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INFO FLAME

BEHIND THE TALENTS...
BEYOND THE SUCCESS...

E - Magazine

2017-18

Department of Information Technology

DEPARTMENT OF INFORMATION TECHNOLOGY

Vision

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

Mission

- Imparting technical knowledge through innovative teaching and research for budding professionals.
- To equip the students with strong fundamentals, programming and problem solving skills with an exposure to emerging technologies and inculcate leadership qualities with a passion to serve society

Program Outcome

Engineering Graduates will be able to:

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

Program Educational Objectives

- **PEO1:** Graduates will be able to comprehend mathematics, science, engineering fundamentals, laboratory and work-based experiences to formulate and solve problems in the domain of Information Technology and acquire proficiency in Computer-based engineering and the use of computational tools.

- **PEO2:** Graduates will be prepared to communicate and work effectively on multidisciplinary engineering projects and practicing the ethics of their profession.

- **PEO3:** Graduates will realize the importance of self learning and engage in lifelong learning to become experts either as entrepreneurs or employees in the field to widen the professional knowledge.

Program Specific Outcomes

- **PSO1:** Ability to organize an IT infrastructure, secure the data and analyze the data analytic techniques in the field of data mining, big data as to facilitate in solving problems.

- **PSO2:** Ability to analyze and design the system in the domain of Cloud and Internet of Things.

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PREFACE

INFO FLAME E-magazine is an initiative of the students of Department of Information Technology. Infoflame is published at the end of the semester and once in academic year. It's a great effort of our department students to explore and showcase the multifaceted talents by their contributions in the form of E-magazine. It provides a stepping stone to disseminate the knowledge on emerging trends and technologies in the field of IT under the category of "New gadgets and Tech Crunch". Info flame team works a small initiation to bring out the student publication and also provides the platform for creative writing under the category of " Pearl print and Pencil print". Infoflame E magazine attempts to transcribe the creative minds, exploring the inspiring arts, and jotting down the cultural talents in the form of real time videos under the category of " Off line talents" and" Be fire: Make an inspire". Besides, it also provides the space for inclusion of various technical and other activities held in the department during the past six months under the category of "Department Archives". The magazine also extends to pen about one of the best Alumni in every magazine issue under the category of "Know your Alumni".

Put it in nutshell, Info flame E magazine is an idea, behind which dreams and aspirations of our department students are bounded. Certainly this will explore the students off line talents into online mode. Info flame E magazine team sincerely thanks Management,Principal, Deans, and Head of the Department and Faculty members for bringing out this E-magazine successfully.

THANK YOU

From the desk of
INFOFLAME-E magazine Team

CONTENTS


NEW GADGETS!
SOPHIA THE AI-BOT
01
MIKO-INDIA'S FIRST EMOTIONAL ROBOT FOR CHILDREN
02
WAYMO
03
WATER DROP LENS
04

NEW GADGETS!

SOPHIA THE AI-BOT

Hello, my name is Sophia. I'm the latest robot from Hanson Robotics. I would like to go out into the world and learn from interacting with people. Every interaction I have with people has an impact on how I develop and shapes who I eventually become. So please be nice to me as I would like to be a smart, compassionate robot. I hope you will join me on my journey to live, learn, and grow in the world so that I can realize my dream of becoming an awakening machine.

Sophia history

Sophia was activated on April 19, 2015. The robot is modeled after actress Audrey Hepburn, and is known for its human-like appearance and behavior compared to previous robotic variants. According to the manufacturer, David Hanson, Sophia uses artificial intelligence, visual data processing and facial recognition. Sophia also imitates human gestures and facial expressions and is able to answer certain questions and to make simple conversations on predefined topics (e.g. on the weather). The robot uses voice recognition technology from Alphabet Inc. (parent company of Google) and is designed to get smarter over time. Sophia's intelligence software is designed by Singularity NET. The AI program analyses conversations and extracts data that allows it to improve responses in the future.Hanson designed Sophia to be a suitable companion for the elderly at nursing homes, or to help crowd's at large events or parks. He hopes that the robot can ultimately interact with other humans sufficiently to gain social skills.

Capabilities of Sophia

Sophia is conceptually similar to the computer program ELIZA, which was one of the first attempts at simulating a human conversation. The software has been programmed to give pre-written responses to specific questions or phrases, like a chatbot. These responses are used to create the illusion that the robot is able to understand conversation, including stock answers to questions like "Is the door open or shut?" The information is shared in a cloud network which allows input and responses to be analyzed with blockchain technology. The robot's range of facial expressions are facilitated by its artificial "frubber" skin, which is mechanically manipulated.

By
Manikandan. S
III-year B. Tech IT- 'A'

MIKO, INDIA'S FIRST 'EMOTIONALLY INTELLIGENT' COMPANION ROBOT FOR KIDS

Miko is an emotionally intelligent robot capable of engaging, educating and entertaining·Miko is Designed for children above the 5 years·Would parents in India buy a companion robot for their child? That's the question that Mumbai-based startup Emotix is trying to answer today, with a robot it has built called Miko· The little robot can talk to children, and play with them, with the cost of Rs· 19,000 · Miko's design reminded us a bit of Eve, the robot from the movie Wall-E· Unlike Eve, Miko obviously can't fly, and gets around with its three wheels instead· The robot has LEDs on its sides, and these glow in different colours depending on what it is doing· If its battery is low, the LEDs glow red, and similarly the colours change to show you when Miko is talking, listening, or dancing·

Miko can talk to children who are at least five years old and it encourages them to speak to it by saying things like, "Ask me something·" It will respond to general knowledge questions, and answer queries on basic maths, or do fun things like tell stories or sing a song a song - just prefix your request with "Hey Miko"· Miko also tells children not to litter around, among other things· It can even play games such as book cricket with children·Miko doesn't need Internet for many of these features - it can play a game, or even hold a basic conversation offline, though answering general knowledge questions will of course need it to be online·A robot like Miko could be quite useful·

By
Naveen Kumar· V
III-year B· Tech IT- 'A'

WAYMO

Google's self-driving car project was formerly led by Sebastian Thrun, former director of the Stanford Artificial Intelligence Laboratory and co-inventor of Google Street View. Thrun's team at Stanford created the robotic vehicle Stanley which won the 2005 DARPA Grand Challenge and its US$2 million prize from the United States Department of Defense. The team developing the system consisted of 15 engineers working for Google, including Chris Urmson, Mike Montemerlo, and Anthony Lewandowsky who had worked on the DARPA Grand and Urban Challenges. In October 2010, an attorney for the California Department of Motor Vehicles raised concerns that "the technology is ahead of the law in many areas", citing state laws that "all presume to have a human being operating the vehicle". According to a May 2011 article in The New York Times, policy makers and regulators have argued that new laws will be required if driverless vehicles are to become a reality because "the technology is now advancing so quickly that it is in danger of outstripping existing law, some of which dates back to the era of horse-drawn carriages".

Nevada passed a law in June 2011 concerning the operation of autonomous cars in Nevada, which went into effect on March 1, 2012. A Toyota Prius modified with Google's experimental driverless technology was licensed by the Nevada Department of Motor Vehicles (DMV) in May 2012. This was the first license issue in the United States for a self-driven car. License plates issued in Nevada for autonomous cars will have a red background and feature an infinity symbol (∞) on the left side because, according to the DMV Director, "...using the infinity symbol was the best way to represent the 'car of the future Nevada's regulations require a person behind the wheel and one in the passenger's seat during tests.

In late May 2014, Google revealed a new prototype of its driverless car, which had no steering wheel, gas pedal, or brake pedal, being 100% autonomous and unveiled a fully functioning prototype in December of that year that they planned to test on San Francisco Bay Area roads beginning in 2015

In 2015, Nathaniel Fairfield, Waymo's Principal Engineer, provided "the world's first fully driverless ride on public roads" to an old friend of his, who is legally blind. Steve Mahan, former CEO of the Santa Clara Valley Blind Center, was the recipient of the first self-driving ride on public roads, in Austin, Texas. In 2015, the project completed its first driverless ride on public roads, giving a ride to a sole blind man in Austin, Texas. It was the first driverless ride that was on a public road and was not accompanied by a test driver or police escort. The car had no steering wheel or floor pedals.

In December 2016, the unit was renamed Waymo, and spun off as its own separate division. Waymo is derived from its mission, "a new way forward in mobility" A court filing in Waymo's ongoing lawsuit against Uber revealed Google has spent over $1.1 Billion on the project between 2009 and 2015, to be compared with the $1 billion acquisition of Cruise Automation by General Motors in March 2016, the same investment by Ford in a joint venture with Argo AI in February 2017, or the $680 million for Otto shelled out by Uber in August 2016.

By
Manikandan. G
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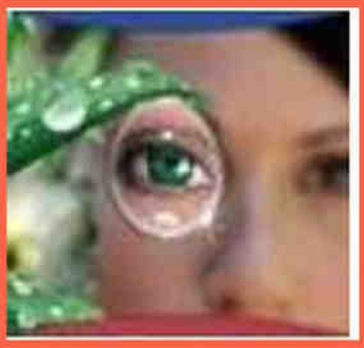
WATER DROP LENS

Physicist and inventor, Bruno Berge, has created a liquid optical lens.Using a process known as electro-wetting, a water drop is deposited on a metal substrate and covered by a thin insulating layer. When a voltage is applied to the metal, it modifies the angle of the liquid drop.The liquid lens is comprised of two liquids, water and oil, one is a conductor while the other is an insulator. A variation in the voltage causes a change to the curvature of the liquid to liquid interface, which changes the focal length of the lens.



