

HIGHLIGHTS

APACHE
CASSANDRA



CORSAIR



KNOCKI

CONOSCENZA

Your Technology Reference | Conoscenza 17 | 19 October

A

R

CONVERGENCE
OF
TECHNOLOGY

N

PLUS

MOVIES REVIEW

Doctor Strange
Independence Day

GAMES REVIEW

Call Of Duty: Infinte Warfare
Need For Speed

GENETICS
ROBOTICS
ARTIFICIAL INTELLIGENCE
NANOTECHNOLOGY

G

GRUB STREETERS
ARTICLES BY NEWBIES

KNOW OUR CODEWORLD

SUMMER OF CODE

S

coursera

codecademy

NPTEL





Birthday Celebration



*This Magazine highlights the exalting
Glimpse of the triumphant time that
just passed by...*

EDITORIAL

Conatus, the technical society of Ajay Kumar Garg Engineering College, has always been engaged in exploring the field of Computer Science and Information Technology, increasing the awareness among the students and opening their new vistas of knowledge.

In order to maintain continuum, TEAM CONATUS takes immense pride in launching the 17th edition of Conoscenza, the tech torrent that addresses the applied and theoretical issues of the technical field.

The 17th edition contains articles overloaded with information like Convergence of Technology, GRAIN, Odin, Doctor Strange, Apache Cassandra, Knocki , NFS, and much more.

Your suggestions and recommendations towards creation and increasing the spontaneity of Conoscenza are most welcome.



Warm regards
TEAM CONATUS

Please Write to us at -



teamconatus@gmail.com



/conatus.agk



/conatus_akg

CONTENTS

COVER STORY

CONVERGENCE OF
TECHNOLOGY
GRAIN

1



GADGETS

7

KNOCKI
BLIPS

SANDWEDGES
CHAI CALLING



ENTREPRENEUR

27

Articles By:

Team Conatus

Chief Editors:

Abhishek Pratap Singh
Gaurav Tripathi

11

SOFTWARES



APACHE CASSANDRA
MICROSOFT DYNAMICS
CRM

Chief Designers :

Archit Garg
Shubham Yadav
Vibhav Kaushik



EDITORIAL



GRUB STREETERS

29



HARDWARES

9

ODIN
CORSAIR



NEED FOR SPEED
CALL OF DUTY

MOVIES

17

DOCTOR STRANGE
INDEPENDENCE DAY

13

GAMES



E-LEARNING PORTALS

21

NPTEL
COURSERA
EDX
CODEACADEMY

CODING EVENTS

25

GOOGLE SUMMER OF CODE
ACM ICPC



Designed By:

Akshay Agarwal
Om Singh
Prathna Agarwal
Shubham Prakash

Convergence of Technology

They say “Necessity is the mother of invention” and as the need required convergence of technology came into the fore. But what exactly is convergence of technology? Technological convergence is the process by which existing technologies merge into new forms that bring together different types of media and applications. For instance Digital convergence refers to the convergence of four industries into one conglomerate, ITTCE (Information Technologies, Telecommunication, Consumer Electronics, and Entertainment).

The Internet is perhaps the most widespread example of technological convergence. Virtually all entertainment technologies, from radio and television to books and games, can be viewed and played online. Many computers with Internet access offer greater functionality than primary devices like media players or e-Readers for digital books.

The creation of synergies, blurring of boundaries, integration and overlapping of marketer all used to describe convergence. The innovations in the technical sector diffuse into existing products and thus come to form a new integral part of the goods. Convergence occurs when products become interchangeable into one another to fulfill needs.



In the past, each entertainment medium had to be played on specific device. For instance, Videos were played on a television through some type of video player, music came through a tape duct or Compact Disc (CD) player, video games were played through a console of some sort and for audio we had radios. Technological convergence has resulted in devices that not only interact with the media they are designed to handle, but also with a number of other formats.

One of the most basic examples of technological convergence is a smart phone which is not an unusual gadget or a technical jargon, but it is an impeccable blend of a mobile phone and computer functionalities in a single gadget. It is quite different than an ordinary phone, as it comes with an operating system and a storage space.

