed idea is to implement GPS on the buses and thereby provide the location co-ordinates to the palm of the student.

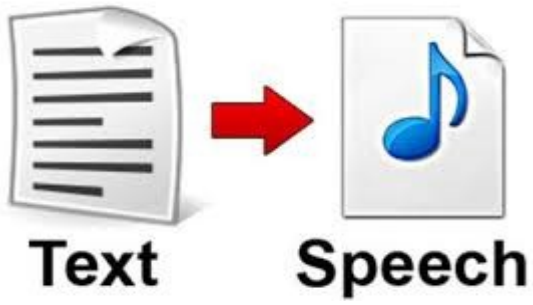
Landslide prediction and alert system

Members: Akshay S. Santhanam & K. Mahalingam
Mentor: Ms. S. Sasirekha and Mr. I. Joe Louis Paul

The project focuses on a real –time land slide prediction and alert system for rainfall induced landslide using wireless sensor networks.

Portable Text to Speech Converter for the Visually Impaired

Members: K. Ragavi & Priyanka Radja
Mentor: Dr. S. Chithra



A handheld scanner and OCR application which helps the visually impaired listen to an audio read-back of the scanned text .

Implementation of WLAN 802.11/N and To Estimate co-channel and Adjacent channel interference

Members: S. Vigneshwaran
Mentor: Dr. S. Chithra

The objective of the project is to focus on maximizing the bandwidth gain upto300mbps with less number of error rate using Beamforming and MIMO technology plays major role .

Technology'ai Arindhaal

Oru mellisaana kodu.. Indha pakkam paatha technology romba naladhu. Andha pakkam paatha adhe technologyromba kettadhu. Nalladha Kettadha nu decide panna there are lot of things to be discussed.

Of late, there is a significant growth in many automation systems which are based on internet of things. Humans' perception on the emerging technologies may vary. Few feel that the technologies are a boon and makes their job easy. While others feel that it is a huge disadvantage when security and privacy aspects are taken into picture.

In India, Onida introduced a smart A/C. Once the A/C is installed in your house, you can switch it on by sending a message from your mobile to the device. You can use this service when you are outside and about to return home. Before you reach home you can turn on your A/C and keep the room cool before you reach your house. "Romba azhaga panirukeenga ma"

In a sports scenario, you can tag a person as your favourite footballer. You are provided with a smart jersey which tracks the movement of your favourite player and based on those movement you will receive vibrations in the smart jersey. "Technology use panna poriya?? Illa.. Adhukkum Mela"

Using smart pressure management systems, water leaks can be identified and stopped. I20 is the technology used in this system and they claim that average loss can be reduced by 20%. Turbidity Sensors are available for quality check of water. "Nanga lam tsunami laye swimming podravanga".

But when the security aspects come into the picture, just imagine how embarrassing it would be if your neighbor gets access to all the information about you by hacking the IOT devices installed in your home. A study revealed that a misfeasor hacked into the devices present in a house and even came to know at what time the owner was in the restroom. He then broke into that house, locked the restroom and looted the house. This gives the feeling "Enna ma ipdi panreengale ma!!".

Another aspect is that the current generation are over dependent on the technologies. Making decisions using technologies could be potentially catastrophic at times. Depending heavily on technologies these days, students use calculator for adding 4 and 5 too. Smart watch is another one used by students to load pdfs and copy in exam halls.

On the whole, as mentioned earlier perceptions vary. But I'm mersalaayiten with the technology :D

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Only 8% of the world's currency is physical money, the rest only exists on computers.

ROLL TOP LAPTOP

What is it?

Roll top is a portable computer development concept for designer, architect and everyone, who would like to have a gadget, which, from an aesthetic standpoint alone, certainly hits the mark. By virtue of the OLED-Display technology and a multi touchscreen the utility of a laptop computer with its weight of a mini-notebook and screen size of 13 inch easily transforms into the graphics tablet, which with its 17-inch flat screen can be also used as a primary monitor due to the support attached to the back of the screen.

Rolltop 2.0 is a further development of Rolltop with some visible and mostly invisible improvements (e.g. internal design, placement of certain components etc.)

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PROJECT ARA

What is ARA:

Let's go back a year into the past, January 29, 2014, the day Google sold Motorola to Lenovo. Google acquired Motorola Mobility in August 2011 and gave the world the Moto range, but it wasn't to be and Google concluded its unprofitable foray into the Smartphone hardware market with the sale. That being said it wasn't a complete disaster. Google still had some clout in Motorola: the Advanced Technology and Projects (ATAP) group; Motorola's Google X, headed by Reginald Dugan, former director of the United States Department of Defense's most fabled subsidiary– the Defense Advanced Research Projects Agency (DARPA). DARPA brought GPS, Internet and Stealth Fighters into this world. It's actually completely logical that Google chose to retain ATAP. The projects and technologies it specializes in are audacious ideas which Google calls 'Moonshots' and rightly so. Google acknowledged the existence of Project ARA in late October, 2013. What is Project ARA you ask? Well Project ARA is building a modular phone. What is a modular phone? The phone is a collection of modules-the display module, speaker module, battery module, camera module even a night vision module; the possible modules are limited only by imagination. The modules are like functioning Lego blocks-phones are built with these modules. I am not lying, gone are the days when you had to replace your phone for want of a better camera or fingerprint sensors or a micro fluidic sensor which can test all sorts of fluids-blood, water, you name it. There could be a module for just about anything. What's more, the modules are hot swappable, meaning the module can be swapped even without the battery(the device can work for 30 seconds when battery is being swapped). ATAP is working on increasing this swap time. to 2 minutes.

The ATAP team is well on track to meet the self-imposed deadline. May 5, 2015 will see the launch of Spiral 2 in Puerto Rico. Spiral 2 is the first modular phone to be available to the general population; Spiral 2 packs 1280 x 720 display, dual application processors including Marvell's PXA1928 and NVIDIA's Tegra K1, 5-megapixel camera, 3G, Wi-Fi and Bluetooth connectivity. Initially, 11 working modules will be available to buyers, with the number supposed to reach 30 by the end of the year. The first module collection will include a better camera, and 4G LTE support.

What's the catch? Unfortunately, the device will have a battery that's 20% to 30% smaller than an average Smartphone battery, which means battery life might not be that great, plus the phone is expected to be a little bulky.

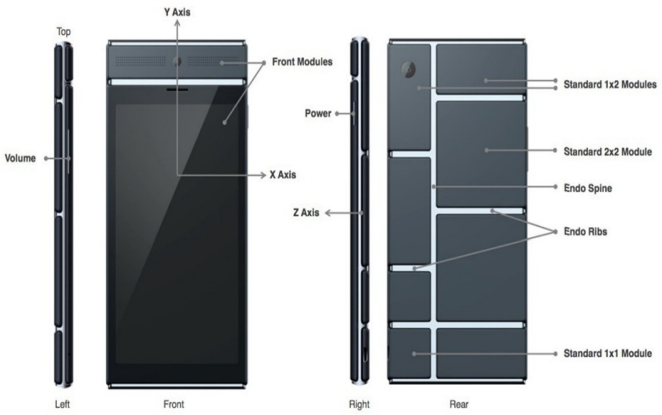
HARDWARE

An ARA phone starts as an 'endoskeleton', a bare motherboard with no screen, processor, battery. Then modules bought sepARAtely or as part of a kit, can be attached to the end to create a complete phone(assembly workers in China could easily lose their jobs if ARA becomes mainstream).

The modules lock into these slots by way of electro-permanent magnets (EPMs). These are a hybrid of electromagnets and normal permanent magnets, which can essentially be turned on and off by having a current passed through them. Once the magnet is turned on it stays in that state without needing to have electricity flowing through it, unlike a conventional electromagnet. The connection should be pretty robust - Google says that all ARA phones must be able to withstand a 4-foot drop and fairly intense vibration. The electro-permanent magnets will be controlled by an EPM application, where the user will be able to see what modules are attached, whether they're locked in or not. You'll also be able to activate/deactivate the magnets on a per-module basis, using the touch screen. The modules themselves can be 1x1, 1x2 or 2x2, although 1x1 modules are apparently non-functional on the current prototype.

U.S. chose 00000000 as the password for its computer controls of nuclear tipped missiles for eight years.

Every module communicates with the endoskeleton via an 'interface block', a little connector that provides power and data flow to and from the module. A battery module could provide power via the interface block, and a processor module would draw power and so on. The goal of ARA is that as processors and RAM increase in power, users can just keep upgrading those specific modules to keep their phones at the cutting edge. For that to work, however, an interface that lets all the modules talk to each other has to be able to keep up.



One of Google's more interesting visions for ARA is the use of over-sized modules that stick out from the chassis. Two ideas specifically highlighted are a thermal-imaging camera, which you could swap out the regular camera for when you're feeling particularly Terminator; and a fingerprint sensor module that extends off the bottom of the phone. It's not difficult to imagine other, equally useful, applications - a zoom-lens camera, for example, or a credit-card reader.

ARA phones could redefine the future, they could become the mother of all modular phones.

MDK (Module Development Kit):

On January 14, 2014 Project ARA launched the Module Development kit to help module developers. Details can be found at: http://www.projectARA.com/

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RIDING THE BIG DATA WAVE

Data scientists" trained in big data technologies are in great demand in the industry and the government. Interest in big data analytics arises from its demonstrated ability to transform large volume of unprocessed data into one for improved decision-making. For example, social media posts, transactions from retail, supply chain networks, electronic medical records (EMR), and other information sources provide the required input to big data projects. Data reduction methods and ETL (Extract-Transform-Load) methods then produce descriptive or predictive models of business processes. Predictive analytics, for example, could focus on micro-targeting individual customers using models that produce probabilistic statements about the future consumer behavior (as could be seen by the ads dynamically getting served in the web pages visited by the users).