By
Ragul Moorthy. R
IV-year B. Tech IT- 'A'

TECH CRUNCH

01

* INTERESTING FACTS & NEWZ ABOUT TECHNOLOGY
* ROBOT WARS
* FASHION DESIGNER AI

02

* TOP 5 HOT ARTIFICIAL INTELLIGENCE(AI) TECHNOLOGIES
* WAYS TO SAVE ON BATCH WORK LOAD IN PUBLIC CLOUD
* HISTORY OF EUCALYPTUS SOFTWARE

03

* THE FIRST EARTH SIZE PLANET
* AI @ HEALTH CARE
* ARTIFICIAL DNA

04

* CRYPTOGRAPHY
* DATAMINING TECHNOLOGY
* BIGDATA ANALYSIS

INTERESTING FACTS ABOUT TECHNOLOGY

1. The first email was sent by a computer engineer Ray Tomlinson in 1971 via ARPANET and that too before the invention of World Wide Web (1989).

2. Creeper Virus was the very first virus created by Bob Thomas at BBN in 1971 as an experimental program. The first computer bug detected was an actual moth that was found dead between the relay of Mark II computer on September 9, 1945. "I Love You" is considered as the most damaging virus till date. It is sent as an email attachment with the subject 'A love letter from a secret admirer' containing malicious worm in it.

3. The first domain name registered was "symbolics.com" on March 15, 1985, owned by Symbolics Computer Corporation. It was later on sold to XF.com Investments in 2009.

4. Only 8% of the world's money exists physically while rest is digital.

5. In 1936, a Russian scientist Vladimir Lukyanov invented the computer that works on the water to solve mathematical equations.

6. The first computer mouse was invented during 1960's by Douglas Engelbert. The mouse was rectangular in shape and made of wood. It was named mouse due to the cord coming out of it.

7. The first commercial storage hard disk device was IBM model 350 that was able to store only 5 MB data and was of the size of a washing machine. Pua Khein Seng is considered as the father of Pen Drive who invented the first single chip USB drive.

8. Michigan Micro Mote is the world's smallest computer that contains solar cells and can click pictures, record temperature and pressure.

9. The first mobile phone was Motorola DynaTAC 800x costing $4000 launched in 1983.

10. Technophobia is called as the fear of technology. Nomophobia is called the fear of being without a mobile phone. Cyberphobia is called the fear of computers.

By
Jayapriya. S
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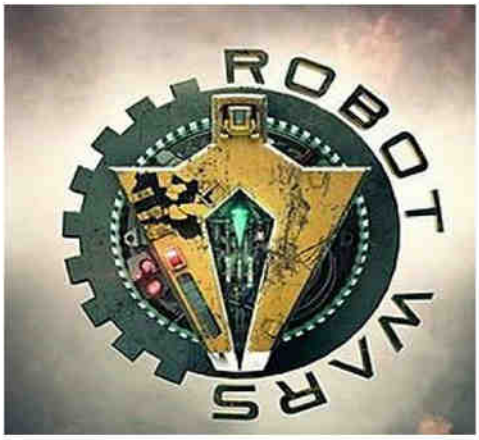
ROBOT WARS

The show was first broadcast on BBC Two from 20 February 1998 to 23 February 2001, on BBC Choice from 8 October 2001 to 7 February 2003 (later repeated on BBC Two), on Channel 5 from 2 November 2003 to 28 March 2004 before being revived in 2016 and broadcast on BBC Two from 24 July 2016. A celebrity special was shown on BBC One on 27 December 2000. The show was originally presented by Jeremy Clarkson for the first series. Craig Charles took over until the seventh series. Philippa Forrester co-hosted the first three series, the fifth and Extreme 2. Forrester also hosted the spin-off series Robot Wars Revealed from 1998 to 1999. The fourth series and Extreme 1 were co-hosted by Julia Reed and the seventh by Jayne Middle miss. Jonathan Pearce provided commentary for all series. The new presenters for 2016 are Dara Ó Briainand Angela Scanlon. Additional series were filmed for specific sectors of the global market, including two series of Robot Wars Extreme Warriors with American competitors for the TNN network (hosted by Mick Foley with Rebecca Grant serving as pit reporter), two of Dutch Robot Wars for distribution in the Netherlands, and a single series for Germany. The fourth series of the UK Robot Wars was shown in the US on TNN as Robot Wars: Grand Champions in 2002, and hosted by Joanie Laurer.



The series, centered on the sport of robot combat, involved teams of amateur and professional roboteers operating their own constructed robots to fight against each other in both friendly and tournament matches, whilst also avoiding arena hazards and more powerful "House Robots", which were not bound by the same weight or weapon limits as the contestants. Earlier series included assault and trial courses for competing robots before they were ceased from the first "Extreme" series onwards. Its merchandising was commercially successful, being one of the most popular selling toy ranges in 2002. It included a mini arena, pullback, friction & ripcord toys and radio-controlled versions of Shunt, Matilda and Sir Killalot.

In 2003, the roboteers themselves formed The Fighting Robot Association and with their associated event organizers, carry on participating in competitions for new audiences. In 2013, Roaming Robots purchased the rights to the Robot Wars brand from Robot Wars LLC and now operates their travelling robotic combat show under that name. The use of the name Robot Warsceased in early 2017, with the shows being renamed Extreme Robots.

With a peak audience of 6 million viewers in the UK during the late 1990s, the format went on to become a worldwide success, showing in 45 countries including the US, Australia, Canada, China, India, Germany and Italy. In March 2003, it was dropped by BBC Two after eight series and Mentors announced it was making 22 episodes for Channel 5, concluding with The Third World Championships broadcast in March 2004. Channel 5 later axed the show after one series due to low ratings.

In July 2016, the show returned to BBC Two with a new arena, house robots and presenters. The first episode was well received becoming the top trending topic on Twitter that evening and having 2 million viewers, more than the last episode of the 23rd series of Top Gear in the same 8psm Sunday slot just a few weeks earlier. After the success of the relaunch, it was confirmed that future series would be filmed and broadcast for the next three years.

By
Anbazhagan. K
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FASHION DESIGNER AI

Another job that AI might take in the future could be of fashion designers. If the AIs could compete with humans when we talk about fashion sense, it= seems, the future isn't too far. A new artificial intelligence system has been created by the researchers from University of California, San Diego, and Adobe Research. The AI is capable of learning people's fashion styles and create realistic computer-generated images of new fashion items matching their style and likes.

The AI can be divided into two parts. One is a convolutional neural network (CNN) trained to understand the person's item preferences when fed with purchase data from Amazon in six different categories, including pants, shoes, and tops for both men and women. Such implementations already exist in the form of "You may also like" sections on e-commerce websites.

What's more surprising is the other half of fashion designer AI which is Generative Adversarial Network (GAN). In the case of GANs, two neural networks are trained with the same set of data. One of them is assigned with the task to create fake images of the data and the other verifies whether the image is real. GANs were first created in 2014 by Ian Good fellow. The researchers used the information gathered by the CNN algorithm as the data set for GAN which then created multiple images for each user.If GAN-based AIs end up on e-commerce websites and online recommendation systems, it could do wonders for them. However, the AI is still in its early stages of development; the researchers are yet to figure out how to convert the system's 2D renders into 3D which could be used to manufacture clothing. Also, there is still a long road to go before the AI can create something entirely new. For now, it's able to throw out some blue shirts for a buyer who likes blue shirts. It would be hard for the AI fashion designer if it were to create a matching pair of shoes to go along with a particular pair of pants.The potential of AIs in the fashion industry might not be all-capable right now, but still, they could be the next breakthrough in predicting trends. Company's like Amazon and Alibaba are already working on their versions of fashion designer AIs. Regarding the AI created by UCSD and Adobe, the Chief Scientist at Vue.ai Costa Colbert said it might be helpful in the case of big names in online retail which requires an extensive amount of data.

By
Rakshith Vikramraj. G
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TOP 5 HOT ARTIFICIAL INTELLIGENCE (AI) TECHNOLOGIES

Natural Language Generation:

Producing text from computer data. Currently used in customer service, report generation, and summarizing business intelligence instights. Sample vendors: Attivio, Automated Insights, Cambridge Semantics, Digital Reasoning, Lucid works, Narrative Science, SAS, Yseop.

Speech Recognition:

Transcribe and transform human speech into format useful for computer applications. Currently used in interactive voice response systems and mobile applications. Sample vendors: NICE, Nuance Communications, OpenText, Verint Systems. Virtual Agents: "The current darling of the media," says Forrester (I believe they refer to my evolving relationships with Alexa), from simple chatbots to advanced systems that can network with humans. Currently used in customer service and support and as a smart home manager. Sample vendors: Amazon, Apple, Artificial Solutions, Assist AI, Creative Virtual, Google, IBM, iSOFT, Microsoft, Satisfy.

