



KAKATIYA INSTITUTE OF TECHNOLOGY AND SCIENCES

(An Autonomous Institution under Kakatiya University)

Warangal-506015, Telangana India

Department of
Computer Science & Engineering

roCKSE

A Technical Magazine

Volume - VII

March - 2017

KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE

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Department of
Computer Science & Engineering
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Opp: Yerragattu Hillock, Vill: Bheemaram, Mdl: Hasanparthy, Warangal: 506015, TELANGANA, INDIA



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Chief Editor's Message

This magazine summarizes the current state of Computer Science & Engineering, latest technologies and also information of department. Providing an arena for the student community to showcase their technical talents is a great task. We took up the challenge to bring awareness to everyone in laying their career steps towards latest technologies. Keeping in view of the present era of technological revolution in the field of Engineering, the CSE department of KITSW presents you **roCkSE**.

P. Niranjan Reddy
HOD
Department of CSE

Director's Message

I congratulate the team of the faculty members and the students for their brilliant efforts. I wish all the students and faculty a great career ahead. The main focus of the institution is to empower students with sound knowledge, wisdom, experience and training both at the academic level of Engineering and in the highly competitive global industrial market.

We wish the best for all our students, and the members of the institution who reiterate their aims at providing the best in academic and extra-curricular fields.

Y. Manohar
Director



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3D PASSWORD

Current authentication systems suffer from many weaknesses. Textual passwords are commonly used. Users tend to choose meaningful words from dictionaries, which make textual passwords easy to break and vulnerable to dictionary or brute force attacks. Many available graphical passwords have a password space that is less than or equal to the textual password space. Smart cards or tokens can be stolen. Many biometric authentications have been proposed. However, users tend to resist using biometrics because of their intrusiveness and the effect on their privacy. Moreover, biometrics cannot be revoked. The 3D password is a multi factor authentication scheme. The design of the 3D virtual environment and the type of objects selected determine the 3D password key space. User have freedom to select whether the 3D password will be solely recall, recognition, token based, or combination of two or more schemes. The proposed system is a multi factor authentication scheme. It can combine all existing authentication schemes into a single 3D virtual environment .This 3D virtual environment contains several objects or items with which the user can interact. The user is presented with this 3D virtual environment where the user navigates and interacts with various objects. The sequence of actions and interactions toward the objects inside the 3D environment constructs the user's 3D password. The 3D password can combine most existing authentication schemes such as textual passwords, graphical passwords, and various types of biometrics into a 3D virtual environment. The choice of what authentication schemes will be part of the user's 3D password reflects the user's preferences and requirements. A user who prefers to remember and recall a password might choose textual and graphical password as part of their 3D password. On the other hand users who have more difficulty with memory or recall might prefer to choose smart cards or biometrics as part of their 3D password. Moreover user who prefers to keep any kind of biometric data private might not interact with object that requires biometric information. Therefore it is the user's choice and decision to construct the desired and preferred 3D password. The 3D password is a multi factor authentication scheme. The 3D password presents a 3D virtual environment containing various virtual objects. The user navigates through this environment and interacts with the objects. The 3D password is simply the combination and the sequence of user interactions that occur in the 3D virtual environment. The 3D password can combine recognition, recall, token, and biometrics based systems into one authentication scheme.

3D VIRTUAL ENVIRONMENT DESIGN GUIDELINES

The design of the 3 D virtual environments affects the usability, effectiveness, acceptability of 3D password. The first step in building a 3D password system is to design a 3D environment that reflects the administration needs and the security requirements. The design of 3D virtual environments should follow these guidelines:

- **Real Life Similarity** The prospective 3D virtual environment should reflect what people are used to seeing in real life. Objects used in virtual environments should be relatively similar in size to real objects (sized to scale). Possible actions and interactions toward virtual objects should reflect real

life situations. Object responses should be realistic. The target should have a 3D virtual environment that users can interact.