Big data, when harnessed properly, is undoubtedly a boon. It enables people and organizations alike to make more accurate, data-driven decisions/predictions based on past and expected behavior. Organizations have been analyzing massive data sets for better business and operational insights for some time now. However, it wasn't until forward-thinking companies like Google, Facebook, Twitter began building custom databases that were specifically intended for larger data sets, that the big data movement really took off. The big data ecosystem is comprised of a large pool of modern databases and software packages like SAS,SPSS, Hadoop, MapR, Hive, PigR etc., These tools require specialized training and/or certification to be used properly. The Harvard Business Review recently referred to the post of data scientist, whose primary responsibility is to analyze complex data sets with these tools, as the 'job of the 21st century'. The continued growth of storage and big data analytics seems to be an indication to Moore's Law of the Next Decade. A growing number of online learning platforms aimed at providing technical training and certification have appeared in recent years.

Some notable examples include Coursera, Khan Academy, Edx and Big Data University, all of which are free of charge (a stark contrast to the wave of

for-profit "universities" that had previously dominated the online education landscape). These platforms are an extremely useful medium for students who are looking for a cost-and time-effective means by which they can gain necessary training for big data tools and technologies. The above mentioned salient features about 'Big data' kindled my interest to know more on the technology and the tools towards becoming a "Data Scientist". I have published a paper on big data analytics in a leading technical journal (IJSER). I am currently working upon a project aiming to analyze large volume of data pertaining to cancer. With "predictive analytics" people will be able to understand the root-cause and come up with recommendations and suggestions (based on various parameters like age, gender, geography, food-habits, physical fitness levels and numerous medical factors) to prevent getting the disease and/or take relevant corrective measures quickly.

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Ethical hacking and Ethical hacker are terms used to describe hacking performed by a company or individual to help identify potential threats on a computer or network. An ethical hacker attempts to bypass the system security and search for any weak points that could be exploited by malicious hackers. This information is then used by the organization to improve the system security, in an effort to minimize or eliminate, any potential attacks.

What constitutes ethical hacking? In order for hacking to be deemed ethical, the hacker must obey the following rules:

1. Expressed (often written) permission to probe the network and attempt to identify potential security risks.
2. You respect the individual's or company's privacy.
3. You close out your work, not leaving anything open for you or someone else to exploit at a later time.
4. You let the software developer or hardware manufacturer know of any security vulnerabilities you locate in their software or hardware if not already known by the company.

When you are surfing the internet, a lot of information is being exchanged between the web host and the device being used to surf the internet. This type of information can always be easily breached by hackers, especially if it involves online transactions and this has always been a major issue when dealing with the internet. Nowadays, cases of online theft are becoming increasingly popular. A way to determine whether a site is safe is through an SSL Certificate.

The term "ethical hacker" has received criticism at times from people who say that there is no such thing as an "ethical" hacker. Hacking is hacking, no matter how you look at it and those who do the hacking are commonly referred to as computer criminals. However, the work that ethical hackers do for organizations has helped improve system security and can be said to be quite successful.

The White Hat Hacker or Certified Ethical Hacker is a professional certification, provided by the International Council of E-Commerce Consultants (EC ccouncil).

BASIC HACKING TECHNIQUES:

BRUTE FORCE

Any password can be cracked using Brute-force attack. Brute-force attacks try every possible combination of numbers, letters and special characters until the right password is found. Brute-force attacks can take a very long time depending upon the complexity of the password. The cracking time is determined by the speed of the computer and complexity of the password.

Countermeasure: Use long and complex passwords.

SOCIAL ENGINEERING

Social engineering is process of manIPulating someone to trust you and get information from them. For example, if the hacker was trying to get the password of a co-worker's or friend's computer, he could call him pretending to be from the IT department and simply ask for his login details. Sometimes, hackers call the victim pretending to be from the bank and ask for their credit card details. Social Engineering can be used to get someone's password, to get bank credentials or any personal information.

Countermeasure: If someone tries to get your personal or bank details ask them a few questions. Make sure the person calling you is legit. Never ever give your credit card details on phone.

RATS AND KEYLOGGERS

In keylogging or RAT-ing the hacker sends a keylogger or rat to the victim. This allows hacker to monitor everything a victim does on his/her computer. Every keystroke is logged including passwords. Moreover the hacker can even control the victim's computer, from the comfort of his/her couch.

Countermeasure: Never login to your bank account from a cyber cafe or somebody else's computer. If it's really important, use an on-screen or virtual keyboard while trying to login. Use the latest antivirus software and keep them updated.

PHISHING

Phishing is the easiest and most popular hacking method used by hackers to get someone else's account details. In a Phishing attack, the hacker sends a fake page, mimicking the real sites like Facebook, Gmail etc., to victim. When someone logs in through that fake page his details will be sent to the hacker. These fake pages can be easily created and hosted on free web-hosting sites.

Countermeasure: Phishing attacks are very easy to avoid. The URL of this phishing pages are different from the real one. For example the URL of a phishing page of Facebook might look like facbbook.com (As you can see there are two "b"s). Always make sure that website's URL is correct.

RAINBOW TABLE

A Rainbow table is a huge pre-computed list of hashes for every possible combination of characters. A password hash is a password that has gone through a mathematical algorithm such as md5 and transformed into something which is not recognizable. A hash is a one way encryption so once a password is hashed there is no way to get the original string from the hashed string. A very commonly used hashing algorithm to store passwords in website databases is md5. It is almost similar to a dictionary attack, the only difference is, in a rainbow tables attack, hashed characters are used as passwords whereas in a dictionary attack, normal characters are used as password.

Countermeasure: Make sure you choose a password that is long and complex. Creating tables for long and complex passwords takes a very long time and a lot of resources.

GUESSING

This seems silly but this can easily help you get someone's password within seconds. If the hacker

knows you, he can use information he knows about you to guess your password. The hacker can also use a combination of Social Engineering and Guessing to acquire your password.

Countermeasure: Don't use your name, surname, phone number or birth-date as your password. Try to avoid creating a password that relates to you. Create a complex and long password with a combination of letters and numbers.

Simple Cool Tricks With Chrome Developer Tool

As you probably know, there is a button on the right-click menu of Google Chrome and IE 10+ called "Inspect element". This is a developer tool. And you can have a lot of fun with it!

A DDoS Attack

Distributed denial-of-service (DDoS) attacks are always in top headlines worldwide, as they plague bank websites, and virtually every other organization having a prominent online presence. The main reason behind the proliferation of DDoS attacks is that the attacker doesn't incur too much cost. Fortunately, today various prevention methods have been developed to tackle such attacks.

There are 5 easy steps to learn Hacking :-

1. Take the necessary safety measures to hide yourself from your target.

There are lots of techniques to hide yourself from the target computer. I recommend you to use as many techniques as you can.

Few important tricks :-

→ Use Hidden IP Software :- This software will help you to hide your IP address

→ Use Firewall:- Firewall secures your computer and restricts any personal information from going outside.

→ Use Proxy servers: - Whenever you want to attack the target, use proxy servers.

Use others' username and password: - Try to avoid using your own user name and password for internet connection. Learn the technique to manipulate other's user name and password.

2. Find out the IP Address of Target Computer. What is an IP address? :- It's short for Internet Protocol Address. Protocol means the way computers talk to each other and Internet protocol means , the way in which two computers talk to each on the internet. So the complete meaning of IP address is address of a computer that wants to talk to other computers on the internet.

There are two important things about IP address :- It is unique for every computer. It is needed every time we wish to connect to the internet.

Use of IP address in Hacking:- IP address is a vital part of hacking. To learn its importance in hacking, first we need to know what is hacking . All I can say here is that if we don't know the IP address of the target computer we won't be able to access the target computer.

Ways to find out IP address :-

→ Ping

→ Tracert

→ DNS query

3.Gather information about the target computer such as its operating system , time, date etc etc . What's the need?

To know the weaknesses of the target computer.

To exploit those weakness.

Learn to exploit them.

How to gather information?

→ Telnet

→ Dns Query

→ Port Scan

→ Tracert

4.Use Search engine (according to information obtained from above steps) to get tools which will help you hack the target computer. Search engines are vital cogs in a hacker's work-kit.

If we use the right tools, we should be able to access the target computer via its IP address and know exactly where the vulnerability lies in the target computer. To use that vulnerability we search for available tools. After downloading specific tools we need the IP Address of the target (we already know) to access it using another computer. Learn to use that vulnerability.

5. . Leave one or two files on the target computer so as to get easy access in future. For repeated access, hackers usually leave files on the target computer. Net cat is a file (download it now!) that allows the attacker to have continued access to his victim.

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GOOGLE IT! – A simple term with a lot of technical sense

We all use google day in, day out. In fact it's become a very important part of our lives. Without google one can hardly imagine getting his/her work done. We use it with such ease that we use the term google it, when we have to get information about anything from 'how to cook sambar' to 'how to set foot on the moon'. Google is the place to go if one has to know something. I'll give you an insight into the technicality that goes into making a simple search on google. Using google is quite simple, we type a search string, hit enter and within a fraction of a second we get our result. But do you know what happens in the background? Well if you read on, I'll give you an insight into it.

The google walker has already visited all the web pages in the world, it is up to the owner of the website to grant permission to google to access the website. Google uses an algorithm called "random walker algorithm" to crawl the entire web (There are

60 billion pages in the web and google crawls over them considering them as a graph!). Google goes from one site to another by following the links in a page and then walks to the next page. If there is a loop among the pages the walker jumps to another random location and walks through the graph. Once a particular site is visited, they're sorted based on their contents and a number of other factors. This process is called web indexing.

Once a user types the search string, Google then uses various auto completion algorithms to find all possible strings derived from the search string, does spell checks, and also finds synonyms of various words in the string. Google then retrieves relevant data from the index, by mapping the optimized search result to the indexed storage. This is done by a distributed system using a MapReduce algorithm. Then google ranks each result based on the authenticity and ranks based on various algorithms before displaying the result to the user.

One will definitely be surprised to note that google does all this in a fraction of a second. Such is the efficiency of its algorithms and of course, the power of its distributed network. I hope that as engineers we feel proud that we can understand the process behind this search engine and appreciate its beauty in its entirety.