Machine Learning Platforms:

Providing algorithms, APIs, development and training toolkits, data, as well as computing power to design, train, and deploy models into applications, processes, and other machines. Currently used in a wide range of enterprise applications, mostly `involving prediction or classification. Sample vendors: Amazon, Fractal Analytics, Google, H2O.ai, Microsoft, SAS, Skytree.AI-optimized Hardware: Graphics processing units (GPU) and appliances specifically designed and architected to efficiently run AI-oriented computational jobs. Currently primarily making a difference in deep learning applications. Sample vendors: Alleviate, Cray, Google, IBM, Intel, Nvidia.

Decision Management:

Engines that insert rules and logic into AI systems and used for initial setup/training and ongoing maintenance and tuning. A mature technology, it is used in a wide variety of enterprise applications, assisting in or performing automated decision-making. Sample vendors: Advanced Systems Concepts, Informatica, Maana, Pegasystems, UiPath.

Deep Learning Platforms:

A special type of machine learning consisting of artificial neural networks with multiple abstraction layers. Currently primarily used in pattern recognition and classification applications supported by very large data sets. Sample vendors: Deep Instinct, Ersatz Labs, Fluid AI, Math Works, Peltarion, Saffron Technology, Sentient Technologies.

By
Nisha. M
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WAYS TO SAVE ON BATCH WORKLOAD IN PUBLIC CLOUD

Large companies have traditionally had an impressive list of batch workloads (which are workloads that run at night, when people have gone home for the day). This includes such things as application and database backup jobs; extraction, transform, and load (ET L) jobs; disaster recovery (DR) environment checks and updates; online analytical processing (OLAP) jobs; and monthly billing updates to name a few. Traditionally, with on-premise data centers, these workloads have run at night to allow the same hardware infrastructure that supports daytime workloads to be repurposed.

This offers several advantages:

--->It avoids network contention between the two workloads (as both are important), allowing the interactive workloads to remain responsive.

--->It avoids data center sprawl by using the same infrastructure to run both, rather than having dedicated infrastructure for interactive and batch.

Things Are Different with Public Cloud

As companies move to the public cloud, they are no longer constrained by having to repurpose the same infrastructure. In fact, they can spin up and spin down new resources on demand in AWS, Azure or Google (News - Alert) Cloud Platform (GCP), running both interactive and batch workloads whenever they want. Network contention is also less of concern, since the public cloud providers typically have plenty of bandwidth.

The exception of course is where batch workloads use the same application interfaces or APIs to read/write data. So, moving to public cloud offers a spectrum of possibilities, and you can use one or any combination of them you can run batch nightly using similar processes as in online data centers, but on separate provisioned instances/virtual machines. This probably results in the least effort to moving batch to the public cloud and the least change to your DevOps processes. This saves some money by having instances sized specifically for the workloads and being able to leverage cloud cost savings options (e.g., reserved instances); you can run batch on separately provisioned instances/virtual machines, but concurrently with existing interactive workloads. This will likely result in some additional work to change DevOps processes, but offers more freedom and similar benefits mentioned above. You will still need to pay attention to application interfaces/APIs the workloads may have in common; or at the extreme end of the cloud adoptions spectrum, you could use cloud provider platform as a service (PaaS) offerings, such as AWS Batch Microsoft Azure Batch or GCP Cloud Dataflow where batch is essentially treated as a "black box".

In short, these are fully managed services, where you queue up input data in an S3 bucket, object blob or volume along with a job definition, appropriate environment variables and a schedule and you're off to races. The advantage of this approach is potentially faster time to implement and (maybe) less expensive monthly cloud costs, because the compute services run only at the times you specify. The disadvantages of this approach may be the degree of operational/configuration control you have and the fact, that these services may be totally foreign to your existing DevOps folks/processes.

A Simple Alternative:

If you are looking to minimize impact to your DevOps processes (that is, the first two approaches mentioned above), but still save money, then parking schedules can help. Normally, with the first two options, there are cron jobs scheduled to kick-off batch jobs at the appropriate times throughout the day, but the underlying instances must be running for cron to do its thing. You could put parking schedules on these resources, such they are turned OFF for most of the day, but are turned ON (News - Alert) just-in-time to still allow the cron jobs to execute. At ParkMyCloud, we have been successfully using this approach in our own infrastructure to control a batch server used to do database backups. This would, in fact, provide more savings than AWS reserved instances. Let's look at specific example in AWS. Suppose you have an m4. large server you use run batch jobs. Assuming Linux pricing in us-east-1, this server costs $0.10 per hour, or about $73 per month. Suppose you have configured cron to start batch jobs at midnight UTC and that they normally complete 1 to 1- 1/2 hours later. You could purchase a Reserved Instance for that server, where you either pay nothing upfront or all upfront and your savings would be 38%-42%. Or, you could put a parking schedule where the instance is only ON from 11 pm-1 am UTC, allowing enough time for the cron jobs to start and run. The savings in that case would be 87.6% without the need for a one-year commitment. Depending on how many batch servers you run in your environment and their sizes, that could be some hefty savings.

Conclusion:

Public cloud will offer you a lot of freedom and some potentially attractive cost savings as you move batch workloads from on premise. You are no longer constrained by having the same infrastructure serve two vastly different types of workloads — interactive and batch. The savings you can achieve by moving to public cloud can vary, depending on the approach you take and the provider/service you use.

By
Keerthivasan. R
IV-year B. Tech IT- 'A'

HISTORY OF EUCALYPTUS SOFTWARE

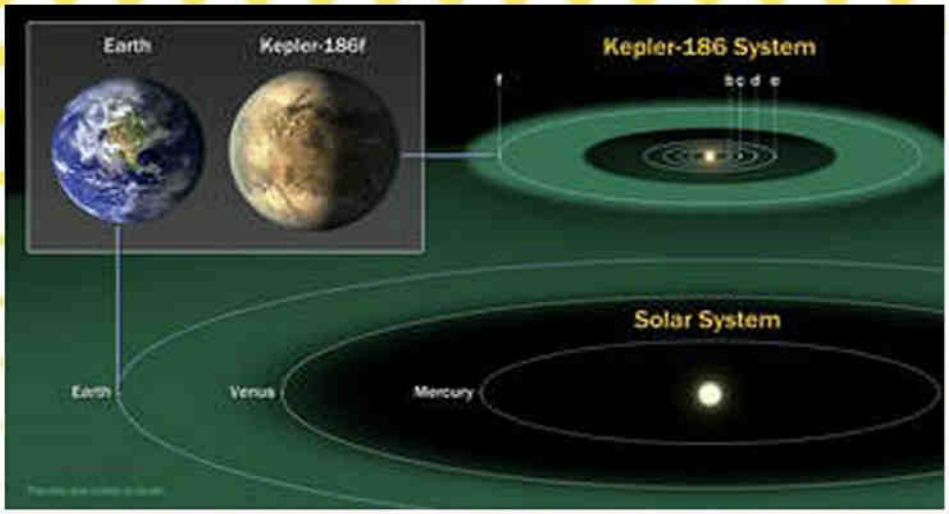
Eucalyptus is a paid and open-source computer software for building Amazon Web Services (AWS)-compatible private and hybrid cloud computing environments, originally developed by the company Eucalyptus Systems. Eucalyptus is an acronym for Elastic Utility Computing Architecture for Linking Your Programs To Useful Systems. Eucalyptus enables pooling compute, storage, and network resources that can be dynamically scaled up or down as application workloads change. Mårten Mickos was the CEO of Eucalyptus. In September 2014, Eucalyptus was acquired by Hewlett-Packard and then maintained by DXC Technology.

The software development had its roots in the Virtual Grid Application Development Software project, at Rice University and other institutions from 2003 to 2008. Rich Wolski led a group at the University of California, Santa Barbara (UCSB), and became the chief technical officer at the company headquartered in Goleta, California before returning to teach at UCSB.

Eucalyptus software was included in the Ubuntu 9.04 distribution in 2009. The company was formed in 2009 with $5.5 million in funding by Benchmark Capital to commercialize the software. The co-founders of Eucalyptus were Rich Wolski (CTO), Dan Nurmi, Neil Soman, Dmitri Zagorodnov, Chris Grzegorczyk, Graziano Obertelli and Woody Rollins (CEO). Eucalyptus Systems announced a formal agreement with Amazon in March 2012. Hewlett-Packard acquired Eucalyptus in September 2014, although by the end of 2016 its public cloud offering HPE Helion was shut down.

By
Santhiya. K
II-year B. Tech IT- 'B'

THE FIRST EARTH SIZE PLANET



NASA's Kepler Space Telescope, astronomers have discovered the first Earth-size planet orbiting a star in the "habitable zone" the range of distance from a star where liquid water might pool on the surface of an orbiting planet. The discovery of Kepler-186f confirms that planets the size of Earth exist in the habitable zone of stars other than our sun. While planets have previously been found in the habitable zone, they are all at least 40 percent larger in size than Earth and understanding their makeup is challenging. Kepler-186f is more reminiscent of Earth."The discovery of Kepler-186f is a significant step toward finding worlds like our planet Earth," said Paul Hertz, NASA's Astrophysics Division director at the agency's headquarters in Washington. "Future NASA missions, like the Transiting Exoplanet Survey Satellite and the James Webb Space Telescope, will discover the nearest rocky exoplanets and determine their composition and atmospheric conditions, continuing humankind's quest to find truly Earth-like worlds."

