



K.L.N. College of Engineering

**i'Storm**

Department of Information Technology



## THE EDITOR'S DESK

### PRINCIPAL MESSAGE



It is a matter of great pride and satisfaction for KLN COLLEGE OF ENGINEERING to bring out the News Letter 'iSTORM' Released from the Department of Information Technology. The College has made tremendous progress in all areas-academic, non-academics, capacity building relevant to staff and students. The College has achieved another milestone in getting NBA (National Board of Accreditation).I am confident that this issue of Department News Letter will send a positive signal to the staff, students and the person who are interested in the Technical education and Technology based activities. A News Letter is like a mirror which reflects the clear picture of all sorts of activities undertaken by a Department and develops writing skills among students in particular and teaching faculty in general. I congratulate the Editorial Board of this News Letter who have played wonderful role in accomplishing the task in Record time. I express my deep sense of gratitude to Dr.N.Balaji, HOD/IT under whose guidance this Technical work has been undertaken and completed within the stipulated time. Also my heartfelt Congratulations to staff members and Students for their fruitful effort. With Best Wishes.

**PRINCIPAL**

**Dr.A.V. RAMPRASAD**



It gives me immense pleasure to note that response to this newsletter of our department **i'STORM** has been overwhelming. The wide-spectrum of articles in different sections gives me a sense of pride that our students and professors possess creative potential and original thinking in ample measures. Each article is entertaining, interesting and absorbing. I applaud the contributors for their stimulated thoughts and varied hues in articles contributed by them. Commendable job has also been done by the Editorial Board in planning for and producing the Newsletter. My congratulations to the team who took the responsibility for the arduous task most effectively. I am hopeful that this small piece of technical work shall not only develop the taste for reading among students but also develop a sense belonging to the institution as well.

**H.O.D (I.T)**

**Dr.N.Balaji**

**NEWS LETTER EDITORIAL BOARD**

**EDITOR-IN-CHIEF:**

- Dr.N.Balaji (HOD/IT)

**STAFF-INCHARGE:**

- Mrs.N.Nandhini (AP2)

**STUDENT EDITOR:**

S.Vishnu Prasad (Third year)

M.Sundar(Third Year)

# **ICON OF THE MONTH**

## **MARISSA MAYER**

### **Introduction:**

**Marissa Mayer** is Google's first female engineer, having joined the company at a startup stage in 1999. At just 36 years old, she was the youngest member of Google's executive operating committee. Mayer led product management for a variety of search products, such as Google Earth, Google Maps, Local Search, Street View and Gmail. In July, 2012, Mayer was appointed President and CEO of Yahoo!.



### **Early life and education:**

Mayer was born in Wausau, Wisconsin, the daughter of Margaret Mayer, an art teacher of Finnish descent, and Michael Mayer, an environmental engineer who worked for water companies. Her grandfather, Clem Mayer, had polio when he was 7 and served as mayor of Jackson, Wisconsin for 32 years. As a child, Mayer was "painfully shy" and was a Brownie. During middle school and high school, she took piano and ballet lessons, the latter which taught her "criticism and discipline, poise and confidence."

When she was attending Wausau West High School, Mayer was on the curling team and the precision dance team. She

excelled in chemistry, calculus, biology, and physics. She took part in extracurricular activities, becoming president of her high school's Spanish club, treasurer of Key Club, captain of the debate team, and captain of the pom-pom squad. Her high school debate team won the Wisconsin state championship and the pom-pom squad was the state runner-up. During high school, she worked as a grocery clerk. After graduating from high school in 1993, Mayer was selected by Tommy Thompson, then the Governor of Wisconsin, as one of the state's two delegates to attend the National Youth Science Camp in West Virginia.

### **Marissa's aggressive speech:**

For the 20th anniversary of Yahoo, Marissa Mayer discusses how she's trying to reinvent the company. In a wide-ranging interview, Mayer shares her vision for fixing the company's past mistakes, including a major investment in mobile and a new ad platform. Yet she's been dogged by critics who see her as an imperious micromanager, who criticize her \$1.1 billion purchase of Tumblr, and who fault her for moving too slowly. The company's executives explain that the business could only return to health after she first halted Yahoo's brain drain and went big on mobile. As one Yahoo employee summarized Mayer's thinking: "First people, then apps."

"In technology we live at a rare, fast-moving pace," Mayer said, "There are probably industries where gender is more of an issue, but our industry is not one where I think that's relevant."