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REVOLUTIONARY THINGS IN IPHONE 6 AND IPHONE 6 PLUS

The users of iPhone always had a disadvantage when it came to size. In order to satisfy the users the Apple Corporation came out with two phones which differ in size and not much in their specifications. They named these stunning gadgets as iPhone 6 and iPhone 6 plus. Incidentally these have revolutionized the payments in stores with the help of **Apple Pay.**

"iPhone 6 isn't simply bigger — it's better in every way. Larger, yet dramatically thinner. More powerful, but remarkably power efficient. With a smooth metal surface that seamlessly meets the new Retina HD display. It's one continuous form where hardware and software function in perfect unison, creating a new generation of iPhone that's better by any measure."

IPhone at its Largest. And thinnest.

This is just not only a larger display but a great one too. And the thickness is a **stunning engineering achievement.**

Thickness

IPhone 6 - 6.9mm
IPhone 6 plus - 7.1mm

Security. Right at your fingertip.

With the help of Touch ID sensor the authenticated users can unlock their phones by placing their finger over the home button instead of entering the password every time you want to use it.

How it works?

There's a lot of technology at work below the surface of the Home button. Touch it and the surrounding stainless steel ring detects your finger and wakes the capacitive touch sensor. The laser-cut sapphire crystal surface of the button then directs the image of your finger to the sensor, which reads beneath the outer layers of your skin to get a detailed fingerprint. Software then reads the ridges of your fingerprint and finds the match to unlock your phone.

The app store purchases can also done using Touch ID.

What is Apple Pay?

Apple Pay is a mobile payment and digital wallet service by Apple Inc. that lets users make payments using the iPhone 6, iPhone 6 Plus, Apple Watch-compatible devices iPad Air 2, and iPad Mini 3. Apple Pay does not require Apple-specific contactless payment terminals. It will work with Visa's PayWave, MasterCard's PayPass, and American Express's ExpressPay terminals. The service has begun initially only for use in the US, with international roll-out planned for the future.

How it works??

Add the card that you already use for your iTunes Store account. Add a new card using your device's iSight camera.

Pay with Apple Pay in stores

On iPhone 6 and iPhone 6 Plus, you can use Apple Pay in stores that accept contactless payments. Look for the symbol at checkout.

To pay with Apple Pay using your default card, hold your iPhone an inch or less from the contactless reader with your finger held on Touch ID without pressing it. If you need to choose between "Credit" or "Debit" on the terminal, we recommend you to choose "Credit" to get the most consistent Apple

experience. Choosing “Debit” may not always work successfully with some older merchant payment terminals and backend systems. Some stores might have this symbol on their card readers and POS terminals, but they might not be currently set up to accept contactless payments including Apple Pay. At present, this includes 7-Eleven, Home Depot, and Jack in the Box.

1. Hold your iPhone near the contactless reader without placing your finger on the Touch ID. Your iPhone will wake up, and you'll see your default card on your screen.
2. Tap your default card. From the list of cards, tap the one you want to use.
3. Place your finger on the Touch ID and move your iPhone near the reader to complete the payment. You might also need to sign a receipt, depending on the store and the transaction amount.

Make sure that you hold your iPhone near the reader until you feel a subtle vibration and see a checkmark on the screen. That's how you get to know that your payment information was sent.

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WWW leading to ETC !?

The World Wide Web (WWW) is a system of interlinked hypertext documents that are accessed through the internet. With a web browser, web pages that contain texts, images, audios and videos can be viewed. WWW is a way of accessing information over the internet, that is, it is an information sharing model. Transmission of data is achieved with the help of hyper text transfer protocol-HTTP- the language that is widely spoken over the internet.

Many a time people use the terms “www” and “internet” interchangeably. The fact is they are different and non-synonymous, yet

related terms. Internet is a massive network of networks that contains millions of computers together globally in which any computer can communicate with any other computer as long as they are connected to the internet.

Even though peoples' lives are made easier with the introduction of web, its liabilities are more when compared to its assets. Now-a-days it is treated as a library where lots of useful information can be gained. Communication has been made easier and accessible due to it. However, a coin has 2 sides and both the sides have to be analyzed for an unbiased conclusion. The inimical reality can easily influence human psyches. For example, violent videos and pictures could affect juveniles. Although it might not be a serious issue, for children who are unable to differentiate between the right and the wrong, it's the exactly the sort of stuff they shouldn't indulge in. In addition, the newly growing trend of "e- " has put a big full stop for young people by preventing them from thinking out of the box. That is, it has raised the

End of
Thinking
Capacity.

For every minuscule doubt that arises that needs a few minutes of thinking in depth, today's youngsters clarify it through the web. They don't pause to think. The reason that's usually given is insufficient amount of time, which is much similar to a bad workman blaming his tools. This isn't taking us in the right direction. It might mislead and make our futures one-dimensional.

Nothing in the world is flawless. Each and everything comes with its own pros and cons. Analyzing these will enable us to lead an e-independent life. Since we are the master of our lives and we control it, we should not allow it to take control!

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Michael Jeffrey Jordan

"I can accept failure, but I can't accept not trying"

All of us would know who the "God of Cricket" is; it is none other than our Sachin Ramesh Tendulkar. But, here we are going to see about the "God of Basket-Ball", the great Michael Jeffrey Jordan. Jordan is a former American professional basketball player, entrepreneur and principal owner and chairman of the Charlotte Hornets. He was born on February 17, 1963 in Brooklyn, New York. He played 15 seasons in the National Basket Association (NBA) for the Chicago Bulls and Washington Wizards. He started his career by joining NBA's Chicago Bulls in 1984. The position occupied by him on the court was Shooting Guard and his jersey number was 23, which remains popular. He quickly emerged as a league star, entertaining crowds with his prolific scoring. His leaping ability, illustrated by performing slam dunks from the free throw line in slam dunk contests, earned him the nicknames "Air Jordan" and "His Airiness". He also gained a reputation for being one of the best defensive players in basket ball. In 1991, he won

his first NBA championship with the Bulls, and followed those with three additional championships in 1996, 1997, and 1998. Jordan's individual accolades and

accomplishments include five Most Valuable Player (MVP) Awards, ten All-NBA First Team designations, nine All-Defensive First Team honors, fourteen NBA All-Star Game appearances, three All-Star Game MVP Awards, ten scoring titles, three steals titles, six NBA Finals MVP Awards, and the 1988 NBA Defensive Player of the Year Award. Jordan played on two Olympic gold medal-winning American basketball teams. As a college player he participated, and won the gold, in the 1984 Summer Olympics. Jordan also starred in the 1996 feature film Space Jam as himself. He actually undertook three retirements in successive intervals- a first one during 1993-1994, the second during 1999-2001 before retiring for good on April 16, 2003. Therefore, undoubtedly MJ Jordan is the greatest player of all time in Basket-Ball history.

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→ **Direct Download Links FACTS :**

"YOUR SEARCH TERM HERE" -inurl:(htm|html|php|pls|txt) intitle:index.of "last modified" (mkv|mp4|avi)

Example:

Titanic -inurl:(htm|html|php|pls|txt) intitle:index.of "last modified" (mkv|mp4|avi)

→ **A Geek's way of Booking tickets :Female co-passenger hack**

IRCTC uses an algorithm to allocate seats to a girl. Only if there is at least one other girl is she put in the bay. A geek will book tickets for him and an extra ticket mentioning it as female. After a few weeks cancelling the ticket for the female will result in that seat being occupied by a female. This works on 95% of cases. If not, better luck next time.

→ **A computer Student should know this :**

During the copy-paste process (in Windows specially), the time taken by the OS to generate the cool looking green process bar is more than the time taken to actually copy a normal text file from one place to another.

→ **Saving PowerPoint :**

When saving your PowerPoint presentations; use the extension .pps/.ppsx instead of .ppt/.pptx. This will open the presentation directly as a slide show. Saves time and looks very professional.

→ **Instant screen casts:**

Just click record – Record movies of your desktop and send them straight to YouTube.

Untiny :

Find the original URLs that are hiding be hind short URLs.

PushBullet :

Easily send notes, links, lists, files, etc. to your Android phoneSend files, links, and more to your phone and back, fast!

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CARNATIC MUSIC — A JOURNEY OF DEVOTION

"Music is a moral law". It gives soul to the universe, wings to the mind, flight to the imagination, and charm and gaiety to life and to everything. This is one of the most beautiful quotes that embodies music to its fullest extent as told by one of the greatest philosophers of all times, Plato. Music is of various forms-folk, pop, jazz, rock, classical, punk, acoustic blues and the list goes on. I mainly intend on glorifying South Indian classical music, otherwise known as Carnatic music.

Carnatic music owes its name to the Sanskrit term, Karnataka Sangitam which means "traditional" music. It is also believed to be a divine art form originating from the Devas .The Sama Veda has also laid a foundation for carnatic music as it consists of hymns set to various musical tunes. I feel carnatic music is the only traditional style in which the songs are a perfect combination of both grandeur and succinctness. Also, there is an exceptional amalgam of expression and the melodic content. The main emphasis in carnatic music is on vocal music, although many instruments such as the violin,flute,Veena,Mridangam, Ghatam,Kanjira are also used. To highlight the salient features/components of carnatic music,we can start off with the Sruti. This is also commonly known as the musical pitch. Next, we have a complex, yet, an exquisite raga system. It basically prescribes a set of rules which is assembled using the Swaras .Lastly, we have the Tala system. This is nothing but a group of beats set for a particular compostition or song. Karnataka Sangeetham is also referred to as Manodharma Sangeetham. Manodharamam is improvisation. The principal improvisations include the Alapana, Swarakalpana, Nirval, Ragam -Tanam - Pallavi(RTP) and the Tani avartanam. All of this requires a considerable amount of classical music training or might be mind boggling.

Whenever I come accross the very famous question, "who are those great men who walked the earth?",I can always answer that without a hint of hesitation. According to me, those men are the greatest composers of all times. The most famous composers are Thyagaraja, Muthuswamy Dikshitar, Shyama Shastri, Purandara Dasa, Papanasam Sivan etc. The former three are also known as the Trinity of music as these men have created some remarkable changes in the concert pattern by experimenting with new ragas and talas. The compostions written by them are magnificient as the lyrics are filled with devotion and also bring out the raga-bhava. The compositions include

brings out the raga-bhava. The compositions include

Varnams, Kritis, Padmas,Javalis and the list goes on. These are all sung in a full-fledged concert with the previously mentioned embellishments by the vocal artists.