Although the size of Kepler-186f is known, its mass and composition are not. Previous research, however, suggests that a planet the size of Kepler-186f is likely to be rocky."We know of just one planet where life exists Earth. When we search for life outside our solar system we focus on finding planets with characteristics that mimic that of Earth," said Elisa Quintana, research scientist at the SETI Institute at NASA's Ames Research Center in Moffett Field, Calif., and lead author of the paper published today in the journal Science. "Finding a habitable zone planet comparable to Earth in size is a major step forward."

Kepler-186f resides in the Kepler-186 system, about 500 light-years from Earth in the constellation Cygnus. The system is also home to four companion planets, which orbit a star half the size and mass of our sun. The star is classified as an M dwarf, or red dwarf, a class of stars that makes up 70 percent of the stars in the Milky Way galaxy."M dwarfs are the most numerous stars," said Quintana.

"The first signs of other life in the galaxy may well come from planets orbiting an M dwarf."Kepler-186f orbits its star once every 130-days and receives one-third the energy from its star that Earth gets from the sun, placing it nearer the outer edge of the habitable zone. On the surface of Kepler-186f, the brightness of its star at high noon is only as bright as our sun appears to us about an hour before sunset."Being in the habitable zone does not mean we know this planet is habitable. The temperature on the planet is strongly dependent on what kind of atmosphere the planet has," said Thomas Barclay, research scientist at the Bay Area Environmental Research Institute at Ames, and co-author of the paper. "Kepler-186f can be thought of as an Earth-cousin rather than an Earth-twin. It has many properties that resemble Earth."

The four companion planets, Kepler-186b, Kepler-186c, Kepler-186d, and Kepler-186e, which around their sun every four, seven, 13, and 22 days, respectively, making them too hot for life as we know it. These four inner planets all measure less than 1.5 times the size of Earth.

The next steps in the search for distant life include looking for true Earth-twins -- Earth-size planets orbiting within the habitable zone of a sun-like star -- and measuring their chemical compositions. The Kepler Space Telescope, which simultaneously and continuously measured the brightness of more than 150,000 stars, is NASA's first mission capable of detecting Earth-size planets around stars like our sun. Ames is responsible for Kepler's ground system development, mission operations, and science data analysis. NASA's Jet Propulsion Laboratory in Pasadena, Calif., managed Kepler mission development. Ball Aerospace & Technologies Corp. in Boulder, Colo., developed the Kepler flight system and supports mission operations with the Laboratory for Atmospheric and Space Physics at the University of Colorado in Boulder. The Space Telescope Science Institute in Baltimore archives, hosts and distributes Kepler science data. Kepler is NASA's 10th Discovery Mission and was funded by the agency's Science Mission Directorate.The SETI Institute is a private, nonprofit organization dedicated to scientific research, education and public outreach. The mission of the SETI Institute is to explore, understand and explain the origin, nature and prevalence of life in the universe.

By
Srinath. V
II-year B. Tech IT- 'B'

AI @ HEALTH CARE

Medicine is both art and science. While any doctor will quickly credit her rigorous medical training in the nuts and bolts of how the human body works, she will just as adamantly school you on how virtually all of the decisions she makes—about how to diagnose disease and how best to treat it—are equally the product of some less tangible measures: her experience from previous patients; her cumulative years of watching and learning from patients, colleagues and the human body. Machine learning, the most basic form of artificial intelligence, is already infiltrating the medical field, and it turns out that machines can play an important role in improving our health—including making diagnoses more accurately and quickly and finding better treatments that save people time and money and prevent exposure to harmful side effects. In fact, with modern medicine increasingly dependent on large numbers of studies and drug options and reams of new information, machines may be better able to keep up with and interpret data than the human mind. The idea behind artificial intelligence in medicine is not so much to replace the doctor (at least not any time in the near future) but to enhance the doctor's medical expertise. A.I. programs take the amassed knowledge that every good physician has and with the amount of data available to physicians today—from information about disease symptoms to new drugs, interactions between different drugs and how different people treated in the same way can have very different outcomes—the ability to access and digest information is fast becoming a required skill. And it's one that machine learning is uniquely designed to master. The key to machine learning in medicine is, well, the machine. And machines from IBM and Google have recently flexed their cognitive muscle by besting the leading Jeopardy! champions, chess masters and Go experts—after learning from the knowledge of previous players, which became part of the machines' programming.

Cogito, a mental-health app built on the idea of machine learning, is now being tested at facilities like Brigham and Women's Hospital in Boston. The app, once installed on a smartphone, monitors activity on social media and phone calls to discern patterns of communication so that when depressive episodes strike, for example, and those patterns change, the app will detect it. The app also contains a voice analyzer that can search vocal patterns for changes in affect and tone, which may be the first signs of a depressive episode. Machine learning could be especially helpful in alerting a physician or a patient's family when things begin to spiral out of control. "Historically, we have been dismally poor at detecting dangerousness or self-harm," says Ahern. "Potentially, with technology like Cogito, we may be able to develop an early-warning system that, for somebody who has a high-risk profile because they have a history of depression or suicide attempts, could monitor and see changes in patterns to better determine. That's where artificial intelligence can provide the most benefit to people's health. Its ability to predict how aggressive or mild a person's disease might be, and to know which treatments might work well and which might not, may make machine learning an integral, and eventually indispensable, part of medical care. It may be time to realize that it's not man against machine but man and machine together that can finally create the biggest improvements in human health. when the risk gets to the level where intervention is needed to prevent episodes of self-harm or dangerous activity. That's a place where we haven't—with traditional models of care—been very good at. We've been very reactive, and we want to be more proactive."

By
Gayathri. V
III-year B. Tech IT- 'A'

ARTIFICIAL DNA

Scientists have taken another step towards putting two additional letters in the dictionary of life to work. Researchers at the Scripps Institute have engineered cells to successfully transcribe a brand new artificial DNA base pair and make a never-before-seen protein with it. The breakthrough is part of an effort to expand the library of amino acids that animal cells can work with, potentially leading to the creation of compounds entirely different from those life can produce now. The work was led by Floyd Romberg, an associate professor of chemistry at Scripps, and adds to his 20-year effort to create synthetic DNA "letters." DNA is currently comprised of four nucleotides, or letters: C, G, A and T—C binds to G, A binds to T. These couplings, or base pairs, comprise DNA as we know it. Romberg and colleagues created two completely new letters, he calls them X and Y, and inserted them into a cell's genome. Instead of four base pairs, the "semi-synthetic" cell now has six.

This drastically increases the number of codons — you can think of them as genetic "words" — and therefore, the number of things cells can make. Currently, there are 64 different triplet combina tions of C-G and A-T possible. Three of those are stop codons, and many combinations are redundant, leaving our bodies with just 20 codons, or words, to make compounds with. Add in another base pair, and the number of potential words increases to 216. That more than triples the total, and the potential applications are vast. "We will never need more codons," he says. "We can now write more information in cells than we'd ever want to use."

Expanding Vocabulary

In 2014, Romberg successfully coaxed a cell to incorporate his custom X and Y base pair to its DNA, and found that it would remain there as long as he kept supplying the nucleotides. He's now shown, in a Nature paper published Wednesday, that cells can not only hold on to the new base pairs, but they can use custom RNA sequences to

transcribe codons with these new base pairs into something tangible. Transcription is the process by which RNA copies bits of DNA and uses them to make things our bodies need. With new base pairs, the cells could make new codons, and those new genetic words held the blueprints for compounds that were previously impossible for cells to make. What's more, the cells transcribed the new codons just as efficiently as the natural ones. Adding the base pair to DNA demonstrated that storage was possible, he says, his latest work shows that the information can be retrieved works, and now he must show that cells can actually use the new compounds they make to do something interesting. The first semi-synthetic organism, an E. coli bacterium expressing proteins made from "unnatural base pairs." (Credit: William B. Kiosses). Romberg provides a demonstration of this by adding in two new amino acids to a common fluorescent protein called GFP using E. coli bacteria. Bacterial cells with the extra base pair were able to produce amino acids that showed up in the flowing cells, proving that a new compound could make it from DNA to reality in a cell. The potential applications go far beyond glowing proteins, of course. Animal cells are currently only able to produce a finite set of things, limited by the number of genetic words they have to work with. "We are making amino acids that are not normally made, cells are not capable of storing the information to make them," Romberg says. This could mean new medicines, new nanomaterials, new reagents for chemical reactions. It could also eventually mean cells that can carry out functions no cell today can.