The obsession with product, user experience, and her strong point of view is a strength, she argues. For example, her insistence that her team find a way to use the time users spend thumbing their email app to refresh it led to a news and search integration that created millions of extra

minutes of user engagement, according to Yahoo mobile head Adam Cahan.

**Priyadarshini.R,**  
**Third Year.**

## **EMERGING TECHNOLOGIES**

### **VIRTUAL REALITY HEADSET**

Sony plans on putting its virtual-reality headset on consumers' noggins next year. The gaming and electronics company announced that the Game Developers Conference that its VR system nicknamed Project Morpheus will debut in the first half of 2016.



Sony Corp. originally unveiled a prototype of the headset at last year's gathering of video game developers. The headset works in tandem with Sony's PlayStation 4 console and camera by covering users' vision and simulating virtual worlds on screen.

Sony flaunted an updated version of the VR headset prototype at an event. While it largely resembles the prototype introduced last year, the new version redistributes weight toward the back of the user's head and features a screen that can slide back and forth to accommodate eyeglasses.

The new prototype also features a larger 5.7-inch OLED screen that displays nearly a 100-degree field of view and is capable of rendering imagery at up to 120 frames per second. There are nine LED lights on the headset's exterior that are to track movement.

**No price was announced.**

"Our goal with VR is to deliver a sense

of presence, making the player feel as though they've stepped inside the world of a game," said Shuhei Yoshida, president of Sony Computer Entertainment Worldwide Studios. "The new Project Morpheus prototype brings us closer to that goal, as it improves the visual experience and tracking accuracy, both of which are critical to achieving sense of presence."

The company showed off the new prototype at an event with four technical demonstrations, including a game that utilized a pair of PlayStation Move controllers to simulate a shootout inside a lavish building in London and a more passive presentation that featured tiny robots responding to users' movements.



Sony is among several gaming and electronics companies working to bring VR into homes. HTC and Valve announced plans Sunday to release its Vive VR system to consumers later this year, while Oculus VR has yet to reveal when its Oculus Rift headset will be available to consumers.

**Srinithikannama.N,**  
**Third Year.**

### **GOOGLE PILL**

#### **Introduction:**

Google is already in our cars, our homes and on our wrists, but now it could soon be inside our bodies too.

Google X, the company's research lab already in charge of self-driving cars, high-altitude balloons to deliver internet and Google Glass, and now is developing a pill that could detect cancer and other diseases.

**Objective of google pill:**

“Every test you ever go to the doctor for will be done through this system,” said Dr Andrew Conrad, a molecular biologist and head of the Life Sciences team at Google X. “That’s our dream.

A Google spokesman said: “Our mission is to help move health care from reactive to proactive; for far too long, it’s largely been “sickness care,” because we go to the doctor only once we have symptoms. We keep most complex systems (e.g. cars and airplanes) in shape with proactive, preventive care, so why should our bodies be any different?

**How the google pill works?**

The pill would contain magnetic particles approximately 10,000 times smaller than the width of a human hair. These tiny particles will have antibodies or proteins attached to them that detect the presence of “biomarker” molecules inside the body that indicate diseases such as cancer or an imminent heart attack.

“Essentially the idea is simple; you just swallow a pill with the nano particles, which are decorated with antibodies or molecules that detect other molecules,” explained Andrew Conrad, head of life sciences inside the Google’s “moonshot” X research lab. “They course through your body and because the cores of these particles are magnetic, we can call them somewhere and ask them what they saw.”

A wrist-worn device like a smartwatch could be used to read what the particles have detected on their trip through the blood stream.

How nanoparticles could detect the disease early



Nanoparticles are tiny, more than 2,000 could fit inside a red blood cell



Nanoparticles circulate in the bloodstream and attach to certain cells, including cancer cells



A device worn outside the body can detect the nanoparticles and provide useful information to doctors

Source: Google

**Preemptive rather than reactive:**

It is part of the move away from reactive medicine, which treats diseases once they have become serious enough to cause symptoms for patients prompting them to go and see a doctor and towards pre-emptive medicine, which catches signs of disease much earlier, before it becomes a problem.

Pre-emptive or proactive medicine will require new ways of monitoring the normal health of individuals so that changes, even small ones, can be detected. The work is at very early stages – Google currently hasn’t discovered how many nanoparticles would be required to make the system effective and has to develop coatings for the particles that help them bind to cells to detect issues. The scheme is being made public as Google is now seeking partners to take the technology forward.