Therefore, carnatic music will continue to communicate highest ideals as it has always has been doing. It is most definitely one of the world's mighty treasures. I am extremely glad to have been associated with one such fortune and would also like to encourage those reading this to take it up. Also, as we all know it, "Where the world leaves, the music begins".

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ஈரம்

காவேரி தென்பெண்ணை பாலாறு தமிழ் கண்ட தோர்வையை
பொருணைநதி எனமேவிய ஆறுகள் பல ஓட திருமேனி செழித்த தமிழ்நாடு,

இன்று தன் முகம்கழுவக்கூ ட தண்ணீர் இல்லாமல், அண்டை மாநிலங்களிடம் கெஞ்சிக் கொண்டு இருக்கிறது. இந்த மாநிலங்கள் தண்ணீர் கொடுக்கின்றனவோ இல்லையோ நன்றாகத் தண்ணி காட்டுகின்றன. மத்தியிலும் மாநிலத்திலும் ஆட்சிகள் மாறினாலும், இந்த தண்ணீர் பிரச்சனை மட்டும் தீர்வதாக இல்லை. எனவே நதிகளையும், அரசியல்வாதிகளையும் சார்ந்திராமல் நாம் நமக்காக வேறு பல வழிகளில் தண்ணீர் இருப்பை உறுதி செய்து கொள்ள வேண்டும். அப்படியானால்

நிலததடிநரை நமபலாமா ? இனனும 3 வருடங்களில் சென்னையில் நிலத்தடிநீர் (இருந்தால்), அது உப்புகரிக்கப்போகிறது. கிட்டத்தட்ட 10 வருடங்களில், தமிழகத்தின் பலபகுதிகளில் நிலத்தடிநீர் அதிக ஆழத்திற்கு சென்றுவிடப் போகிறது. அதையும் வெளியில் எடுக்க புதிதாக பம்ப்செட்டுகள் கண்டுபிடிக்கத் தொடங்குவோமே தவிரவேறு வழிகளை யோசிக்கமாட்டோம்.

மழைநீரை நம்பலாமா எப்போதாவது தான் நம்பமுடியும். எப்பவுமே நம்பிக்கொண்டு இருந்தால் 'பல்ப்' தான் வள்ளுவரே சொல்லிருக்கார்..

"விண்இன்று பொய்ப்பின் விரிநீர் வியனுலகத்து
உள்நின்று உடற்றும் பசி."

- திருவள்ளுவர்.
(குறள் 13)

அப்போ கடல் நீரை குடிநீராக்கும் திட்டத்தை செயல்படுத்தலாமா ? செய்யலாம் . ஆனால் , தண்ணிவிலை , "தங்கமே பரவாயில்லை" என சொல்ல வைத்துவிடுமே ! அப்போ ,என்னதான் செய்வது ? வேறுவழியில்லை , இருக்கிற தண்ணீரை சாமர்த்தியமாக பயன்படுத்தக் கற்றுக் கொள்ள வேண்டும் . பெய்யும் மழையில் குறைந்தது 14 % , நிலத்தடி நீராக மாற வேண்டும் . அதற்கு சென்னை போன்ற பெருநகரங்கள் உட்பட இனி எல்லா இடங்களிலும் ,மழைநீர் உட்புகுமாறு சாலைகள் அமைக்க வேண்டும் . ஜெயலலிதாவின் முந்தைய ஆட்சியில் அமல் படுத்தப்பட்ட மழைநீர் சேகரிப்புத் திட்டம் , இன்னும் கடுமையாக அமல்படுத்தப்படவேண்டும் . சட்டமாக்கப்படவேண்டும். ஆறுகளில் மணல் அள்ளுவது நிறுத்தப்படவேண்டும் . இன்னும் சில நாட்களில் பாதாள உலகத்தின் கதவுகளை தட்டிவிடப் போகிறோம் . அதிகமானமழை இருக்கும் காலத்தில் , நதிநீர் கடலில் கலக்காமல் இருக்க , டெல்டாபகுதிகளில் அணைகள் கட்டப்படவேண்டும்.

இதுக்கெல்லாம் முதலில் சொட்டு நீர்பாசனம் செய்யணும் . 35 லிட்டர் தண்ணியில் நாம் விளைவிக்கும் பருத்தியை, கலிபோர்னியாவில் , 1 லிட்டரில் விளைவிக்கிறார்கள் .

முடிந்தவரை , வீட்டில் தண்ணீர் பயன்பாட்டை குறைக்க வேண்டும் . கழிவு நீரை மறுசுழற்சிசெய்து ,வீட்டிலேயே செடிகளை வளர்க்க பயன்படுத்தலாம் . கேட்க சின்ன பிள்ளைதனமா இருந்தாலும் , இதுதான் உண்மை !. குழாயை திறந்து விட்டுட்டு பல் விளக்கக்கூடாது . அதிக நேரம் ஷவர்ல குளிக்ககூடாது . தண்ணியை திறந்து விட்டுட்டு பாத்திரம் கழுவக்கூடாது . பொழுது போக்குக்காக தண்ணீரை பயன்படுத்துவதை நிறுத்தவேண்டும் . குறிப்பிட்ட அளவுக்கு (ஒருவருக்கு , ஒருநாளைக்கு 550 லிட்டர்) மேல் நீருக்கு , தண்ணீர் வரி விதிக்கப்படவேண்டும், தன் சொந்த நிலத்தில் இருந்து எடுக்கபட்டாலும் , இங்கு இலவசங்களுக்கு தான் மதிப்பு இல்லையே .

ரொம்ப சின்னபிள்ளைதனமா இருந்தாலும் பரவாயில்லை , ஒன்று நிச்சயம் , மரம் வளத்தாதான் , மழைகிடைக்கும் .

நம் இதயத்திலேயே ஈரம் இல்லாதபோது, நிலத்தில் மட்டும் என்றுமே ஈரத்தை எதிர்பார்ப்பது தவறு . நாளை காலை பல் விளக்கும் போது, நீங்க குழாயை மூடிட்டு விளக்குனீங்கனா , அதுவே தமிழ்நாட்டு தண்ணி பிரச்சனைய தீர்க்கும் .

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Battery Trouble?

No silly, your system, not your car!

Haven't we all gone down that all too familiar path before? An important call to a friend the night before a unit test, asking him/her for the portions and your mobile decides to say nighty-night just when your friend is telling you what's important and what's not...Or imagine the scenario where you are beating Razor to the finish line cramped between 2 people on the college bus, but your laptop battery beats you to it and goes phut, leaving you do that gruelling drag race(I know, I've been there and done that) all over again...In an era of smartphones and high-performance PCs, it seems kind of funny that we've not been able to find and exploit newer, more robust charging components. So how did we go from the era of 'Gimme a sip of charge once a week and I'm set for the next' Nokia 100s to 'My Lord, is it an hour already-I'm feeling famished' HTCs? Anyone's guess is right.

Now I started digging up on system batteries during one of my famous FIFA marathons during the semester holidays. I was unstoppable during those marathons-Play FIFA, eat for sustenance, go back and play harder, repeat. For a kid whose childhood was devoid of any PC games (Pfff, ask my dad...) that was the life. But those marathons tried my laptop the hardest (my mom was a close second). Incessant draining and charging of the battery during play coupled with the furnace like heat that it produced, meant that a once undisputed-world-heavyweight-champion of a battery was reduced to a mere street fighter. When the laptop was bought, the battery used to do 4.5 hrs straight, no sweat. By the time I was finished with my marathons, a 100% charge meant you could get a grand total of 15 minutes out of my laptop. Of course, my dad put the blame squarely on me, saying it was my goal-thirst that had driven the battery to its demise. Apparently the guy who sold the laptop had told him to let the battery drain before charging it again (that policy went to tatters once I managed to get FIFA into the system). Of course, I felt wronged so I went looking for evidence to prove otherwise. And here I'm going to break some myths associated with batteries, and how some of you may have completely wrong notions about the charging-draining cycle of batteries, be it from your PC, laptop or mobile.

One, completely draining your batteries is the worst thing you could possibly do. We are in a generation of Lithium ion cells. These Li cells are not the same as the old nickel based cells. Where nickel based cells would struggle with the problem of 'memory' (constant charging cycles lead to a loss in capacity), the lithium cells aren't even mildly susceptible to such a problem. It was the nickel cells that needed draining to 0% charge before you could recharge again. As far as Li cells are concerned, the best way to go is constant periods of charging and discharging (charging at 40% capacity and discharging between 90-100% capacity). It is when the capacity really falls (below 20%) that Li cells are severely tested. At that point there are too little of the ions to keep the reaction going. Therefore each time the charge falls to such a level, the ion-production capacity of the cell goes down, therefore charge storage takes a knock as well. Therefore next time you are playing a game, don't wait until the gameplay slows down before you plug in the charger. It's perfectly okay to plug it in even at half capacity.

Two, and this is a mistake we all do-don't let your battery heat up excessively. Temperature is one of the major reasons for the loss of storage capacity in batteries. Anything above 30 degree C (in terms of temperature) or 4.10V/cell (in terms of voltage) is considered detrimental to battery life. Prolonged use at these levels will definitely bring down battery life, you need have no doubts about that. Therefore next time you're playing a game and the side of your laptop feels like the mouth of a volcano, use a cooler pad, or better still, pause the game, unplug your charger and let the battery cool down before you resume. Excessive cold is a more potent battery-life deterrent, but I think we Indians need not worry about that.

Three, never leave your battery at 0% charge. Of course that doesn't mean that if your charge indeed hits 0 you need to go rushing to find a nearby power socket. It's just that don't let the charge linger at 0% for too long a time. Prolonged disuse like that could lead to the battery completely losing its charge-retention capability.

"Almost" is the longest word in the English language with all the letters in alphabetical order.

the charge linger at 0% for too long a time. Prolonged disuse like that could lead to the battery completely losing its charge-retention capability.