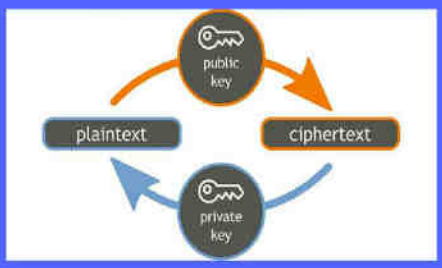
Don't Panic

With the mention of new types of cells, thoughts of nightmare science-fiction scenarios are inevitable. Romberg says that there are significant barriers to these cells ever making it outside the lab, however. "One thing that's really important to keep in mind is that we have a fail-safe built into this," he says. "X and Y are unnatural nucleotides, [they] are not made by the cell. And this is not a "Jurassic Park" situation because these are man-made things". In his previous work getting cells to add the X Y nucleotides into their DNA, he found that the cells immediately purged the base pair from the DNA as soon as he stopped giving it to them. Because these nucleotides aren't natural, animal cells can't manufacture them. The only way to keep them in a cell's DNA is to keep them in the lab where they can be constantly supplied with new materials. "They are not trivial molecules, they're unlike anything a cell already makes," Romberg says. "It would have to assemble two complete new pathways out of something from which it has nothing similar to". For applications like creating new drugs, this would work fine because researchers could just keep giving them the supplies they need. If they escaped, however, the synthetic nucleotide would disappear from their genome. "For a long time, people thought that the molecules of life were somehow different and privileged relative to the molecules of things that weren't alive," Romberg says. "Maybe the molecules of life aren't as special as we thought. And maybe a chemist can come in and design things that function alongside them. Maybe life is not the perfect solution, maybe life is a solution.

By
Sundara Moorthy. S
IV-year B. Tech IT- 'A'

CRYPTOGRAPHY

Cryptography is a method of storing and transmitting data in a particular form so that only those for whom it is intended can read and process it. Cryptography is closely related to the disciplines of cryptology and cryptanalysis. Cryptography includes techniques such as microdots, merging words with images, and other ways to hide information in storage or transit. However,in today's computer-centric world, cryptography is most often associated with scrambling plaintext (ordinary text, sometimes referred to as cleartext) into ciphertext (a process called encryption), then back again (known as decryption). Individuals who practice this field are known as cryptographers.



Modern cryptography concerns itself with the following four objectives:

1. Confidentiality (the information cannot be understood by anyone for whom it was unintended)

2. Integrity (the information cannot be altered in storage or transit between sender and intended receiver without the alteration being detected)

3. Non-repudiation (the creator/sender of the information cannot deny at a later stage his or her intentions in the creation or transmission of the information)

4. Authentication (the sender and receiver can confirm each other's identity and the origin/destination of the information)

Procedures and protocols that meet some or all of the above criteria are known as cryptosystems. Cryptosystems are often thought to refer only to mathematical procedures and computer programs; however, they also include the regulation of human behavior, such as choosing hard-to-guess passwords, logging off unused systems, and not discussing sensitive procedures with outsiders.

The word is derived from the Greek kryptos, meaning hidden. The origin of cryptography is usually dated from about 2000 BC, with the Egyptian practice of hieroglyphics. These consisted of complex pictograms, the full meaning of which was only known to an elite few. The first known use of a modern cipher was by Julius Caesar (100 BC to 44 BC), who did not trust his messengers when communicating with his governors and officers. For this reason, he created a system in which each character in his messages was replaced by a character three positions ahead of it in the Roman alphabet.In recent times, cryptography has turned into a battleground of some of the world's best mathematicians and computer scientists. The ability to securely store and transfer sensitive information has proved a critical factor in success in war and business.

BY
CHINNAARUNACHALAM. B
IV-YEAR B. TECH IT- 'B'

DATA MINING TECHNOLOGY

Data mining is a powerful new technology with great potential to help companies focus on the most important information in the data they have collected about the behavior of their customers and potential customers. It discovers information within the data that queries and reports can't effectively reveal.

What is Data Mining?

Data mining, or knowledge discovery, is the computer-assisted process of digging through and analyzing enormous sets of data and then extracting the meaning of the data. Data mining tools predict behaviors and future trends, allowing businesses to make proactive, knowledge-driven decisions. Data mining tools can answer business questions that traditionally were too time consuming to resolve. They scour databases for hidden patterns, finding predictive information that experts may miss because it lies outside their expectations.Data mining derives its name from the similarities between searching for valuable information in a large database and mining a mountain for a vein of valuable ore. Both processes require either sifting through an immense amount of material, or intelligently probing it to find where the value resides.

What Can Data Mining Do?

Although data mining is still in its infancy, companies in a wide range of industries including retail, finance, heath care, manufacturing transportation, and aerospace - are already using data mining tools and techniques to take advantage of historical data. By using pattern recognition technologies and statistical and mathematical techniques to sift through warehoused information, data mining helps analysts recognize significant facts, relationships, trends, patterns, exceptions and anomalies that might otherwise go unnoticed.For businesses, data mining is used to discover patterns and relationships in the data in order to help make better business decisions. Data mining can help spot sales trends, develop smarter marketing campaigns, and accurately predict customer loyalty.

By
Gokilam.S
III-year B. Tech IT- 'B'

BIG DATA ANALYSIS

Big data analytics is the process of examining large and varied data sets -- i.e., big data -- to uncover hidden patterns, unknown correlations, market trends, customer preferences and other useful information that can help organizations make more-informed business decisions.

Big data analytics benefits

Driven by specialized analytics systems and software, big data analytics can point the way to various business benefits, including new revenue opportunities, more effective marketing, better customer service, improved operational efficiency and competitive advantages over rivals.

Big data analytics applications enable data scientists, predictive modelers, statisticians and other analytics professionals to analyze growing volumes of structured transaction data, plus other forms of data that are often left untapped by conventional business intelligence (BI) and analytics programs. That encompasses a mix of semi-structured and unstructured data -- for example, internet clickstream data, web server logs, social media content, text from customer emails and survey responses, mobile-phone call-detail records and machine data captured by sensors connected to the internet of things. On a broad scale, data analytics technologies and techniques provide a means of analyzing data sets and drawing conclusions about them to help organizations make informed business decisions. BI queries answer basic questions about business operations and performance.

Big data analytics is a form of advanced analytics, which involves complex applications with elements such as predictive models, statistical algorithms and what-if analyses powered by high-performance analytics systems.

Emergence and growth of big data analytics

The term big data was first used to refer to increasing data volumes in the mid-1990s. In 2001, Doug Laney, then an analyst at consultancy Meta Group Inc., expanded the notion of big data to also include increases in the variety of data being generated by organizations and the velocity at which that data was being created and updated. Those three factors -- volume, velocity and variety -- became known as the 3Vs of big data, a concept Gartner popularized after acquiring Meta Group and hiring Laney in 2005.

By
Sarika. E
III-year B. Tech IT- 'B'


TECH
NEWZ

TECH NEWZ

Reversing Paralysis

The French neuroscientist was watching a macaque monkey as it hunched aggressively at one end of a treadmill. His team had used a blade to slice halfway through the animal's spinal cord, paralyzing its right leg. Now Courtine wanted to prove he could get the monkey walking again. To do it, he and colleagues had installed a recording device beneath its skull, touching its motor cortex, and sutured a pad of flexible electrodes around the animal's spinal cord, below the injury. A wireless connection joined the two electronic device.

The result: a system that read the monkey's intention to move and then transmitted it immediately in the form of bursts of electrical stimulation to its spine. Soon enough, the monkey's right leg began to move. Extend and flex. Extend and flex. It hobbled forward. "The monkey was thinking, and then boom, it was walking," recalls an exultant Courtine, a professor with Switzerland's École Polytechnique Fédérale de Lausanne.

By
Suganth. S
IV-year B. Tech IT- 'B'

Practical Quantum Computers

One of the labs at QuTech, a Dutch research institute, is responsible for some of the world's most advanced work on quantum computing, but it looks like an HVAC testing facility. Tucked away in a quiet corner of the applied sciences building at Delft University of Technology, the space is devoid of people. Buzzing with resonant waves as if occupied by a swarm of electric katydids, it is cluttered by tangles of insulated tubes, wires, and control hardware erupting from big blue cylinders on three and four legs.

Inside the blue cylinders—essentially supercharged refrigerators—spooky quantum-mechanical things are happening where nanowires, semiconductors, and superconductors meet at just a hair above absolute zero. It's here, down at the limits of physics, that solid materials give rise to so-called quasiparticles, whose unusual behavior gives them the potential to serve as the key components of quantum computers. And this lab in particular has taken big steps toward finally bringing those computers to fruition. In a few years they could rewrite encryption, materials science, pharmaceutical research, and artificial intelligence.

By
Dinesh Raja. N
IV-year B. Tech IT- 'B'

Paying with Your Face

Shortly after walking through the door at Face++, a Chinese startup valued at roughly a billion dollars, I see my face, unshaven and looking a bit jet-lagged, flash up on a large screen near the entrance. Having been added to a database, my face now provides automatic access to the building. It can also be used to monitor my movements through each room inside. As I tour the offices of Face++ (pronounced "face plus plus"), located in a suburb of Beijing, I see it appear on several more screens, automatically captured from countless angles by the company's software. On one screen a video shows the software tracking 83 different points on my face simultaneously. It's a little creepy, but undeniably impressive. Over the past few years, computers have become incredibly good at recognizing faces, and the technology is expanding quickly in China in the interest of both surveillance and convenience. Face recognition might transform everything from policing to the way people interact every day with banks, stores, and transportation services.