Conrad said it would not be Google operating the technology, and that the search giant would not be the one with access to the data collected by the nanoparticles. Instead it would be the patients doctors, hospitals and medical equipment companies that take the technology on.

**Defect of nanotechnology:**

Nanotechnology is a new field in medical science, which has promised to help combat disease including cancer. But nanoparticles potentially pose a risk to the health of individuals and the environment if not carefully controlled, which could build up and cause unintended consequences in unexpected places both inside the body and in the wider environment.

Medical applications of new diagnostic technologies like this are highly regulated, and Google could face tough challenges in proving the safety and efficacy of the nanoparticle platform. It is highly likely that a medical company would partner with Google to take the technology to the next step, but that next step is likely to be more than five years away according to industry experts.

One of Google's previous X lab projects, a "smart" contact lens capable of monitoring the signs of diabetes, was licensed by Swiss drug firm Novartis in July to develop the technology into a practical medical application.

#### **Who are all working in this research?**

"This team combines expertise from the fields of biology, chemistry, physics, electrical engineering, computer science, and more, and we are focused on developing new diagnostic tools for physicians -- especially new smart devices that integrate easily into daily life and could help transform the detection, prevention, and management of disease."

#### **How much the us government has invested in it?**

Scientists believe nanotechnology could greatly enhance medicine. The US government has invested more than \$20 billion in nanotechnology research over the last decade.

**Karpura Sundara Pandian.P,**  
**Third Year.**

### **THREE DIMENSION (3D)** **PRINTED SELFIES**

#### **Introduction:**

"Today is not tomorrow" making this phrase true the selfies are now advanced to 3D printed selfies. This is most welcomed by people because it can bring their sweet memories at any time overcoming the photos that are mishap from their mobile phones. It is an emerging technology app. This app captures depth information in real-time using ordinary cameras. It takes multiple 3D images

and uses cloud based reconstruction technology and produces high definition three dimension model of your face.

The app, is based on Dacuda's SLAM Scan 3D engine that captures depth information in real-time using regular cameras. Taking multiple 3D images from Dacuda's 3D engine and Volumental's cloud-based reconstruction technology, the app renders a high-resolution 3D model of your face.



#### **How to use?**

Usage of this app is quite simple as ABC. Users can take a picture using their smartphone or tablet, by moving it. This will create a 3D rendering of their face. They will then be able to send the picture to a 3D printing company and receive a 3D version of their face in the post.

If you ever wanted a 3D printed selfie, there'll soon be an app for that. Developer Dacuda has teamed up with Stockholm, Sweden based Volumental on the world's first mobile application for easily creating printable 3D selfies. A detailed 3D selfie is created just by moving your iPad from left to right in front of your face. After creating a 3D model of your face, the app then lets you send the picture to a 3D printing company and receive a 3D version of your face in the post. It's compatible with iPads and iPhones from the iPhone 5 range and above. According to Dacuda founder Alexander Ilic, the software also supports

Android 5.0 Lollipop devices and above that have compatible camera software.

#### News:

The software works by capturing a video of one's face on a tablet and is being shown off at Mobile World Congress in Barcelona, Spain, CNBC reported last weekend. "We expect people won't have a 3D printer quickly but we think the technology will become more affordable," Ilic said in an interview.



#### Expectations:

The app is compatible with iOS devices from the iPhone 5 and above and iPads. And it currently works on Android 5.0, but only on certain devices.

**Rashmi.J.K,**  
**Third Year.**

## **RECENT TRENDS**

### **READING SPEED HARNESSSED TO AUTOMATICALLY CONTROL TEXT DISPLAY RATES**

Reading a text is something that each of us does at our own individual pace. This simple fact has been exploited by computer scientists in Saarbrücken who have developed a software system that recognizes how fast a text on a display screen is being read and then allows the text to scroll forward line by line at the right speed. The technology makes use of commercially available eye-tracking glasses, which are able to capture the motion of the user's eyes and

convert this into a reading speed. Potential future areas of applications include **electronic books or the large-scale displays used in railway stations and shopping centres.**



Average readers manage about 200 words per minute. Once they reach the end of a page in a book, they turn the page. Things are somewhat different when reading a text on a display. In this case, the reader might use the mouse to pull up the next section of text to be read. This is something the team of computer scientists from Saarland University and the German Research Center for Artificial Intelligence (DFKI) would like to change. Their solution is based on the movement of the reader's eyes. The system analyses the reading speed and uses the result to automatically adjust the speed at which the text is displayed on the screen. 'We use commercially available eye-tracking glasses,' explains Christian Lander, a doctoral research student who works at the DFKI's Innovative Retail Laboratory .