And finally, the bone of contention-should we be using the laptop/mobile while in charge and still expect the battery to perform at full tilt? The answer is yes. Li ion batteries are designed to work under charge. Using a laptop or mobile while charging is not going to adversely impact battery life ever. Of course, optimal performance is attained when the battery is allowed to discharge to 50% of its capacity before recharge, but running the device on charge is not that bad either. Of course, keeping it plugged in for months can lead to problems, but as long as the battery is allowed to discharge intermittently (keeps the electrons in circulation), a device can be used on a charging battery without any dire consequences (your system anyway severs the connection when at 100% capacity). Which then begs the question, why on earth did that fellow tell my dad that the battery needed to be drained before recharge? A scheme no doubt to ruin battery life, and send I could provide more technical details to support my case, but that is for a research paper (which I'm too lazy to do). So the next time you guys are faced with the conundrum of using your device while its charging, you would do well to remember this article and get your facts separated from your myths (it earns brownie points with your dad as well).

P.S. Before I started the research, I was totally convinced that using my laptop while charging was taboo, and I was going to code a device driver that would automatically disconnect the connection with the power socket and use it as a basis for my final year project. Sadly it looks like that chance has gone down the drain, just like so many of those one-on-ones with the keeper I skied on FIFA...

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I Still Remember

I still remember watching you go by
You were the apple of my eye
Eyes bright and tail wagging
You never did mind my constant nagging
I still remember watching you eat
More than pedigree, you enjoyed meat
Although sometimes, food you did waste
You always never said no to taste
I still remember watching you sleep
You seemed very soft, docile and meek
The area below the dining table was yours
And you didn't like moving from there when we had to wipe the floor
I still remember the way you used to care
You would come lie on my lap and just stare I used to cuddle with you, pet you and hug and hug
And say, 'Come here you big lug'

I still remember the day you fell ill
And we knew that kill you, it will
We tried to make your last few days good
But believe me when I say, I would've saved you if I could

I still remember the day they took you away
Your eyes looking back at me, with a smile even
Though your body swayed
Even though we had to part
You always will hold a place in my heart

I still remember...
In loving memory of Browny, my best friend

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We breathe on average about 5 million times a year.

Sophomore

Stepping out of the humanities block,
End of a year, fast is the clock.
No longer freshers are we,
The department is where we are to be.

Moving a few rows behind,
In our daily buses made us mind.
We didn't want to give up our spots,
To the first year slots.

A lot of feelings bundled into one,
Thoughts that struck similar to none.
Much happiness in the air,
No more physics and chemistry nightmare.

Yes, very excited indeed,
Walking into departments of our need.
New classrooms welcomed us,
And professors greeted thus.

Subjects seemed interesting,
Definitely required extra learning.
Putting all our minds to test,
Cause the UTs entered without a rest.

But this didn't stop the next strata,
Cause we got busy with Converita.
And that's when we understood,
How strong as a department we stood.

We cannot forget this next destination,
Wayanad-Cochin was the chosen vacation.
Enjoying with friends, not just any tour,
Great memories in our hearts soar.

And then a sudden tension,
The semesters seeking attention.
Yet another set of examinations,
To fall under AU verifications.

And so it will continue,
Another year fresh and new.
An experience that'll last forever,
Information Technologists this world will meet, sooner than ever.

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கவிதைகள்

உனக்கு வலி கொடுத்து
பிறந்ததால் தான் என்னவோ.....!
எனக்கு வலி பிறக்கும் போதெல்லாம்
உன்னையே அழைக்கிறேன்.....!

உலகில் ரசிக்க ஆயிரம் இருந்தாலும்.....
என்னை மறந்து நான் ரசிக்கிறேன்
உன் நினைவுகளை மட்டும் ...!

மறக்க நினைக்கிறேன்....
உன்னை அல்ல...
உன்னிடம் பேசாமல் இருந்த
அந்த நிமிடங்களை..!

உலகத்தில் உனக்கென யாரும்
இல்லாமல் இருக்கலாம் .....
அனால் யாரோ ஒருவருக்கு
நீயே உலகமாய் இருப்பாய்....

பிரிவை நினைத்து
அழுத போதுதான் என்
கண்ணில் இருந்து வந்தது
"கண்ணீர்"
ஆறுதல் சொன்னது....
என்றுமே நான் மட்டும் தான்
உன்னுடன் இருப்பேன் என்று....

ஒரு பார்வை பார்க்கிறாள்...
புதிதாய் ஒரு வேதனை ..
அழகாய் சிறு சண்டைகள்...
இது காதல் தாண்டி.....
"அன்பே வா"

அழகை எதிர்பார்க்கும்
ஒருவரிடம் அன்பை காட்டாதே...
உன்னிடம் அன்பு வைக்கும் ஒருவரிடம்
அழகை எதிர்பார்க்காதே .....

தேடும் முன்பு வந்த பொருள்
வாழ்வில் நிலைப்பதில்லை .....
தேடித்தேடி வந்த பொருள்
தொலைவதில்லை...உன்னைப்போல...

யோசித்த பின் நேசி...
அனால்,
நேசித்த பின் யோசிக்காதே...
அது நீ நேசித்த இதயத்தை காயப்படுத்தும்...

நீ நேசிப்போருக்கு உன் இதயத்தில்
இடம் கொடு...
உன்னை மட்டும் நினைக்கும்
இதயத்திற்கு உன் உயிரையும்
சேர்த்துக் கொடு.....

மனதுக்கு பிடித்தவரிடம் மனம்விட்டு
பேசினால்..."மரணவலி" கூட
மறந்து போகும் ....

முகமது ஆசிஃப்
இரண்டாம் ஆண்டு
தகவல் தொழில் நுட்பம்
asif.n96@gmail.com

Blue Cross

Why adopt dogs and not buy them?

It is a known fact that people tend to grow only pedigree dogs and not the ones found astray on the roads. People believe that these stray dogs found on the streets are rabid or worse they just don't adopt them because they are ugly. What does looks have to do with guarding our front porch? And where did this wrong presumption about stray dogs come from in the first place? Aren't they dogs as well? Don't they have four limbs and a tongue to lick you when you are down?

It's only reasonable to adopt a stray dog than spend thousands buying a pedigree breed. Adopt a pet that needs you. Give him a home, a roof to sleep under, at least 3 meals a day to keep him healthy. Welcome a new member into your family. Besides, these sweet, loving quadrupeds are less high-maintenance than the pedigree breeds. They don't really mind if their food has Omega-3 or Omega-6 to keep their skin healthy and their coat shiny. They wait, like any other dog would, for you to get inside your house, to pounce on you and to lick your whole face. Wise men have said charity begins at home. Everybody wants to feed the hungry and the mal-nourished kids of India or worse the kids in Africa even when they see millions of stray animals starving each day. We worry about the people we have never met before and will never meet ever in the future and not about what's right outside our house or our workplace. Why do we do that? Is it because we are of the same species as them? Is that why we have a soft corner for humans and not animals? Don't you think that it is utterly stupid?

The **Blue Cross of India**, Velachery is a home to about 500 puppies and 300+ adult dogs. They have cats, cows, snakes and what not? About 10 puppies get adopted each day and 5-10 new ones come in. The Blue Cross of India approximately spends 40,000 INR each day to feed their guests. The Blue Cross of India is a private organisation partly funded by the Indian Government. They need all the help they can get, to keep their guests healthy and satisfied. If not adopt a dog, the least we can do is to help the people who would.

Priyanka Radja
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UI/UX Design Internship

During the last semester holidays, I worked as an intern in an UI/UX Design startup called Effectworks. There were around 10 employees with whom I could interact and learn a lot.

First, I was asked to go through the specification of Material Design and design the UI of an event scheduling app. Keeping the basic UX in mind, the UI was tweaked through various iterations with the help of the design head of the company. On completion of the UI, I discussed the UX with the developer and provided him with all the resources like fonts, icons, etc.

Then I was assigned the analysis of the existing time tracking application as a task for few days. This analysis helped me understand about the problems in time tracking applications. This is when I realized that UI is the most fundamental part of the success of an application. The company used this analysis for further design, development and pricing.

Later I designed a few app icons and other icon resources for few apps. Some of the icons had challenging contexts; challenging because there was a need to convey so much through a 50px square canvas (or even less!) without any ambiguity. It was indeed a challenging experience.

This internship was an eye opener to UI/UX Design fundamentals and changed my perspective towards UI/UX designs of the applications and software that I use
everyday.

Manikandan
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FIRE-FIGHTING ROBOTS

Fire fighting robots are a new breed of automatons whose function is to replace fire fighters in dangerous situations. The robot uses multiple sensors to detect fires and extinguish the flame. The microcontroller PIC 16f877A is used to control the operation of the robot. It could save a lot of lives-lives of those affected by a fire disaster as well as of those working as fire fighters. Robots assisting fire fighters are not an often seen sight. However, there are robotic devices that can be used for such purposes. These include bots that can be thrown into the fire site to inspect the situation, as well as large remote controlled fire extinguishers.

The robot has three ways of seeing the world: a stereo camera with two lenses that allow it to see with binocular vision (like a human), a thermal imaging camera that enables it to detect heat and see through smoke, and a laser range finder that allows it to map out the distance between itself and an object. Dexterous enough to hold a fire hose, SAFFiR can both detect and put out a blaze. In the future, every Navy ship that leaves port could have one of these fire fighting robots on board.

SAFFiR (short for Shipboard Autonomous Fire fighting Robot) was tested several times before being unveiled. In November 2014, the life-size robot carried out a three-day demonstration aboard the USS Shadwell, a decommissioned Navy warship currently anchored off the coast of Mobile, Alabama. During the demo, SAFFiR was tasked with manoeuvring along a slim, low-ceilinged hallway to locate the source of a fire. Without falling or stopping, the robot then had to grasp a fire hose and quench the flames with water. The bot, which was controlled from a distance by a team from Virginia Tech, successfully put out the blaze.