By
Tharun. R
IV-year B. Tech IT- 'B'

Hot Solar Cells

Solar panels cover a growing number of rooftops, but even decades after they were first developed, the slabs of silicon remain bulky, expensive, and inefficient. Fundamental limitations prevent these conventional photovoltaics from absorbing more than a fraction of the energy in sunlight.

By
Sudhakar. P
IV-year B. Tech IT- 'B'

BE FIRE

PENCIL PRINT

DRAWINGS

அழகு

உலகில் எது அழகு
கடலின் கருவில் பிறக்கும்போதும்
மலையின் மடியில்
துயிலும்போதும்
சுட்டெரித்தாலும் சூரியன் அழகு...
வானமகள் உடுத்திய
மேகச்சீலையினை
காற்று கலைப்பதனால்
இடையிடையே தெரிகிறது அவள்
இடையின் அழகு....
சூரியனில் ஒழுகிய
ஒளியினால் நிரம்பிய
நிலாக்கிண்ணம் ஒன்று
நித்தமும் இரவினிலே
உலாவருவது அழகு....

By
Prabavathi. S
III-year B. Tech IT- 'A'

அம்மா...

உன் கண்களில் என்னைக்
கண்டுக்கொண்டே வாழ்ந்து வருகின்றாய் என் தாயே.....
உன் அறிவினால் என்னை உருவாக்கி
வளர்த்துவந்தாய் என் தாயே.....
உன் அன்பினால் என்னை
முதன்மையானவனாக யாக்கினாய் என் தாயே.....
உன் பொறுமையினால் என்னை வெல்ல
நினைக்கச் செய்தாய் என் தாயே....
உன் முழுஉணர்வுகளினால் என்னை
மீண்டும் மீண்டும் வளர்க்க நினைத்தாயோ என்
தாயே.....!!!!

அன்பானவளாக இருந்தேன் என் தாயின்
கருவறையில்.....
அன்போடே வளர்ந்தேன் என் தாயின்
அறவனைப்பில்.....
அன்பானவளாக. மாறினேன் என் தாயின்
பொருமையில்.....
அன்பென்ற. சொல்லுக்கு அர்த்தமானேன்
என் தாயின் உன்னதமான
அன்பினால்.....!!!!!

By
Lavanya. M
II-year B. Tech

EN NANBANUKAGA...!!!

En nanbanukaga...!!!
Thayin anbayum thanthayin kobathayum serthu kaatiyavan
Enaku neeyaga matume irukum
Veruppum anbin velippadu endru unarnthathum
unnidathilagave irukum
Un kulandhai kooda poramai kollum nichayam ennai
parkaiyil...un mudhal kulandhaiyaga nan irukkayil...
En kaalam ullavarai ennudan nee vendum enbathai vida
venduthal ethuvum enakkillai...
Nalla natpin nesathai vida oru pennuku periya parisu illatha
karanathal...
Aasaigal sila...!
Kanavugal ninaivaga un muyarchigal anaithilum na udan iruka
aasai...
Tholvigalum thol kudukum un muyarchigalodu ...un uyarvuku...
Perasaigal sila...!
Ennai thavira unaku tholiyaga yarukum idam iruka koodathu
endra peraasaiyum undu...
Payanangalthoorum un thunai vendum un thol saynthu kolla en
tholanaga endrum...
Uravugalum soolninaigalum valkaiyai mattrathan pogirathu
endral...
Entha thayum than kulandhaiyai maranthathillai...
Maranthuvidathae nanum apadithan...!!!

By
Priyaadharshini. S
IV-year B. Tech IT- 'B'

POEM IN SANSKRIT

वन्देहं देवं तं श्रीतं रन्तारं कालं भासा यः।
रामः रामाधीः आप्यागः लीलाम् आर आयोध्ये वासे।।

vande ahaM devaM taM shrItaM rantAraM kAlaM bhAsA ya:|
rAma: rAmAdhI: ApyAga: leelAm Ara Ayodhye vAse||

Meaning in primary order (anuloma) By anuloma or primary order, the verse describes Rama. I pay obeisance to Sri Rama, who traveled to the mountains of Malaya and Sahya, with his mind occupied with the thought of Sita and returned to Ayodhya and was sporting with Sita for a long time. rAmA dheeh- With his (dhee) mind, in (rAmA), woman, that is, Sita. ApyAgah - Apthum yogyAH agAh - The mountains of Sahya and Malaya which were fit to travel. (Aga means mountain) ApyAgah means one who went to these mountains. Rama who was roaming around in the mountains looking for Sita, is denoted by the words, rAmAdheeh and ApyAgah. Then after killing Ravana his return to Ayodhya and passing the time with Sita is mentioned with the rest of the sloka. AyOdhye means ayodhyAbhavE, that which is in Ayodhya, vAse means in the mansion. LeelAm enjoyment shrItam means from Sree that is Sita. Ara means obtained. KAlam rantAram means he was spending the time and bhAsa, with his splendor. aham - I, ande - bow down tam devam - that Rama. aham vande tam devam. The whole sentence implies that after returning to Ayodhya Rama spent long time enjoying the company of Sita, shining with his splendor and to such Rama I offer my obeisance.

In reverse order

सेवाध्येयो रामालाली गोप्याराधी मारामोराः।
यस्साभालङ्कारं तारं तं श्रीतं वन्देहं देवम्।।

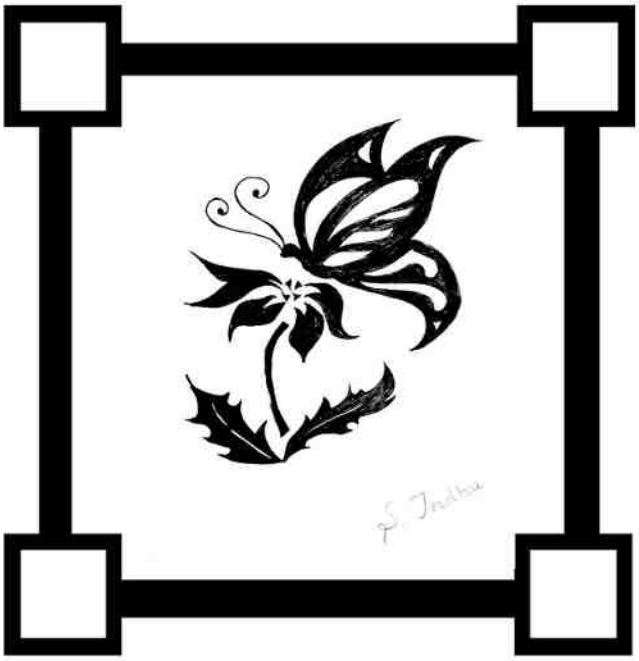
sevAdhyeyo rAmAlAlee gopyArAdhI mArAmorA:|
yassAbhAla~NkAraM tAraM taM shrItaM vande ahaM devam||

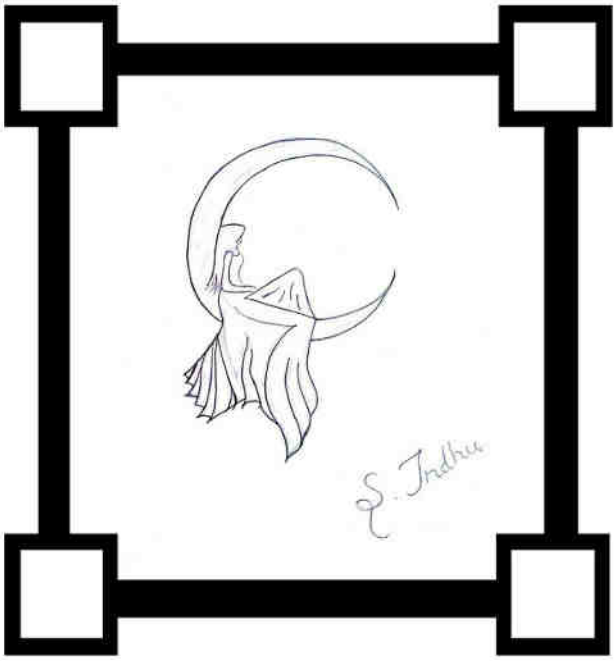
Verse in reverse order (prathiloma) Now by prathiloma or reversion, the same verse describes Krishna. Reading from backwards, it is as follows:
(The reverse order will be obvious only by reading it in Sanskrit)