- Object uniqueness and distinction every virtual object in the 3D virtual environment is different from any other virtual object. The uniqueness comes from the fact that every virtual object has its own attributes such as position. Thus, the prospective interaction with object 1 is not equal to the interaction with object 2. However, having similar objects such as 20 computers in one place might confuse the user. Therefore, the design of the 3D virtual environment should consider that every object should be distinguishable from other objects. Similarly, in designing a 3D virtual environment, it should be easy for users to navigate through and to distinguish between objects. The distinguishing factor increases the user's recognition of objects. Therefore, it improves the system usability.
- Three Dimensional Virtual Environment Size A 3D virtual environment can depict a city or even the world. On the other hand, it can depict a space as focused as a single room or office. A large 3D virtual environment will increase the time required by the user to perform a 3D password. Moreover, a large 3D virtual environment can contain a large number of virtual objects. Therefore, the probable 3D password space broadens. However, a small 3D virtual environment usually contains only a few objects, and thus, performing a 3D password will take less time.
- Number of objects and their types Part of designing a 3D virtual environment is determining the types of objects and how many objects should be placed in the environment. The types of objects reflect what kind of responses the object will have. For simplicity, we can consider requesting a textual password or This can be done by designing a 3D virtual environment that contains objects that request information to be recalled, information to be recognized, tokens to be presented, and biometric data to be verified.

AI FOR BLIND

While it's easy to dwell on the potential threats of artificial intelligence, much more often the field promises to make human's lives better. A.I. algorithms are meant to help us connect with our friends, find information, and even transport us through the physical world.

Starting today, Facebook is using artificial intelligence to automatically generate text captions for every photo on Facebook, to provide much-needed accessibility for the blind or visually impaired. Because the developers wanted the text generated by the A.I. to be extremely accurate, they trained it intensively on images of just 100 different types of object, so at present it is limited to identifying human, pizza, baseball and the like, but as research progresses the captions will get increasingly versatile and complex.

To surf the internet, the visually impaired often rely on screen readers, which dictate words on the screen. However, screen readers are only as good as the content they can read. If text is missing, they can't read it. Web standards dictate that images should have a field called alt text, describing in words what the image depicts. However, on most Facebook images, the only text available for screen readers is the status posted along with the photos.

By applying artificial intelligence algorithms, Facebook is able to scan each image and pull out some information about what it depicts. If someone posts a picture of a pizza, the algorithm will be able to automatically put the word "pizza" into the alt text of the image, so the screen reader can tell it to the user. The captions won't be seen by most of the social network's 1.5 billion users, but it marks a shift for those who can't see photos on an increasingly visual platform.

Facebook is using this opportunity to democratize the way it does research. The company's and A.I. teams will get feedback from users and use it to direct further research. In March, Facebook published a study in tandem with Cornell University exploring how blind people used Facebook, in hopes to make a product geared towards what the community needs.

The challenge of recognizing and describing images is a prominent category of research in the field of artificial intelligence. New techniques and hardware are enabling deep learning, using layers of artificial neural networks, or tiny clusters of mathematical equations that mimic the brain's neurons, to sort through data and look for patterns. These techniques can be applied to images, audio, text, or nearly any kind of data.

In images, the pattern within a photograph of a cat is different from the pattern for a dolphin. But individual objects are simple. When objects interact with each other, or when there's context around an action, that's much more difficult, because the machine needs to actually understand something about the physical world, and know relationships between objects. To a naive machine, there is no gravity for family relationships or love. There's only data. So to understand that a father and daughter are walking on a hiking trail, or that a cat is on a bed, a machine must first learn about the physical world.

And that's just what Facebook's Accessibility team needs, too. Right now, they have these recognized objects, called tags. A tag is a cat, a tag is a bed, a tag is a person. With that information, they can say there are four people with ice cream cones in a photo, or a pizza pie.