The glasses are equipped with two cameras: a small infrared camera that faces the user and tracks the movement of the pupil in the user's right eye. The other camera faces forward and records the image that the user is looking at. The software combines the images from the two cameras and is thus able to precisely determine the direction of eye gaze. 'We have combined the

image capture technology with a computational procedure that we developed in the media informatics research seminar,' says Lander. 'It computes the average speed at which a paragraph is read. The method involves registering how quickly the reader's eye travels from left to right along a line of text and then downward to the next line.' The system recognizes any change in the reader's reading speed and adjusts the text scrolling speed accordingly.

The system currently allows three readers to simultaneously read the same text on a single display. 'Each reader has their own small window in which they can read the text at their preferred speed,' explains Lander. It is conceivable that in a few years' time this technology will be used on the sorts of large displays found in railway stations or shopping centres. At the moment, tracking glasses are needed in order to register the wearer's gaze. However, the system could be installed in future in other more user-friendly wearable devices such as Google Glass. The method can also be adapted for use on smaller displays or with electronic books.

**Sri Vidya.G.M,**  
**Third Year.**

### **SAFFIR the HUMANOID ROBOT**

#### **Introduction:**

A **humanoid robot** is a robot with its body shape built to resemble that of the human body. A humanoid design might be for functional purposes, such as interacting with human tools and environments, for experimental purposes, such as the study of bipedal locomotion, or for other purposes. In general, humanoid robots have a torso, a head, two arms, and two legs, though some forms of humanoid robots may model only part of the body, for example, from the waist

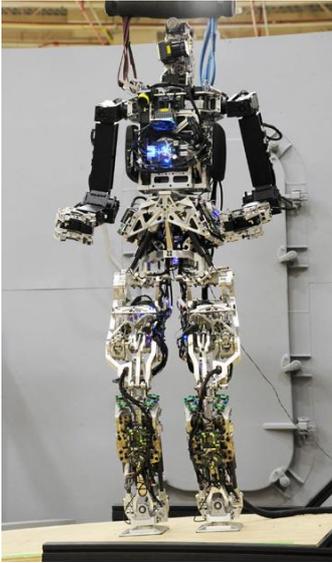
up. Some humanoid robots may also have heads designed to replicate human facial features such as eyes and mouths. Now this Humanoid Robot Technique has been used for Navy .



#### **About :**

The birth of SAFFiR (Shipboard Autonomous Firefighting Robot ) - US Navy's latest recruit was at The Naval Future Forces Science and Technology Expo . Scientists unveiled a Firefighting Robot Prototype that was able to successfully complete it's demonstration . This stands 5Feet10 and weighs 143 pounds . He would be soon fighting fire in the US Navy . This was tested under simulated fire where it walked across uneven floors , used thermal imaging to identify overheated equipments and used hose to extinguish a small fire .

Dr. Thomas McKenna, ONR program manager for human-robot interaction and cognitive neuroscience said that they had set out to build and demonstrate a humanoid capable of mobility aboard a ship, manipulating doors and fire hoses, and equipped with sensors to see and navigate through smoke . The main theme of this or as a long-term goal is to keep Sailors from the danger of direct exposure to fire.



### The Making:

The Humanoid Robot SAFFiR has been loaded with a lot of latest technologies. Sensors including infrared stereovision and a rotating laser for Light Detection and Ranging (LIDAR), that enables the Humanoid to see through Dense Smoke. It also has hands that can manipulate objects, open doors and handle a hose. But seeing through smoke and handling hose is just a part of the equation. According to the team who built the Bot, the hardest part of the process was designing the robotic equivalent of “sea legs” that allow SAFFiR the Humanoid Robot to stay upright aboard a rollicking ship. Whole-body momentum control allows for the robot to optimize the locations of all of its joints so that it maintains its center of mass on uncertain and unstable surfaces.

**Rashmi.S,  
Third Year.**

## **INERTIAL SENSORS IN GAMING AND SIMULATION**

### Introduction

**Inertial sensors** are used for capturing the **gestures and motions** which are widely used for simulations in automobile industry, gaming, medical, mining and navigation systems. Inertial sensors are sensors based on

inertia. These are used in **MEMS (Micro-Electro-Mechanical Systems)** and embedded with the techniques of microfabrication.