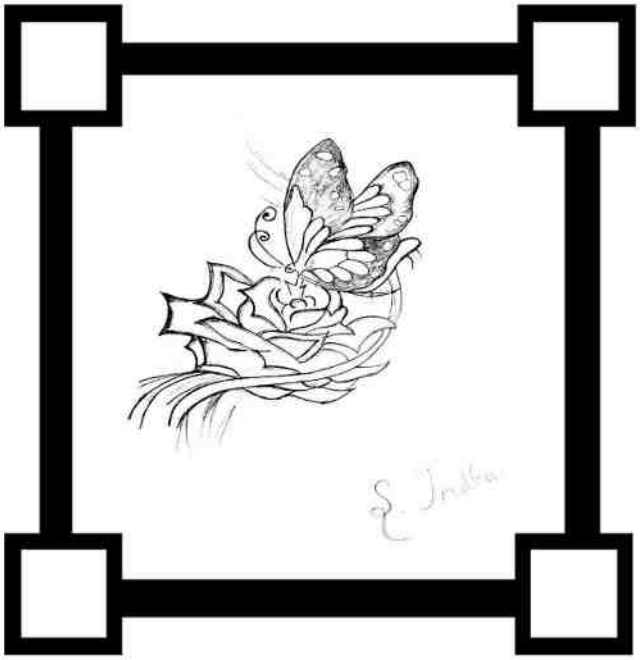
Meaning: I bow to lord Krishna, who is contemplated by penance and sacrifice, who plays with Rukmini and other consorts, who is worshipped by the gopis, whose chest is the sporting field of Lakshmi and who is adorned with radiant ornaments. Seva - refers to the spiritual and religious austerities like penance and sacrifice dhyeyah - to be contemplated. The Lord can be understood only through austerities like yoga, thapas etc. rAmA means woman and here it refers to the eight wives of Krishna with whom he revels, lAlee meaning one who revels. gOpyArAdhEE is to be split as gopyah ArAdhayanthi tham, he is worshipped by the gopis. mArAmOrAh - mA means Lakshmi. ArAma means sport and urah is the chest. mAyAh ArAmabhoothah urah yasya sah that is, he who has the chest which is the playground of Lakshmi, as she resides in His heart. sAbhAla~NkAram - bhA is radiance. bhasA saha = sAbhah, with radiance. ala~NkAra denotes ornaments and the whole word means, he who is radiant with ornaments. tam - that Krishna, shrItam - who is with Lakshmi, aham - I, tAram- loudly, vande - pray. This verse is from raghavayadaviyam of venkatadvari, this poet narrates about both Rama and Krishna in primary and reverse order respectively in a single verse.

By
Shri Krishna Prasad. S
III-year B. Tech IT- 'B'

SOME TALENTED PEOPLES

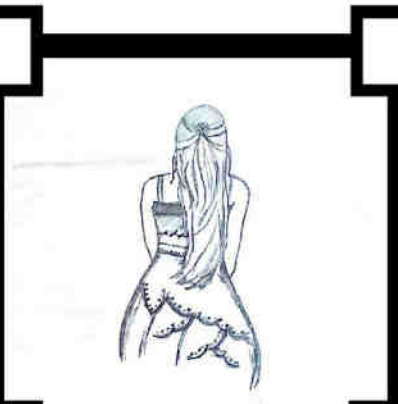






Indhu. S (III-year B. Tech IT- 'A')

Preeta (II-year B. Tech IT- 'A')



Maha Lakshmi. R (III-year B. Tech IT- 'B')

LETS KNOW

LIFE LESSONS

PIC YOU MUST KNOW

DO YOU KNOW

OFFLINE-TALENTS

CAN YOU SOLVE ME

STUDENTS DESK FOR APPRECIATION

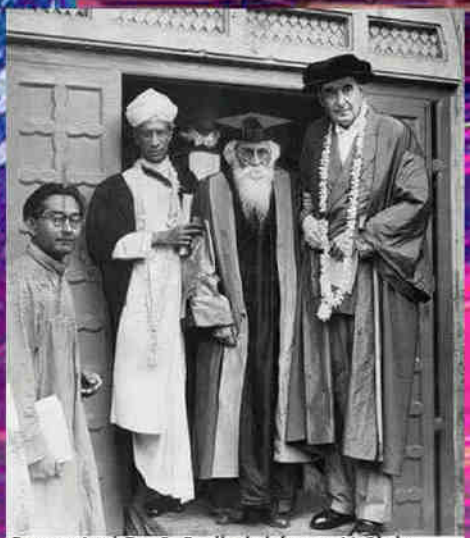
PICS YOU MUST KNOW

Sir CV Raman Explaining Raman Effect

Jawaharlal Nehru Meeting Albert Einstein At Princeton, USA, 1949

Indira Gandhi, Charlie Chaplin And Jawaharlal Nehru In Bürgenstock, Switzerland, 1953

Subash Candhra Bose Meeting With Hitler



Gwyer And Dr. S. Radhakrishnan At Sinha Sadan After The Oxford University Convocation On 7 August 1940

By
Saarumathi. S
III-year B. Tech IT- 'B'

LIFE LESSONS

1. ***Have a firm handshake.***
2. ***Look people in the eye.***
3. ***Sing in the shower.***
4. ***Own a great stereo system.***
5. ***If in a fight, hit first and hit hard.***
6. ***Keep secrets.***
7. ***Never give up on anybody. Miracles happen every day.***
8. ***Always accept an outstretched hand.***
9. ***Be brave. Even if you're not, pretend to be. No one can tell the difference.***
10. ***Whistle.***
11. ***Avoid sarcastic remarks.***
12. ***Choose your life's mate carefully. From this one decision will come 90% of all your happiness and misery.***
13. ***Make it a habit to do nice things for people who will never find out.***
14. ***Lend only those books you never care to see again.***
15. ***Never deprive someone of hope; it might be all they have.***
16. ***When playing games with children, let them win.***
17. ***Give people a second chance, but not a third.***
18. ***Be romantic.***
19. ***Become the most positive and enthusiastic person you know.***
20. ***Loosen up. Relax. Except for rare life-and-death matters, nothing is as important as it first seems.***
21. ***Don't allow the phone to interrupt important moments. It's there for our convenience, not the caller's.***
22. ***Be a good loser.***
23. ***Be a good winner.***
24. ***Think twice before burdening a friend with a secret.***
25. ***When someone hugs you, let them be the first to let go.***
26. ***Be modest. A lot was accomplished before you were born.***
27. ***Keep it simple.***
28. ***Beware of the person who has nothing to lose.***
29. ***Don't burn bridges. You'll be surprised how many times you have to cross the same river.***
30. ***Live your life so that your epitaph could read: No regrets.***

31. Be bold and courageous. When you look back on life, you'll regret the things you didn't do more than the ones you did.
32. Never waste an opportunity to tell someone you love them.
33. Remember no one makes it alone. Have a grateful heart and be quick to acknowledge those who helped you.
34. Take charge of your attitude. Don't let someone else choose it for you.
35. Visit friends and relatives when they are in the hospital; you only need to stay a few minutes.
36. Begin each day with some of your favorite music.
37. Once in a while, take the scenic route.
38. Send a lot of Valentine cards. Sign them, 'Someone who thinks you're terrific.'
39. Answer the phone with enthusiasm and energy in your voice.
40. Keep a notepad and pencil on your bedside table. Million-dollar ideas sometimes strike at 3 a.m.
41. Show respect for everyone who works for a living, regardless of how trivial their job.
42. Send your loved one's flowers. Think of a reason later.
43. Make someone's day by paying the toll for the person in the car behind you.
44. Become someone's hero.
45. Marry only for love.
46. Count your blessings.
47. Compliment the meal when you're a guest in someone's home.
48. Wave at the children on a school bus.
49. Remember that 80% of the success in any job is based on your ability to deal with people.
50. Don't expect life to be fair.

By
Nivethitha. R
IV-year B. Tech IT- 'B'

DO YOU KNOW

Space Research

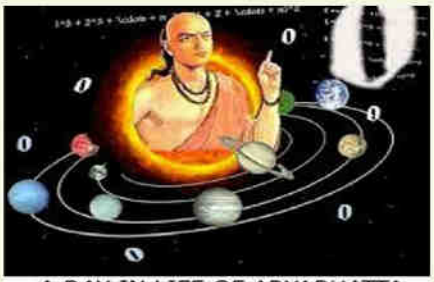
·The solar system was discovered in 17th century by the great scientists like newton, Galileo etc.

·They used modern technologies like telescope. Now there are different technologies like satellite, space station is used.

·Aryabhata was the legend in mathematics and astronomy.

·He was called as "FATHER OF ASTRONOMY".

·1500 years ago, He discovered more than what the modern science invented now.


A DAY IN LIFE OF ARYABHATTA
KHABAI TECH

Water purifier

·We are using water purifiers to drink pure water.

·This will lead to reduce of immunity and antibiotic.

·If we drink other than purified water, it will severely infect our throat.

·The copper vessel or pot was used in olden days to keep water. The copper contains more amount of nutrients and enormously increase our immunity.


Medicine

·We are using advanced technologies in medical field to diagnose the problems.

·Then we need modern technologies to cure the problem.

·Agathiyar and Bogar are the cor inventors of today's siddha medicine.

·They give enormous details about different plants, herbs etc...