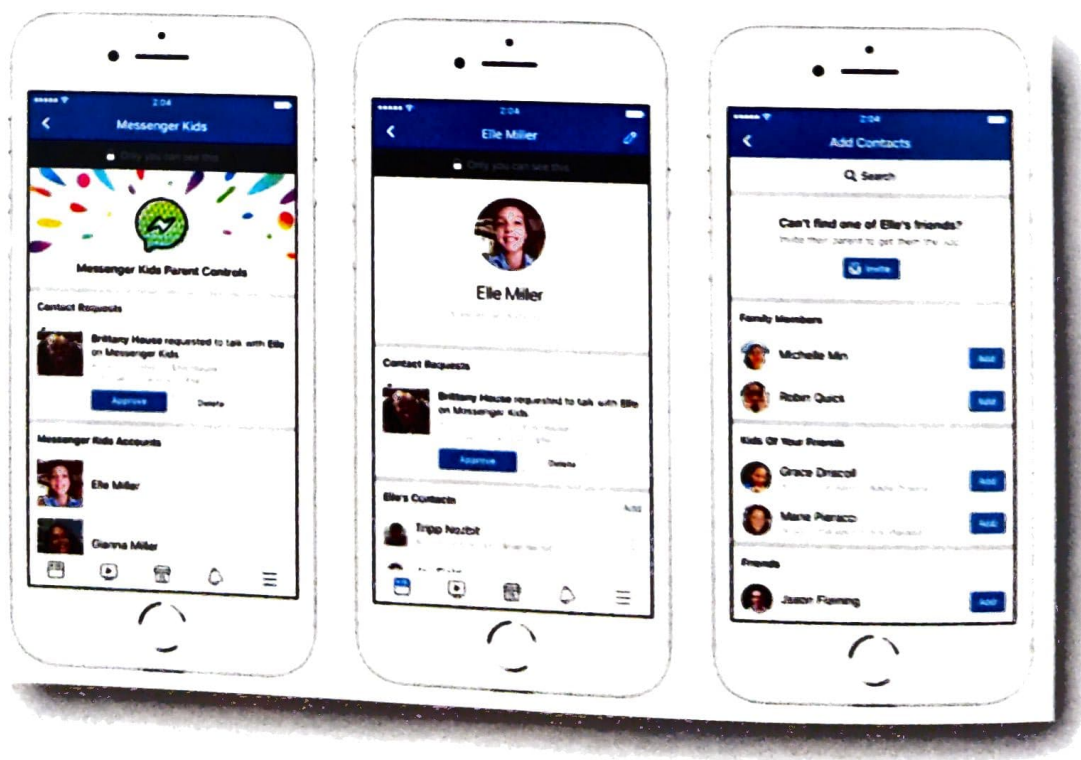
This is a starting point in many ways. Not only does the team have dreams of more context based object recognition, but also making the recognition more interactive. FB suggests a potential feature where users could tap on different parts of the image to hear specific information.

But at the scale Facebook works at, precision needs to be a top priority. Two billion images are shared over Facebook, Instagram, Messenger and WhatsApp every day, so even one percent error can mean millions of mistakes. Engineers hand-tuned each of the roughly 100 concepts that the algorithm can detect, based on the importance of correctly classifying the object. For instance, the algorithm needs to be much more certain about something like gender than about whether an object is pizza. It can recognize objects from its library of 100 with from 80 percent confidence to 99 percent confidence. Facebook says that it can recognize at least one of the objects in more than 50 percent of the photos on Facebook.

Concepts that the algorithm can detect, based on the importance of correctly classifying the object. For instance, the algorithm needs to be much more certain about something like gender than about whether an object is pizza. It can recognize objects from its library of 100 with from 80 percent confidence to 99 percent confidence. Facebook says that it can recognize at least one of the objects in more than 50 percent of the photos on Facebook. Most of the concepts that the machine can understand are about people and physical objects.

It knows eyeglasses, baseballs, and even Selfies. Mistakes made by A.I. systems, especially when classifying images, can be culturally sensitive, like when Google's Photos app labelled black people as gorillas last year. To avoid that sort of situation, "we want to start where we're super confident and there's a lot of positive feedback," FB says.

The feature is available now on Facebook's iOS app, and will be rolling out to other platforms soon, as well as to languages other than English.



APPLE'S FACE ID

Apple announced Face ID, a slick new way for people to biometrically unlock their phones by showing it their face. The system relies not only on neural networks but also on a slew of sensors that occupy the real estate near the selfie camera on the front of the handset.

The kind of facial recognition that Apple is doing is different from what, say, Facebook does when it identifies a photo of you and suggests a tag—that's taking place in the twodimensional landscape of a photograph, while the latest iPhone is considering the three dimensions of someone's face and using it as a biometric indicator to unlock their phone.

Among the sensors that comprise what the company calls the TrueDepth camera system that enable Face ID are an infrared camera and a dot projector. The latter of those projects a pattern of more than 30,000 infrared dots on the user's face when they want to unlock their phone, according to Phil Schiller, a senior vice president at Apple.

One step in the facial-identification process is that the TrueDepth camera system takes an infrared image; another piece of hardware projects those thousands of infrared dots on the face, Schiller explained. "We use the IR image and the dot pattern, and we push them through neural networks to create a mathematical model of your face," he said. "And then we check that mathematical model against the one that we've stored that you set up earlier to see if it's a match and unlock your phone."