Inertial sensors detect and measure acceleration, tilt, shock, vibration, rotation and multiple Degrees-of-Freedom (DoF) motion. Until recently, their primary use was in Inertial Navigation Systems (INS) as a navigation technique in which measurements provided by Accelerometers and Gyroscopes.

### **The following technologies use the inertial sensors:**

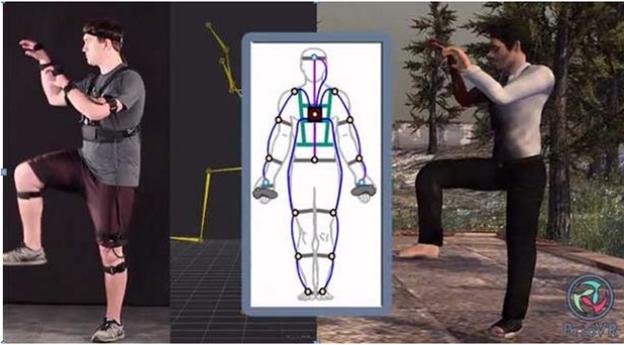
#### **PrioVR suits:**

Until now, there hasn't been a way to truly immerse yourself into virtual worlds in a way that allows natural, **full-body interaction**. PrioVR is changing the game by bringing you and your movements into **virtual environments where you can see your body move as you move**, manipulate items as if they were right in front of you, and interact as naturally as you do in the real world.

PrioVR **uses high-performance inertial sensors** to provide **360 degrees of low-latency, real-time motion tracking without the need for cameras, optics, line-of-sight, or large, awkward equipment. All PrioVR needs is you.**

PrioVR's sensors are placed on key points of your body to capture your movements and translate them on-screen in real-time. PrioVR is wireless, allows **for multiple simultaneous users**, and will work anywhere - indoors or out, in capture spaces of any size.

PrioVR is available in three versions, the Core, the Lite, and the Pro, all of which are wireless and compatible with each other. All suits include two hand-controllers with action buttons, triggers, and joysticks. The joysticks let you easily navigate through large worlds without actually walking, while the trigger supports a familiar shooting experience.



### Ignite Engine by EA:

Electronic Arts announced several features within the engine. Its **Human Intelligence framework** lets in-game players "think like real athletes", with the ability to make snap judgments, prepare for impact, and perform as a team player. For example, the new artificial intelligence creates a sense of urgency for computer players towards the end of a match, who will rush for more shots on goal. The True Player Motion framework makes players' bodies, limbs, and clothing each **move according to physics**. The Living Worlds framework models the stadium audience members and their behaviors individually. The audience will have expectations about the **in-game sports matches**, and will **change react with the match's progress**. The Ignite artificial intelligence is able to use the **next-gen hardware** to handle four times as many calculations per second than older EA Sports titles. Animation detail is expected to improve "ten-fold".



**Sanjeev Ram.N,  
Third Year.**

### FACEBOOK'S SUPPORT TO THE MOBILE APP DEVELOPERS

#### Introduction:

Whenever we hear the name Facebook the first thing came to all of us mind is online chat service. But it is not really true. Facebook is not only for time consuming chat service. It provides a loads of services to the people. Recently, Facebook accompanied with Reliance provides Free Internet Service to the people. Facebook gives its helping hand to the mobile app developers through **F8 conference and FbStart Page**.

#### F8 conference:

F8 is the annual conference conducted by Facebook on almost every year. It is started at 2007 by the founder of Facebook **Mark Zuckerberg**. F8 is normally held on San Francisco, California. This conference mainly focus on Mobile application developers and Entrepreneurs. Entrepreneur really took risk for running their small organisation. In order to help them F8 is started. Zuckerberg wants Facebook to be a "**cross platform**" that ride across Android, Windows, iOS, Web and more. So that Facebook does not create its own mobile platform. In this conference all the main members of Facebook, Instagram, Parse, Oculus, Live Rail are participated. They share their knowledge with the participants. It will really help the

mobile app developers to develop their application effectively and make that application to next level. In this conference the participants can access the latest tools provided by the above companies. New Product Demos and discussions are also held during conference. So, for 2015, the F8 conference is going to be held on March 25 and 26. And no worries anyone from anywhere can participate in F8 conference. They provide free videos and live interviews for the registered people. Go to F8 page and register for it to participate in F8 conference.