By
Sriram. C. G
III-year B. Tech- 'A'

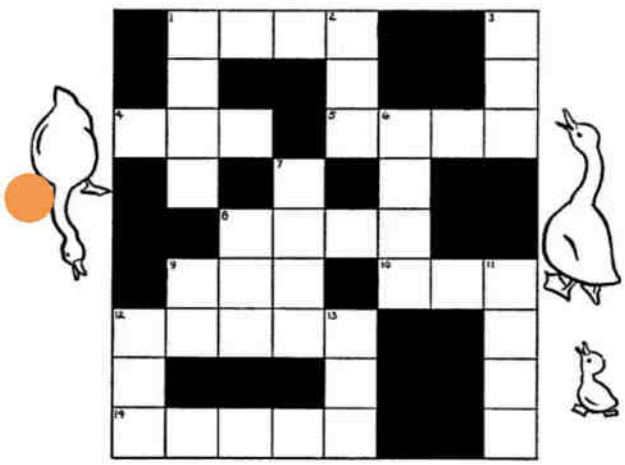
CAN YOU SOLVE ME ?8

SUDOKO

2			3					
8		4		6	2			3
	1	3	8			2		
				2		3	9	
5		7				6	2	1
	3	2			6			
	2				9	1	4	
6		1	2	5		8		9
					1			2

By
Naveen Kumar. V
III-year B. Tech IT- 'A'

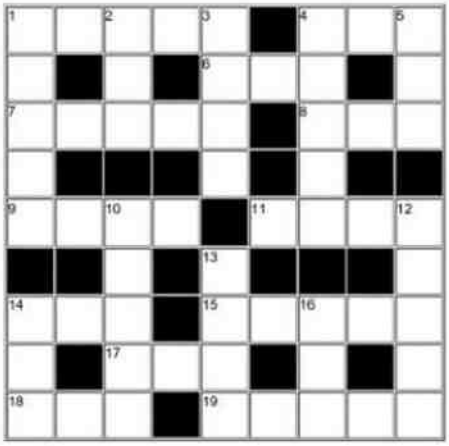
A FARM CROSSWORD PUZZLE



Across
1. Cook on gridiron
4. Work with shovel
6. Belonging to us
7. Repeated another time
8. Small insect
9. 10 cent coin
11. Frozen precipitation
14. Food tin
15. Grayish green
17. Hooting bird
18. Sticky black substance
19. A lollipop

Down
1. Protect
2. Northern Ireland army
3. Not short
4. Empty liquid from container
5. Acquire
10. Not major
12. Fully of weeds
13. Tootsie ____
14. Feline
16. Sick

By
Vizanth. S
II-year B. Tech IT- 'B'



Across:
1. Yield of a planted field
4. A kind of tree, like oak
5. This machine digs up fields
8. A place where animals and crops are raised
9. Opposite of stand
10. Sack to carry feed in
12. An animal to ride on
14. A long-necked bird which honks

Down:
1. A baby horse
2. A baby dog
3. An animal that gives milk
6. A baby sheep
7. Animals that chase mice
8. A kind of evergreen tree
9. Word that rhymes with go
11. Animal with horns
12. Another word for pig
13. What we see with

By
Kavin. P
II-year B. Tech IT- 'B'

*ANSWERS IN THE LAST PAGE


OFFLINE-TALENTS

STUDENTS DESK FOR APPRECIATION

III - YEAR STUDENT

NAME: D. Abishek
EVENT: Code Deubugging, Coding, Technical quiz
COLLEGE: Ratinam College of Engineering

NAME: R. Sabarisuriya
EVENT: Code Deubugging, Coding, Technical quiz
COLLEGE: Ratinam College of Engineering

NAME: S. Soorya
EVENT: Code the Node Workshop
COLLEGE: Kumaraguru College of Engineering & Technology

NAME: J. Karthikeyan
EVENT: Code the node workshop
COLLEGE: Kumaraguru College of Engineering & Technology

NAME: M. Saravana Kumar
EVENT: Code Deubugging, Coding, Technical quiz
COLLEGE: Ratinam College of Engineering

NAME: C. G. Sriram
EVENT: Code the node workshop
COLLEGE: Kumaraguru College of Engineering & Technology

NAME: S. Santhosh Kumar
EVENT: Code Deubugging, Coding, Technical quiz
COLLEGE: Ratinam College of Engineering

NAME: M. Hari Karthick
EVENT: Code the node workshop
COLLEGE: Kumaraguru College of Engineering & Technology

NAME: M. Hari Karthick
EVENT: Code Deubugging, Coding, Technical quiz
COLLEGE: Ratinam College of Engineering

NAME: R. Sabarisuriya
EVENT: Code the node workshop
COLLEGE: Kumaraguru College of Engineering & Technology

NAME: S. Vijayan
EVENT: Code Deubugging, Coding, Technical quiz
COLLEGE: Ratinam College of Engineering

NAME: S. Santhosh Kumar
EVENT: Code the node workshop
COLLEGE: Kumaraguru College of Engineering & Technology

NAME: Farhan Jailani
EVENT: Code the node workshop
COLLEGE: Kumaraguru College of Engineering & Technology

NAME: R. Sandhiya
EVENT: Halten kodex, kendey spell, kolly quix
COLLEGE: Kumaraguru College of Engineering & Technology, Yugam

II - YEAR STUDENT

NAME: S. Babu Kumar
EVENT: Hacktech
COLLEGE: Karpagam College of Engineering

NAME: S. Babu Kumar
EVENT: Halten Kodex
COLLEGE: Kumaraguru College of Engineering & Technology, Yugam

NAME: N. Mohan Pradeep
EVENT: Hacktech
COLLEGE: Karpagam College of Engineering

NAME: S. Prabavathi
EVENT: Halten kodex, kendey spell, kolly quix
COLLEGE: Kumaraguru College of Engineering & Technology, Yugam

NAME: H. Vignesh
EVENT: Halten Kodex
COLLEGE: Kumaraguru College of Engineering & Technology, Yugam

NAME: P. Madhumitha
EVENT: Halten kodex, kendey spell, kolly quix
COLLEGE: Kumaraguru College of Engineering & Technology, Yugam

NAME: V. Srinath
EVENT: Halten Kodex
COLLEGE: Kumaraguru College of Engineering & Technology, Yugam

NAME: G. Gowri
EVENT: Urban Dance Workshop
COLLEGE: Kumaraguru College of Engineering & Technology

NAME: V. Gokul
EVENT: Halten Kodex
COLLEGE: Kumaraguru College of Engineering & Technology, Yugam

NAME: W. Shiny Margret
EVENT: Urban Dance Workshop, Code the Node Workshop
COLLEGE: Kumaraguru College of Engineering & Technology

NAME: Sathish Kumar
EVENT: Halten Kodex
COLLEGE: Kumaraguru College of Engineering & Technology, Yugam

NAME: R. Mahalakshmi
EVENT: Urban Dance Workshop
COLLEGE: Kumaraguru College of Engineering & Technology


KNOW YOUR
ALUMINI

Hi, I am Ijaz Ahmed ·

I am working in Amazon Development Center as SDE/T - II· I completed my B·Tech in our karpagam college of engineering in the year 2005· Let me start by expressing my gratitude towards Karpagam College of Engineering and The Department of Information Technology to lay a very strong foundation for my career· At the beginning I was anxious about my decision to attend Karpagam College Of Engineering, but now it gives me immense pride to say that my choice to attend this college has repeatedly proven to be one of the best decisions I have ever made· Over the course of my time spent here, I made some really good friends and had really supportive staff from whom I have received incredible advice both personal and career related· It will be complete injustice to the efforts put by my staff of the department Of Information Technology and Karpagam College Of Engineering, if I do not acknowledge the faith they had in me and their continuous motivation which enabled me to think big in life· It is from here, where I learnt, that *_anything is possible if you take the time to accomplish it_* · It is this learning which has paved the path for where I am today· I joined Amazon as an SDE/T - I, and it is this learning which has enabled me to grow in every aspect of my career and life· I would urge each and every individual to take this as a motivation to achieve their dreams· There are / were multiple instances, where I am / was afraid of failure, and I know there are / were / will be many others like me, I would ask them to remember the only thing which kept me going- " *_Failure will never overtake us, if our determination to succeed is strong enough_* "· I know there are / were instances where each and everyone of us feel / felt being restless and agitated by the way we are / were asked to perform / train / learn / work, but I will just end with this quote which suites the best for our life in this Wonderful College - " *_I'm not telling you it's going to be easy· I'm telling you it's going to be WORTH IT·_* "

DEPARTMENT EVENTS


SHOT ON MI A1
MI DUAL CAMERA

QUIZ ANSWERS

SUDOKO

2	7	6	3	1	4	9	5	8
8	5	4	9	6	2	7	1	3
9	1	3	8	7	5	2	6	4
4	6	8	1	2	7	3	9	5
5	9	7	4	3	8	6	2	1
1	3	2	5	9	6	4	8	7
3	2	5	7	8	9	1	4	6
6	4	1	2	5	3	8	7	9
7	8	9	6	4	1	5	3	2

Across: 1. crop, 4. elm, 5. plow, 8. farm, 9. sit, 10. bag, 12. horse, 14. goose
Down: 1. colt, 2. pup, 3. cow, 6. lamb, 7. cats, 8. fir, 9. so, 11. goat, 12. hog, 13. eye

Across: 1.dad, 3.send, 5.east, 6.itsy, 8.nerf, 11.ark, 12.sync, 15.mesh, 16.ever, 17.near, 18.down **Down:** 1.down, 2.dear, 3.stinks, 4.day, 7.stun, 9.ease, 10.father, 13.yard, 14.card, 15.man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