Structured light :

The technique of projecting something onto a three-dimensional object to help computer vision systems detect depth dates back decades, says Anil Jain, a professor of computer science and engineering at Michigan State University and an expert on biometrics. It's called the structured light method. Generally, Jain says, computer vision systems can estimate depth using two separate cameras to get a stereoscopic view. But the



structured light technique substitutes one of those two cameras for a projector that shines light onto the object; Apple is using a dot pattern, but Jain says that other configurations of light, like stripes or a checkerboard pattern, have also been used. "By doing a proper calibration between the camera and the projector, we can estimate the depth" of the curved object the system is seeing, Jain says. Dots projected onto a flat surface would look different to the system than dots projected onto a curved one, and faces, of course, are full of curves.

HOW SAFE IS YOUR HOME CONNECTED

Security experts are both thrilled and anxious about the internet of things (IoT), the evergrowing collection of smart electronic gadgets that interact with the world around them. It includes devices like internet-connected garage door openers, refrigerators you can text to see if you're low on milk and tennis rackets that offer tips on a better backhand. The technology research firm Gartner estimates that 6.4 billion such IoT devices were connected online in 2016, and that number doesn't include smart phones, tablets or laptops.

But buyer beware: Smart devices prize convenience and novelty, not security. "The challenge with IoT is that the market is so enthusiastic right now - connected devices are super cool," says Ted Harrington, a San Diego-based partner at Independent Security Evaluators, the company that first hacked an iPhone in 2007. "The problem is that this enthusiasm is really overshadowing the security challenges."

On Oct. 21, 2016, those challenges burst out of the shadows. Three times that day, hackers launched attacks against Dyn, a company that reads the URL you type in a web browser and directs you to a webpage - a kind of digital phone book. The onslaught persisted for six hours, blocking or slowing access to dozens of prominent websites. This type of event is known as a distributed denial-of-service



(DDoS) attack, which means so many devices sent simultaneous requests that Dyn's system was overwhelmed and broke down. It was the largest attack of its kind in history, but it won't be the last.

Turns out, IoT played an important role in the Dyn hack. In the aftermath of the hack, security experts determined that the attackers had hijacked tens of thousands of connected household devices, including surveillance cameras, routers and DVRs, directing them to connect to Dyn at the same time. The owners likely had no idea their gadgets were causing the widespread internet slowdown they complained about on Facebook.

The most disturbing part of the hack was its simplicity. The attackers didn't need high coding devices. Instead, they commandeered devices just by logging in - using the default username and password provided by the manufacturer, which the owners had never bothered to change. The worse is, unsecured IoT devices could lead to personal breaches of security. If someone hacked that connected garage door opener, they could gain access not just to a house itself, but it's home network as well

INTERNET PROTOCOL TELEVISION

An IPTV signal is a stream of data packets traveling across the Web. Internet TV is relatively new there are lots of different ways to get it, and quality, content and costs can vary greatly. Shows can be high-quality, professionally produced material, while others might remind you of Wayne and Garth broadcasting "Wayne's World" from their basement. Traditional TV networks are also easing into the technology and experimenting with different formats.

Internet TV, in simple terms, is video and audio delivered over an Internet connection. It's also known as Internet protocol television, or IPTV. You can watch Internet TV on a computer screen, a television screen (through a set-top box) or a mobile device like a cell phone or an iPod.

It's almost the same as getting television through an antenna or a series of cable wires -- the difference is that information is sent over the Internet as data. At the same time, you can find even more variety on Internet TV than cable TV. Along with many of the same shows you find on the big networks, many Web sites offer independently produced programs targeted toward people with specific interests.

HOW IPTV WORKS

There are two things that make Internet TV possible. The first is bandwidth. To understand bandwidth, it's best to think of the Internet as a series of highways and information as cars. If there's only one car on the highway, that car will travel quickly and easily. If there are many cars, however, traffic can build up and slow things down. The Internet works the same way -- if only one person is downloading one file, the transfer should happen fairly quickly. If several people are trying to download the same file, though, the transfer can be much slower. In this analogy, bandwidth is the number of lanes on the highway. If a Web site's bandwidth is too low, traffic will become congested. If the Web site increases its bandwidth, information will be able to travel back and forth without much of a hassle. Bandwidth is important for Internet TV, because sending large amounts of video and audio data over the Internet requires large bandwidths.

The second important part of Internet TV is streaming audio and video. Streaming technology makes it possible for us to watch live or on-demand video without downloading a copy directly to a computer.