#### **FbStart:**

The next support by Facebook to the mobile app developers is **FbStart**. It is an extended idea to complete the mission of F8 conference. Because of the best responses from the conference the FbStart page is launched. It helps the budding mobile application developers to get success in their idea. It provides the Mobile app developers and entrepreneurs a set of free tools worth \$30,000. And also they get the help from the highly professional people. FbStart provides tools for Developing, Prototyping, Testing, Social Marketing etc... The available tools are Adobe, Blue Jeans, Usability Testing, Appurify, Email Marketing and many more. The eligibility for FbStart registration is the app must be developed either in Apple or in Android. And the main criteria is that app must lived on the Play

store atleast for 30 days. After the registration, the applicant get the mail from the FbStart if they like their Mobile Application Idea. And for entrepreneurs it helps to accelerate their business profit by understanding what the user wants and find the work flow.



**Pavithra.P,  
Third Year.**

## **BULLETINS**

### **WORKSHOP ON MICROPROCESSOR**

#### **8086:**

**Dr.D.Hariharan, Professor of Thiagarajar Engineering College, Thirupparankundram** has conducted hands-on session on **microprocessor 8086** on 23.01.2015 and 24.01.2015. This program was conducted for the second year students of KLNCE IT department. This program was conducted to enrich the student`s knowledge on microprocessor.



**COUNSELING FOR THIRD YEAR STUDENTS**

A counseling was given to the third year students of IT department by ISTE counselor **Mrs.Gomathi** on 09.02.2014 to enrich their activities.



**PRIZE AWARDS**

Our students of third year has won the prizes on the events namely web designing contest and mobile app development in **GYAN MITRA'15** which was conducted by **MEPCO SCHELENK ENGINEERING COLLEGE,SIVAKASI** on 21.02.2015.

**SEMINAR ABOUT "DREAMWEAVER" SOFTWARE**

A seminar was conducted to the third year students of IT department by **DREAMZONE, MADURAI** conveying about the **DREAMWEAVER** software.



**PLACEMENT DETAILS**

**FINAL-YEAR(2011-2015)STUDENT PLACED IN **INFOSYS**:**

**SEMINAR ON HUMAN VALUE AND PROFESSIONAL ETHICS**

**Dr.Sorna Latha** has conducted an awareness program for first year students saying that they should shape their behavior to shine in their life .This program was conducted on 27.02.2015.

	S.Rosyponmary	115009
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**FINAL-YEAR(2011-2015)STUDENTS**  
**PLACED IN INFOFACES:**

	Priya Dharshini.M. R	115104
	Manoj Kumar.T.S	115132
	Saravana Kumar.S.R	115129
	Sivachandra n. N K K	115124

**FINAL-YEAR(2011-2015)STUDENT**  
**PLACED IN L4:**

	Sriram.V	115312
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**FINAL-YEAR(2011-2015)STUDENT**  
**PLACED IN EXTERRO:**

	Saravana Kumar.S.R	115129
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**FINAL-YEAR (2011-2015)STUDENTS**  
**PLACED IN BLU DACNIS:**

	Sivachandran. N K K	115124
	Monisha.M.G	115102

**FINAL-YEAR(2011-2015)STUDENTS**  
**PLACED IN ARICENT:**

	R.Jaya Priya	115028
	B.Aishwarya	115030
	S.D.Venkatesh	115106
	R.S.Keerthana	115131

**FINAL-YEAR(2011-2015)STUDENTS**  
**PLACED IN RELIANCE:**

	M.R.Nagarajun	125908
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	T.G.Asmitha Chandini	115115
	S.G.Kaushik Kumar	115128
	P.Subash	125909
	A.Vetrivel Pandiarajan	115010
	P.Paisul Khan	115015
	J. Sriram	115314

**FINAL-YEAR(2011-2015)STUDENT**  
**PLACED IN POLARIS:**

	Nivethini.C	115003
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**Suggestions and Feedback Contact:**  
[klnceitsig@gmail.com](mailto:klnceitsig@gmail.com)

**HEAD COUNT OF STUDENTS PLACED**  
**IN FINAL YEAR(2011-2015):**

<b>COMPANY NAME</b>	<b>COUNT</b>
TCS	7
IBM	9
CTS	5
Aricent	4
Infosys	1
Mind Tree	4
Infofaces	4
Blu Dacnis	2
Polaris	1
Exterro	1
L4	1
Reliance	7
<b>GRAND TOTAL</b>	<b>46</b>