These robots can work closely with human fire fighters without fire fighters being directly exposed to steam, heat, fire or smoke. These robots may patrol the sea, scanning for unnatural heat, smoke or other issues, and provide a "constant watch" for on-board dangers that sailors may not be able to detect. The advantages of fire fighting robots are to detect the exact direction of the fire source, capability of sensing accurately with increased flexibility, low cost in the long run, reliable and economical.

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FEEL THE WARMTH

In places like data centres, enormous amount of money and energy is spent to pump out the waste heat generated by computation. What if we start thinking about heat as a valuable benefit of computation instead of cost?

Fig. DareHenry Prototype

Each photo that we "like", email that we send and the search we run creates heat.

Cloud service providers are selling computation today. A significant portion of their overhead is the energy consumed to run and cool their servers. Imagine a future where you could get paid to provide the same computation and use the heat generated to power your home. To bring heat from computing into our homes we need to move the heat source – the servers– into our home too.

PUMP IT OUT

That's where Project Exergy comes in.

A New York start-up, the Project Exergy looks at the heat of computation as a valuable resource that can be used to heat our homes and not as a waste product. Project Exergy is a server that exploits the waste heat from cloud data processing. The heating unit contains a processor that works as a server crunching numbers for computers and tablets around your home. As you use the processing power, the heat is collected and is used to warm the house.

"In order to heat your home, you're going to need far more computation than you could personally use," says Orsini. "So sell it to someone else who needs the computing." The internet makes this easy, allowing the processors to be accessed from almost anywhere on the planet while the heat from Project Exergy's system remains in the house.

A number of sites around the world have started harnessing the heat from computers to keep buildings toasty. Now it's our turn.

Visit https://www.kickstarter.com/projects/projectexergy/project-exergy-darehenry for more info.

Asmitha J S
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There are 10 types of people in the world: those who understand binary, and those who don't.

HIGHGRIVA

The Company "**Highgriva**", a web based start-up was founded by **Sri Vishnu Kumar** (Department of Information Technology, SSN Engineering College) and later co-lead/co-founded by **Prakash** (Department of Information Technology, SSN Engineering of College) and **Pragal** (Department of Information Technology, SSN Engineering of College) . It is a social, educational website. It basically offers a closed environment for interaction among the teachers, parents and students. Teachers can upload notes, practical videos, assignments etc.,. Students will receive the uploaded notes by teachers in the form of newsfeed. The newsfeed gets updated, real time. Students from one class can access the notes of the other classes. This helps the students to pick and study the notes they are comfortable with. In addition, Highgriva provides messaging facility among teachers, parents and students. The Principal has a separate account and is allowed to make announcements. These are common to all the students belonging to the same school. Teachers can upload the marks and attendance details of the student. An online report card is generated automatically for the corresponding marks entered. It provides a complete and comprehensive analysis of marks using bar charts, comparing the student with the average of the class and comparing a student's performance with his previous performances. However, marks and attendance are private. Only the particular student and his/her parents can see his/her marks. Mark updation takes place in real time. This helps the parents to keep track of their child's marks. Highgriva has a subdomain for each school. It provides unlimited uploads.

Now moving on to the technical part, HTML and JAVASCRIPT act as the front end. SQL and PHP provide the back end with a NGINX server in tow. Ajax was used for Newsfeed and messaging.

The scope of the company is very bright and aims to touch great heights.

Each person of the company works as an employee. The payroll of the company is basically equal shares of the profit.

The Team:

Sri Vishnu

Prakash

Pragal

prakashbhai123@gmail.com

PUZZLE TIME

-LIKE PUZZLES? SO LET'S TRY IT

PUZZLE-1

A homicide detective is called to a crime scene. A man is lying dead in front of the building . From the position in which the body is lying, it is evident that the man jumped out from one of them and committed suicide.

The detective asks his team to collect any traces they can find on the body. He then heads towards the building. He goes to the first floor and towards the room that is on the front side and enters, lights a cigarette, walks towards the window facing the dead body, opens the window and throws the cigarette out. He then goes to the second floor and repeats the same process.

He keeps doing the same thing till he is done with all the floors and then takes the lift to the ground floor. Upon reaching there, he informs the team that it is not a suicide but a murder.

While the whole team is shocked to hear the revelation, he lights another cigarette and takes a hard puff.

How do you think he found out that it was a not a suicide?

<Scroll below to see solution>

Solution:

Upon reaching each room, he found out that the window facing the dead body was closed. He had to open the window himself. This tells that there was somebody else with him who closed the window. If the man had committed suicide, at least one window would have been open.

PUZZLE-2

A Japanese ship was making its way through the Arabian Sea. The captain felt like taking a bath and thus went to the bathroom after removing his Rolex watch and gold bracelet. When he returned back from the bathroom, he found out that his valuables were missing. He suspected five of his crew members. He called them in and asked all of them what they were doing for the last 15 minutes. They replied as follows:

The French cook (with a butcher knife): I was in the cold storage getting meat for cooking.

The German Engineer (with some tools in hand): I was working on the generator engine.

The Bangladeshi seaman (empty handed): I was on the mast correcting the flag which was upside down.

The American Radio officer (with his headphones in hand): I was messaging the company that we will reach the port on Friday morning, round about 1100 hrs.

The Indian navigation officer (empty handed): I was taking a nap. I'm on guard duty tonight.

After hearing their statements, the captain figured out who the thief was. How did he know that? Who is the thief? <Scroll below to see solution>

Solution:

The Bangladeshi seaman is the thief. This is because the Japanese flag cannot be identified as upside down- it's the same both ways.

PUZZLE-3

In a hotel, a man was sleeping when he heard a knock on the door. He shifted the blanket and stepped down from the bed. He walked to the door and opened it to find a stranger standing outside.

The stranger said, "Pardon me, I must have made a mistake. I thought this was my room." The stranger then walked the corridor and climbed down the stairs. The man closed the door and immediately called the security. He asked them to arrest that stranger immediately.

Why did he ask them to arrest that stranger? What made him suspicious?

<Scroll below to see solution>

Solutions:

The stranger said that he thought the room was his. If so, he must have had the keys to the room and thus he must not have knocked.

Priyashree S,II Yr, IT B

To get PROMOTION in life

- Take some RELAXATION
- Avoid COMMOTION and CONFUSION
- Develop the quality of APPRECIATION
- Get away from TEMPTATIONS
- Keep away all your EMOTIONS
- Get the INFORMATION about GLOBALISATION
- Love your RELATIONS
- Come out of SUPPRESSION
- Work with DETERMINATION
- Obtain the proper QUALIFICATION
- Taste the real essence of EDUCATION
- Be sincere in your PROFESSION
- Make a proper DECISION
- Come to a good CONCLUSION
- Don't be slave to FELICITATION
- Develop a distant VISION
- To promote you in the life of achievement pray to God for SALVATION

- J.K. JOSEPHINE JULINA

Assistant Professor, Department of IT, josephinejulinajk@ssn.edu.in

COMPUTATIONAL TRUST - A SOLUTION

Scientists and researchers have considered trust from different points of view, and significant work has been done in the area of sociology, psychology and philosophy.

Trust is defined as: confidence, strong belief in the goodness, strength, reliability of something or somebody.

Deutsch worked on trust based on psychology. Deutsch (1962) implied that trust is dependent on individuals and their perceived cost and benefits analysis of the given scenario. In his book "The Resolution of Conflict", he later defines trust as confidence that one will find what is desired from another, rather than what is feared (Marsh 1994).

Trust plays a significant role in our interactions with society and it is linked with expectation about the future. Diego Gambetta (2000) defined trust in terms of mathematics: "Trust (or, symmetrically, distrust) is a particular level of the subjective probability with which an agent assesses that another agent or group of agents will perform a particular action, both before he can monitor such action (or independently or his capacity ever to be able to monitor it) and in a context in which it affects his own action."

This definition gives several new aspects of trust. First, trust is modeled mathematically and becomes more concrete compared to other definitions presented earlier. Second, this definition makes trust somehow quantifiable. Trust now has a range from 0 to 1, where 0 represents complete distrust and 1 represents complete trust. Third, it postulates that our actions are dependent on the probability and this excludes those instances where trust in someone has no influence on our decisions.

Trust a solution provider for the emerging security challenges in the current technological scenarios such as Internet of Things, Cloud and Even Big data analytics.

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"Internet Of Things" – An Overview

Things are being invented all over the world. (Battery Powered, small, internet-connected computers embedded in physical objects, ranging from smartwatches to car data connectors and wearable devices). They keep you safe, offer you a deal when you get to your favorite section of a store and even remind you when to water your plants in the garden. The possibilites are limitless when you combine a microprocessor, a BLE radio or Wifi, some sensors and actuators into a thing, making it part of the global network. Science fiction dreams are now becoming reality with commoditized hardware and standardized communication protocols.

These Things, sometimes called as "Smart Objects" consist of four major components. Sensors, Actuators/Effectors, communication channel (wired/wireless), and a microprocessor. Sensors detect real-world environment and actuators change it. The microprocessor in a thing is for computation, mostly with unlimited functionality. Primary responsibilities include saving/sampling status from sensors, receiving commands from the radio and activating actuators, and interpreting sensor data. Finally, the communications channel, allows you to connect up to the network. It can either be a direct connection or an assisted one.

Most of these things require or work with apps (iOS, Android, Blackberry….) to capture data over time and provide a connection to the cloud.

As things are being invented and released almost on a daily basis, this article suggests four places to find more for yourself, about them, and be part of the DiY community. "You never know, when inspiration is going to strike"

www.kickstarter.com/discover/categories/technology

www.iotnewsnetwork.com

www.iotlist.co

www.indiegogo.com

R. Vinob Chander
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MIT has developed a computer software that can identify and distinguish a real smile from a smile of frustration.

HIGHLIGHTS OF IT STAFF ACTIVITIES SINCE SEPT' 2014

September 14, 2014

Dr.T.Sree Sharmila (Asso.Prof/IT) published the following conference paper:
Aravind G, Sree Sharmila T published a paper titled "Study and Analysis of Serial RapidIO Interface In T4240" in the Proceedings of Thirteenth IRF International Conference, Chennai, India, pp. 20-23, 2014. ISBN: 978-93-84209-51-3.