There are a few basic steps to watching streaming audio and video:

- A server holds video data.
- When you want to watch a video, you click the right command, like "Play" or "Watch." This sends a message to the server, telling it that you want to watch a certain video.
- The server responds by sending you the necessary data. It uses streaming media protocols to make sure the data arrives in good condition and with all the pieces in the right order.
- A plug-in or player on your computer -- Windows Media Player and RealPlayer are two popular examples -- decodes and plays the video signal.

Mobile IPTV

Mobile IPTV is a technology that enables users to transmit and receive multimedia traffic including television signal, video, audio, text and graphic services through IP-based the wired and wireless networks with support for QoS/QoS, security, mobility, and interactive functions. Through Mobile IPTV, users can enjoy IPTV services anywhere and even while on the move. In fact, IPTV is composed of Internet Protocol (IP) and TV. In other words, it implies a traditional TV services are being migrated and converged into Internet space. As long as we use Internet, IP is a vital component and all of advantages of IP can be used for IPTV services. Everyone agrees that IP has played and will play a major role in the evolution of networks and services. IP allows you to make use of all IP based services including IPTV services anywhere on earth through Internet. The major goal of this paper is to raise the interests and concerns of Mobile IPTV including the status of standard activities when deploying IPTV services over wireless and mobile networks, and expand the value of IPTV in the structure of everyday life

Mobile TV Plus IP Approach

This approach uses the traditional digital broadcast networks to deliver IP-based audio, video, graphics and other broadband data services to the user on the move. This is a prime example of the increasing convergence of broadcasting, telecommunications and computing. The reason why it is pursued is to build a content environment that combines the stability and usability of broadcasting and the diverse services of Internet.

To make this approach more attractive, wide area wireless networks such as cellular networks are integrated to support interactivity. The outstanding activities in this approach are Digital Video Broadcast (DVB)-CBMS (Convergence of Broadcasting and Mobile Services) and World DAB (DAB: Digital Audio Broadcasting) Forum DVB-CBMS is developing bi-directional mobile IP based broadcasting protocol specifications over DVB-H [6]. DVB-CBMS already finished Phase I and currently is working in Phase II. World DAB Forum is enhancing and extending Eureka 147 to support IP based services. Eureka 147 was originally developed for digital radio applications and extended to support video services

SUPER COMPUTER IN SPACE

A SpaceX Falcon 9 rocket lifted off on a resupply flight for the International Space Station, and among its cargo, in addition, was something else very cool: a supercomputer.

The machine, made by Hewlett Packard Enterprise and called the Spaceborne Computer, is capable of a teraflop worth of computing power, which puts it roughly in line with a late-1990s supercomputer. Made up of two pizza box-shaped machines in a single enclosure, the HPE supercomputer is a part of a year-long experiment to see how an off-the-shelf computer system can fare in space if protected in the right way by software.

Long space missions like a trip to Mars come with considerable communications delays, so equipping astronauts with a powerful supercomputer would allow them to solve complex problems without having to wait for the issue and the solution to be transmitted to and from Earth. But radiation on a trip like that can damage computers, so NASA and HPE are conducting this research to see if software can provide the necessary protection to keep things functioning correctly.

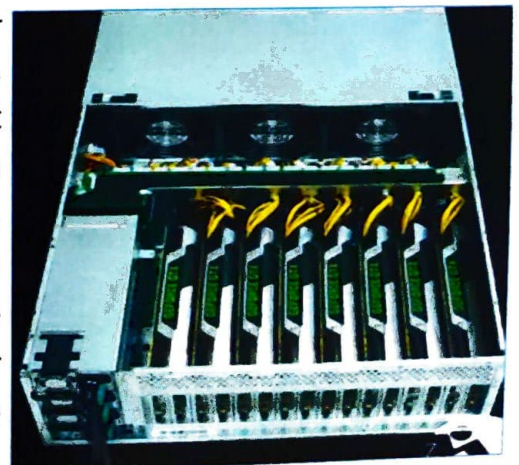
Just like NASA's famous identical twin experiment-in which Scott Kelly spent a year in space and his brother, Mark Kelly, stayed down on Earth-the supercomputer in space has a brother on this planet, a doppelganger machine located in Wisconsin acting as a control in this experiment.

HPE's approach with the Spaceborne Computer, a two-node, water-cooled machine, is different from the way a mission-critical computer in space is physically protected from radiation. For example, the chief computer for the Juno spacecraft inhabits a "protective" according to BAE systems, which made that processor. Instead of physical protection for the HPE computer, the company is hoping to learn if software can do something similar.

Eng Lim Goh, the HPE project's principal investigator, says that the "dramatic vision" for the future of this line of research is one in which before an astronaut travels to space, he or she would be able to take a top-of-the-line, off-the-shelf machine with them, and software could make it space-worthy. Then the astronaut could put whatever programs s/he wanted on the machine.

So how might this help?

In general, Goh says that smart machines on Earth that exercise "self-care" may turn themselves off in the face of dangerous conditions. Another idea is that a machine can intentionally run slowly so that it can handle errors as it goes, as opposed to running at maximum capacity and not having the bandwidth to also cope with problems. "We will find out what works, what doesn't," Goh says. "We have a whole list." HPE said in a statement describing the project that the "system software will manage real time throttling of the computer systems based on current conditions and can mitigate environmentally induced errors."



MY PhD JOURNEY

Most of the people do their Ph.D. from academia is to get a promotion. My case is also the same. But after I have joined my Ph.D., I have learned lot of things that I have not learned even in my 9 years of IT industry experience + 5 years of academic experience. At the age of 35, I have joined my Ph.D. (Full time - Non QIP) in one of the premier national institutes VNIT, Nagpur. The first important challenge in any Ph.D. is to fix the area and topic of my research work. My supervisor, the great Dr. Parag S. Deshpande sir fixed my research area and the topic on which I have to work.

The next task is to complete pre-Ph.D. During my pre-Ph.D., I have to complete my course work along with M.Tech students and it was very challenging to compete with the M.Tech (CSE) students, who were the best rankers in GATE. I have two more subjects to study along with handling of a lab as a teacher and I have my family responsibilities. Finally, I have achieved second rank in the class in which I have studied my subject with M.Tech. students and cleared all my subjects with 10 CGPA in my pre-Ph.D.

During my stay at VNIT, I have seen great teachers who are down to earth and I have learned lot of things from them. My guide Dr. Parag S. Deshpande sir, is always inspirational. Whenever I used to go to sir's cabin, I have seen sir always studying some technical stuff. That has inspired me a lot. His way of guiding UG, PG, and Ph.D. students on daily basis has inspired me a lot on how to guide the students and how to do hard work with smile on your face always. Ph.D. is not just a normal course like any UG or PG, you have to show lot of discipline in terms of maintaining time and lot of hard work in getting novel ideas in your research area by studying and understanding lot of literature, carry out the ideas, write an international standard technical paper and get checked from the guide. After successful check from the guide, you have to choose a best international journal (SCI indexed) and send your paper to the journal. Generally, the writer doesn't have any idea how much time the reviewers take to check your paper. You don't know whether the review will result in success or not. To submit a Ph.D. in VNIT, a scholar has to have at least two journal papers (SCI indexed journals) on his name. The game is not yet over. You have to write the thesis. Review the thesis from your end, then ask any of your friends to review it, and finally handover thesis for review by your guide after corrections. You don't know how much time your guide will take to review your thesis. My guide took 2 weeks to review my thesis. After my guide reviewed it, I corrected my thesis and submitted it to VNIT. Now, the thesis will go for review by two international (SCI indexed) and send your paper to the journal. Generally, the writer doesn't have any idea how much time the reviewers take to check your paper. You don't know whether the review will result in success or not.

To submit a Ph.D. in VNIT, a scholar has to have at least two journal papers (SCI indexed journals) on his name. The game is not yet over. You have to write the thesis. Review the thesis from your end, then ask any of your friends to review it, and finally handover thesis for review by your guide after corrections. You don't know how much time your guide will take to review your thesis.

My guide took 2 weeks to review my thesis. After my guide reviewed it, I corrected my thesis and submitted it to VNIT. Now, the thesis will go for review by two international experts in your subject area. My thesis sent for review to two of the professors from IIT Kharagpur and received my reviews after eight months with minor revision. Finally, I defended my thesis successfully in March, 2017.

So, a Ph.D. student has to show complete dedication and hard work in completing the Ph.D. work. In India, every full time Ph.D. student gets 30 days of leaves every year. In my three years of stay at VNIT, I have taken 20 leaves out of 90 leaves. Most of my leaves I have taken to take care of my daughter.