September 20, 2014

Ms. S. Sasirekha, AP/IT attended a National workshop on Integrating Semantic Web Technologies and Relational Databases, organised by School of Computing Sciences and Engineering, VIT Chennai

September 24, 2014

The following faculty members and I year M.Tech IT students attended the **ACM Eminent Speaker Programme** conducted by SSN ACM Student Chapter and ACM Chennai Professional Chapter.
Dr. S. Karthika, Ms. S. Mohanavalli, Ms. Sasirekha and Ms. Srividya

September 26, 2014

The following faculty members attended the "Workshop on Data Analytics using R", organised by CSE department, SSNCE.
Dr.S. Karthika, Ms. S. Mohanavalli, Ms. P. Vasuki and Ms. Srividya

September 24-27, 2014

Mr. I. Joe Louis Paul (AP/IT) presented the following conference paper:

I. Joe Louis Paul, S. Radha, J. Raja, "Studies on the Suitability of LT Codes with Modified Degree Distribution (MDD) for Fading Channels", in the Proc. of International Conference on Advances in Computing, Communications and Informatics (**ICACCI-2014**) organized by Galgotias College of Engineering and Technology, Greater Noida. The same paper will be published in IEEE Digital Xplore.

September 27, 2014

A guest lecture was organized on "LTE – An Evolution from 3G" for the UG students of IT Department. The lecture was delivered by Dr. J. Jackson Juliet Roy, Architect in the Wireless Networking group at Tata Elxsi, Chennai. The event was coordinated by Ms. Swathika R (AP/IT) and Mr. A Sandanakaruppan(AP/IT).

October 10, 2014

Ms. S. Sasirekha, AP/IT gave a guest lecture in "SOA support in J2EE and .NET" at GKM College of Engineering, Chennai.

October 11, 2014

Mr. R. Vinob Chander, AP/IT conducted (resource person) a workshop on "Getting started with UNO, Yun & Pi for the Internet of Things", SVCE, Chennai.

October 16-18, 2014 : Mr. Arul Kumar, AP/IT participated in the Workshop on "Mathematical Essentials in Crypto Research" at Thiyagarajar college of Engineering, Madurai.Taminadu.

HIGHLIGHTS OF IT STAFF ACTIVITIES SINCE SEPT' 2014

October 16, 2014

The following faculty members of IT department received internal funding from the SSN Trust.

Dr, S. Karthika - Rs. 3.5 lacs for project titled "Joint link prediction in SAN model using attribute inference for clandestine social network".

Dr, T, Sree Sharmila - Rs, 3 lacs for project titled "Development of high resolution imaging algorithm for underwater images".

Ms. S. Mohanavalli & Ms. Srividya - Rs. 2,3 lacs for project titled "Big Data Analytics for Economic Disparity Mining".

Mr. R. Vinob Chander - Rs. 3.5 lacs for project titled "Being Smarter with Smart Objects" （ Web based Monitoring, Control, and Analytical Applications that are syntactically and semantically interoperable and discoverable for the IoT)

October 17- 18,2014

Dr. Srinivasan, Prof/IT was a resource person for FDP on Solid State Device Modeling And Simulation (SSDMS) at Anna university, Regional centre- Coimbatore. The topics handled were :

1. MOSFET Device Physics and Device Modeling
2. Mathematical Techniques for Device Simulations and Simulation Devices

October 21, 2014

Mr.R. Vinob Chander, AP/IT gave a Demo cum Presentation on "Syndication for the Internet of Things", Dell, Olympia Technology Park, SIDCO Industrial Estate, Guindy, Chennai.

October 25, 2014

Dr. T. Nagarajan, Prof, & Head/IT published the following papers in TENCON 2014 Bangkok, Thailand.

1. V. Sherlin Solomi, M. S. Saranya, G. Anushiya Rachel, P.Vijayalakshmi, T. Nagarajan, "Performance Comparison of KLD and PoG Metrics for Finding the Acoustic Similarity Between Phonemes for the Development of a Polyglot Synthesizer", in Proc. of IEEE TENCON, Oct. 2014, pp. 1-4.

2. G. Anushiya Rachel, S. Sreenidhi, P. Vijayalakshmi, T.Nagarajan, "Incorporation of Happiness into Neutral Speech by Modifying Emotive-Keywords", in Proc. of IEEE TENCON, Oct. 2014, pp. 1-6.

November 5th 2014

Dr. S. Chitra, Dr.S.Karthika, Dr.Muneeswari, Assoc. Prof/IT were awarded the Ph.D degree by Anna University.

November 10th , 2014

Dr. T. Sree Sharmila, Assoc. Prof/IT published the following paper:

G. Aravind, T. Sree Sharmila, "Study and Analysis of Serial RapidIO Interface in T4240", International Journal of Advanced Computational Engineering and Networking, Volume-2, Issue-11, Nov.-2014, pp. 54-57. [IF: 2.25]

November 5th -7th , 2014

Ms. R. Swathika, Ms. S. Vidhusha, AP/IT participated in a FDP on "Advanced Digital Signal and Image Processing" organized by the Department of Biomedical Engineering SSNCE.

HIGHLIGHTS OF IT STAFF ACTIVITIES SINCE SEPT' 2014

November 8th 2014
Mr. R. Vinob Chander, AP/IT attended a Developer Workshop on "Travel Technology Conclave" by Amadeus Labs @ The Ritz Carlton, Bangalore.

November 19th - 20th 2014
Mr. R. Vinob Chander, AP/IT attended a webinar- on "Networking the Internet of Things and IPv6" hosted by gogoNET LIVE 5, Silicon Valley, USA.

November 19th ,2014
Ms. E.M.Malathy, AP/IT presented open Research Seminar titled "*Optimized QoS Techniques for Vertical Handovers in Next Generation Network"* at College of Engineering, Department of IST, Anna University, Chennai

November 26th , 2014
Dr. S. Chitra, Assoc.Prof/IT was recognized as a supervisor in Anna University, Chennai.

December 6, 2014
Dr.N.Bhalaji, Assoc. Prof/IT, reviewed an article titled "A novel Synapse Elimination Algorithm: Taking the engineering design problem as an instance" for The Arabian Journal for Science and Engineering (Springer).

December 11, 2014
Dr.N.Bhalaji, Assoc. Prof/IT, delivered a keynote address in the International Workshop on Parallel Computing (IWPC2014) at VIT University, Chennai.

December 11-18,2014
Mr. V.Thanikachalam, Ms. R. Swathika, AP/IT, participated in a FDP on Design and Analysis of Algorithms organized by CSE Department SSNCE.

December 13, 2014
Ms. S. Umamaheswari, Ms.N. Radha AP/IT attended a workshop on Image and Speech Processing at International Institute of Information Technology, Hyderabad.

December 18-19, 2014
The following conference paper was presented at MEPCO, Sivakasi:
P. Ramya, S. Mohanavalli, S. Sasirekha, Knowledge Extracting System for Non Expert Miners, International Conference on Communication and Network Technologies (ICCNT'14), IEEE Xplore 2014.

December 19, 2014
Ms. E.M.Malathy AP/IT, presented the following conference paper at MIT, Anna University Chennai:
E.M.Malathy and Dr.Vijalakshmi Muthuswamy "Vertical Handover Performance Investigation with Discrete Event System Simulation in Next Generation Wireless Network" in proceedings of ICoAC 2014, (IEEE Xplore).

HIGHLIGHTS OF IT STAFF ACTIVITIES SINCE SEPT' 2014

December 22- 23, 2014

Ms. S. Poornima, Mr. R. Vinob Chander, Mr. V. Arul Kumar, Mr.K.Kabilan, AP/IT have attended a FDP on "Behavior Management" organized by SSNCE.

December 2014

Ms. S. Sasirekha AP/IT, presented the following conference paper at Anna University Chennai:

S. Sasirekha, S.Swamynathan, "Arduino Powered Environment Monitoring System for Weather Controlled Laboratories", International Conference on Intelligent Information Technologies(ICIIT' 2014).

January 6, 2015

A National level Workshop on "Cyber Security and Forensics" sponsored by IEEE student branch, have been organized by Dr.S.Chithra, Dr. G. Muneeswari and Mr. K. Kabilan.

January 22, 2015

Ms.E.M.Malathy AP/IT participated in preconference workshop on
Next Generation Network held at PSG College of Technology, Coimbatore.

January 23, 2015

Ms. S. Sasirekha AP/IT attended a " National Workshop on iSense Wireless Sensor Network" , organized by School of Computing Science and Engineering, VIT Chennai.

January 27, 2015

Dr.N.Bhalaji, Assoc.Prof/IT attended a one day Faculty Enable Program conducted by Accenture Services Pvt. Ltd, Chennai .

January 29-30, 2015

Dr. S. Karthika, Assoc.Prof/IT attended workshop on Social Network Mining and Analysis conducted by the Department of CSE, CEG, Anna University.

Jan-2015

Dr.N.Bhalaji, Assoc.Prof/IT co-authored an article titled **"Software Engineering Measures Using Radial Basis Function Neural Network"** in International Journal of Applied Engineering Research, Volume 9, Number 23 (2014) pp. 22629-22639 (Scopus indexed).

WORKSHOPS @ IT

Cyber Security and Forensics

Department of IT Organized One day National Workshop on "**Cyber Security and Forensics**" on 6th January 2015 sponsored by IEEE student branch, SSNCE.

Conveners: Dr. S. Chithra

Coordinators: Dr. G. Muneeswari and Mr. K. Kabilan

Number of Participants: 48

Lecture/ Tutorial Sessions Handled:

1. Introduction to Information Security - Dr. K Subramanian

→ Overview of cyber security and forensics

→ Requirement Engineering for cyber forensics

2.Cyber Crimes and Legal Consequences, Network Forensics - Dr. K Subramanian

3.Awareness on Legal Consequences of Cyber activities - Dr. K Subramanian

4.Network Forensics Introduction, tools and Procedures - Dr.Muthukumaran Balasubramanian

5.Advanced persistent threats - Mr.S.Karthikeyan

→ Advanced persistent threats - Introduction

→ Understanding and analyzing the attack through forensic tools

→ Resource Persons

1. Dr. K Subramanian
Distinguished visitor of IEEE computer society, Senior life member of CSI, founder director and professor of Advanced Center for Informatics and Innovative Learning at IGNOU, Former Senior DDG (NIC), Ministry of Communication and Information Technology and Former Advisor to CAG of India.