In VNIT, my daughter used to get sick for every 15 days because of the atmosphere around the staff quarter that we used to stay. Sometimes myself and my wife have to wake up complete nights to take care of my daughter. In spite of such kind of issues, I have put lot of consistent efforts by working from morning 9 AM to night 11 PM every day for my Ph.D.

I have implemented 2 govt. projects during my three years of stay at VNIT. There is a compulsion of 2 SCI publications in VNIT to submit Ph.D. With grace of god, I got 3 SCI publications and 1 under review in 4 years and successfully defended my Ph.D. I have achieved all these success because of the support from my guide Parag S Deshpande sir and moral support from my family.

Finally, I would like to express my deep and sincere gratitude to my supervisor Dr. Parag S Deshpande sir for his encouragement, inspiration, support, caring, patience, and guidance through my research work. I would never be able to finish my doctoral study without the support of my friends and my family members especially my wife Madhavi and daughter Adithi Reddy, who lost their many enjoyable days on behalf of my studies.

I would like to thank all my family members who were always there to support me during my good and bad times and helped me stay concentrated throughout these difficult days. I would like to thank KITS, Warangal management for providing me the opportunity in acquiring such a great achievement.



S. NARASIMHA REDDY

TASK (Telangana Academy for Skill & Knowledge)

Telangana Academy for Skill & Knowledge (TASK) was established by the Government of Telangana to enable a platform between Government, Academia and Industry to enhance employability quotient of youth in the state.

TASK Faculty In-charge in co-ordination with TASK Team and Department faculty coordinators, conducts various Training & placement activities in the college.

Department of Computer Science and Engineering, KITS Warangal, under the aegis of TASK conducted the following activities in the academic year 2016-2017.

1. Department of CSE, KITSW. Under the aegis of TASK, Organized a Five day Oracle Academy FDP program on "Database Programming with PL/SQL" during 18-22 July 2016.
2. Six Faculty members (from CSE & IT Departments) participated in the FDP on "DB Programming with PL/SQL" and got course completion certificate from Oracle Academy.
3. Mr. Phridviraj, Asst. Prof of CSE Dept, attended "Oracle Academy Day" at St. Martins Engineering College Hyderabad on 19th August 2016.
4. Dr. Y. Manohar, Director KITSW attended and shared valuable inputs with the TASK team in the TASK Principal's Meet held on 23-08-2016 at Kakatiya University Senate Hall.
5. KITSW Team (Dr. Y. Manohar Director, Dr. Y. Purandar-Dean T&P, P. Vijay Kumar- TASK Faculty Incharge and E. Kiran-TPE) visited TASK office on 06-09-2016 and had separate meetings with Sri. Sujiv Nair- TASK CEO, Sri. V. Swamy-TASK Director, SD and Sri. A. Bhaskar TASK Director CR to discuss about various collaborative works.
6. Mr. P. Vijay Kumar, TASK Faculty In charge attended the TASK TPO'S Meet held on 28-09-2016 at TASK office, Hyderabad.
7. Conducted a training for students on "Oracle Academy JAVA course Certification program" by KITSW CSE faculty members during 22-28 September 2016.
8. Five students of Final year B.Tech (Rishika Gurralla, Bhargavi Reddy Beravelli, Sushmitha Goli, Ravali Nuka, Akhil Nagothu) from CSE and IT departments visited Deloitte campus, Hyderabad on 20 February 2017.

NASA'S SPACE APP HACKATHON '17

- ✓ The event "24 hours Hackathon - NASA's Space Apps 2k17" is organized on 16th and 17th march.

About HACKATHON:

Hackathons are technology development marathons that draw on the talents and initiative of bright minded volunteers - developers, engineers, technologists, designers.

They are open to anyone who has a passion for making a difference and are focused on developing real solutions to global challenges by the end of the event. This hackathon is part of a larger process of defining challenges relevant to earth and space, intensively working to prototype solutions over the course of the Space Apps weekend, and subsequently refining and implementing the most promising prototype



The Process/steps:

1. Hackathon in phase-1 is a 24 hours event.
2. The second phase Hackathon will be conducted for 48 hours.
3. Participation is on individual basis and team participation is allowed (only 4 members a team)
4. Participants will be ranked based on the way they take up the challenges and desire to have an immediate impact on the world.



THE ROOTS OF
EDUCATION ARE BITTER,
BUT THE FRUIT IS SWEET

Aristotle

Department of CSE