2. Dr. Muthukumaran Balasubramanian
BSI certified ISO27001LA and NRBPT certified ISO900:2000LA Chief Consultant (Network and Security), Former teaching professional in Sri Venkateswara College of Engineering (SVCE)

3. Mr. S. Karthikeyan
Project Associate and Network Administrator for the research and development organisation of the Government of India, Society for Electronics Transaction and Security (SETS).

WORKSHOPS @ IT

Fundamental Analysis & Processing of Image & Video with Computing Techniques

Department of IT Organized a Two day National Workshop on "**Fundamental Analysis & Processing of Image & Video with Computing Techniques**" on 6th & 7th February 2015 sponsored by CSI Chennai Chapter.

Conveners: Dr. T. Sree Sharmila

Coordinators: Mr. V. Thanikachalam, Ms. S. Poornima and Ms. R. Swathika

Number of Participants: 29

This workshop focused to give an exposure on the fundamental and advanced concepts in the field of Image processing and to motivate the participants to get involved in research.

Image processing is any form of signal processing for which the input is an image, such as photographs or frames of video; the output of image processing can be either an image or a set of characteristics or parameters related to the image. There is a growing demand of application of image processing in diverse application areas such as multimedia computing, secured image data communication, biomedical imaging, biometrics, remote sensing, texture understanding, pattern recognition, content based image retrieval, etc.,

Several resource persons from industry - CTS and academic institutions – IIIT-DM, VIT, SSNCE have shared their valuable ideas right from fundamentals to current trend in wider perspective. They have also given a great exposure to the participants in focus of research challenges to be addressed in future.

FACULTY FUNDED PROJECTS—SPONSORDED BY SSN TRUST

IT Department feels proud in introducing the research ideas of the faculty members through the internal funding projects

Being Smarter With Smart Objects

(Web based Monitoring, Control, and Analytical Applications that are syntactically and semantically interoperable and discoverable for the IoT)

Mr. R.Vinob Chander (Assistant Professor, IT),
SSN College of Engineering

About the Project

Nature of Funding : Internal

Name of the Funding Agency : SSN Trust

Project Investigators: Mr. R. Vinob Chander

Fund Alloted : 3.50 Lakhs

Duration of the Project: 3 Years

Status of the Project: Ongoing

Objective

• Come up with a model and API to deal with interoperability, mashups, syndication and identity for the Internet of Things.

Equipments

- Smart Objects
- Sensors
- Actuators
- Breakout Boards / Shields / Modules

Brief Description of the Project

Internet of Things allows for the integration of the physical world with the digital one. Making this vision a reality has number of challenges. Amongst others, interoperability (physical, networking and application level) and discovery is a big challenge to be addressed. A scalable, interoperable (syntactic and semantic) model is proposed allowing the developers to create smarter applications rapidly. Also, efficient discovery and syndication mechanisms are incorporated.

Analysis of Interoperability, discovery, and syndication for the Iot

- Ongoing

Outcome of the Project

- To enable creation of smart applications for Devices
- To patent any efficient Product / Application / API
- To develop applications for various smart environments
- To publish the results / study in Journals / Conferences

Joint Link Prediction by Attribute Inference in Clandestine Network for Curbing Future Attacks

Dr. S. Karthika (Associate Professor, IT),
SSN College of Engineering

About the Project

Nature of Funding : Internal

Name of the Funding Agency : SSN Trust

Project Investigators: Dr. S. Karthika

Fund Alloted : 3.50 Lakhs

Duration of the Project: 18 Months

Status of the Project: Ongoing

Objective

To simultaneously use the covert network structure and node attribute information to improve performance of both the link prediction and the attribute inference problems.

Major objective:

- It predicts the missing links at different time frames of the covert network evolution and the new links in the future.
- The collection of attribute vocabulary is derived from the network which helps to build the social attribute model

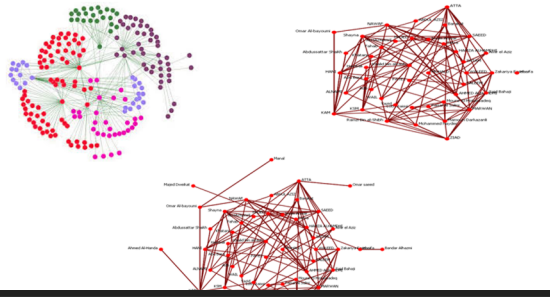
Equipments

- Dell PowerEdge R720 rack server
- NetMiner4

Brief Description of the Project

Clandestine network is a social community with a lot of secrecy and influence whichbehaves in a stealthy and concealed manner to achieve their goals. Realizing the threat posed by these networks, understanding and modeling the evolution of these networks are therefore fundamental issues and active areas of research. The major objective of this proposal is classical link prediction problem that attracts particular interest. In this work, given a snapshot of clandestine network at time t, the methodology aims to predict links (e.g., friendships) that will emerge in the network between t and a later time t'. The missing link problem has important ramifications as these links can alter estimates of network-level statistics. The ability to infer the new links helps to detect the future attacks by covert networks. An effective prediction methodology is attained by resolving the attribute inference problem which is treated as minor objective of this proposal. The negligence of tie strength and attribute link weights in existing works has been overcome by designing the attribute-augmented network model.

SOCIAL N/W **BEFORE LINK PREDICTION**



Analysis of the proposed Prediction methodology for Clandestine Networks

- Ongoing

Outcome of the Project

This proposal ensures to provide a better homeland security as it focuses on the

•Dynamic changes in the network structure based on the actor attributes (roles and responsibilities) in a specific time frame (past and future).

•Helping the crime analyst to resolve the conjecture issues by studying the existing coverts networks, predicting the missed attributes and then analyzing the various attacks launched by them.

Future Work

• It could be further extended by using the new links occurrence to predict the resilience and reconciliation characteristics of disrupted covert networks.

Patience is a great virtue.

Development of High Resolution Imaging Algorithm for Underwater Acoustic Images

Dr.T. Sree Sharmila (Associate Professor, IT),
SSN College of Engineering

About the Project

Nature of Funding : Internal
Name of the Funding Agency : SSN Trust
Project Investigators: Dr. T. SreeSharmila
Fund Alloted : 3.00 Lakhs
Duration of the Project: 18 Months
Status of the Project: Ongoing

Objective

•To develop a novel high resolution post processing algorithm to resolve finer details present in the underwater images.

•To validate the algorithm using sea truth data collected from the Bay of Bengal.

Brief Description of the Project

The underwater surrounding presents a unique set of constraints that have limited our ability to collect and process underwater imagery. Acoustic based instruments can remotely map/image the ocean floor, look below the sea bed and measure various physical oceanographic parameters with the very high degree of accuracy and relatively high resolving capability. Modern side scan sonar is an excellent instrument for performing high quality surveys of the seabed and is routinely employed for underwater imaging.

The challenge from an image processing perspective is to develop techniques like Markov model using probabilistic methodology and sparse representation which may be used to exploit the wealth of information contained in such data. However, resolving verysmaller underwater objects with the present trend of technology still needs a very good post-processing technique and developing relevant algorithm for the same becomes the prominent research area.

Analysis of the proposed Algorithm

- Ongoing

Outcome of the Project

An efficient high resolution imaging algorithm for the post processing software for any underwater acoustic imaging system.

Big Data Analytics for Economic Disparity Mining

Ms. S. Mohanavalli (Assistant Professor, IT), Ms.Srividya (Assistant Professor, IT),
SSN College of Engineering

About the Project

Nature of Funding : Internal
Name of the Funding Agency : SSN Trust
Project Investigators:
1.Ms.Mohanavalli ,Asst.Prof / IT (PI)
2.Ms.Srividya, Asst.Prof / IT (Co-PI)
Fund Alloted : 2.30 Lakhs
Duration of the Project: 12 Months
Status of the Project: Ongoing

Objective

•Utilise the antenna traffic to map regions of user traffic and obtain region specific user behavior

•Predicting user behavior using bandicoot and thereafter address the disparity issue.

•The outcome of the analysis can be used for obtaining inferences in health care, transport,etc

Equipments

- High-end Workstation

Brief Description of the Project

The penetration of Mobile telecom surpasses any other forms of medium to reach a wider population. Big Data Analytics plays a pivotal role in mobile telecom to analyze and understand interesting patterns of human behavior which serve as indicators for a wide spectrum of issues. This project proposes to expose the socio-economic disparity using the mobile telecom data for the sub-saharan African region "Senegal". The mobile telecom data provided by the telecom provider "Orange" would be analyzed to formulate hypothesis to address the socio-economic disparity. We hope to exploit the best of both the academic and industry knowledge to compete at an international level.

This project would be carried out in partnership with Ericsson Global India Ltd., Chennai. Ericsson collaborates with us for problem study, hypothesis formulation, sharing of mobile data of Senegal (around 1 TB data for 1 year mobile transactions provided by Orange), data analysis tools.

Analysis of the formulated Hypothesis

- Ongoing

Outcome of the Project

•Classifying socio-economic patterns, formulation of hypothesis related to mapping and measuring social disparities in Senegal.

•Submission of the study report to D4D challenge.

•Publications of the findings.

NATURE AT ITs BEST

A goal without a plan is just a wish.

K.Kabilan
Assistant Professor
Department of Information Technology

Normal isn't normal when you aren't normal.

Editorial Board

Message from Editors:

Heartfelt thanks to all contributors and supporters. Here's hoping you like this edition of identITy, SSN-IT Department's identity.

Please mail your suggestions to,

→ Dr.T.Nagarajan - nagarajant@ssn.edu.in
→ Dr.S.Karthika - skarthika@ssn.edu.in
→ Ms.S.Vidhusha - vidhushas@ssn.edu.in

Nothing to see here.