GRAIN or Genetics Robotics Artificial Intelligence and Nanotechnology has been a key example of convergence of technology. GRAIN was coined by Douglas Mulhall in his science journal: Our Molecular Future. Mulhall in his journal not only coined GRAIN but also created an extended emphasis on the importance and utility of GRAIN in the near future. The convergence of technology has been taken to a whole new level of integrity and performance with the introduction of GRAIN. Though still in its dormant state, the necessity and importance for the humankind can easily be observed today as most of the sectors around implement GRAIN to its maximum potential. In order to grasp the idea and technology behind GRAIN, we need to look at the forming components

APPLICATIONS

Deep Genomics

"What exactly makes us sick?" has remained the biggest question for decades. The answer is Deep Genomics! It uses computational system to develop a database that provides prediction for how more than 300 million genetic variations could affect a genetic code.

This has led to new insights into the genetic connections of autism, cancer, spinal muscular atrophy that predictive system has revealed things about the genome that weren't known. This large scale data is stored as a manuscript of diagnostics. This will help doctors figure out diseases combined with new gene editing technology, it could be the thing that helps transform genetics in medicine.

Computer system were built to mimic how cell reads DNA and generate life. This led to breakthrough in genomic medicine field that we didn't even knew were possible when this was started.

Today, machine learning technologies are being developed to transform precision medicine, genetic testing, diagnostics and the development of therapies this has led to an extended database of medicinal diagnostics and cures. Deep genomics not only emphasizes on creating a healthier generation but has also worked extremely hard to create a healthy environment and a better future.

DEEP LEARNING



GENOMICS



PRECISION MEDICINE



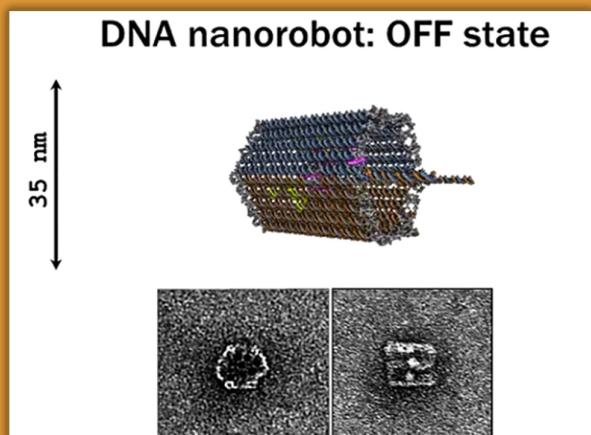
Cancer Curing Bots

The current treatment of cancer is unreliable as well as offers slim hope of complete treatment. Researchers of the University of Harvard have finally come up with a solution to the disease: DNA nanobots that involve genetics, robotics and nanotechnology, to effectively cure cancer.

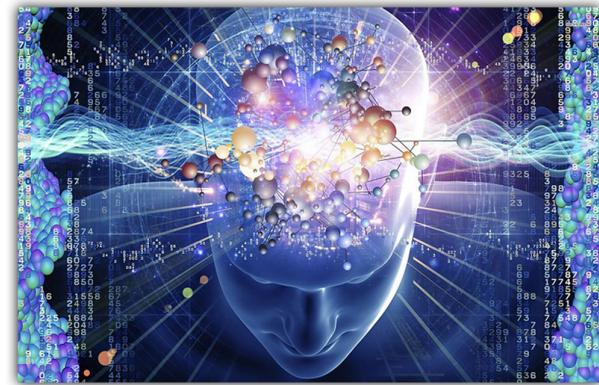
These are designed to seek out and destroy cancer cells, while leaving healthy cells unscathed. Like white blood cells, the nanobots patrol the bloodstream, looking for signs of distress. DNA nanobots are shaped like a hexagonal tube, having two halves connected by a hinge.

When the device recognizes a target cell based on its surface , the two halves swing open like a clam to deliver a tiny but deadly cargo of drugs or nanoparticles.

Nanobots can also have multiple "payloads" in them, and can be programmed so that they know which drug to expose to specific molecules. This means that nanobots work well in combination therapy-where multiple drugs are used at once and can be timed so that different drugs don't interfere with one another.



GENETICS



Genetic engineering, also called genetic modifications is the direct manipulation of organism's genome using biotechnology and DNA back printing. It is a set of technologies used to change genetic makeup of cells including the transfer of genes within and across species boundaries improved or novel organisms. The concept of ideal or novel organisms is to get organisms which have a far greater life expectancy and are immune to most of the

Another key happening for genetics is Genetic algorithms which are stochastic search procedures which have been used for solving many complex optimization problems. It is obvious that GA collect and exploit some statistical information about the search space, but this information isn't processed in explicit way. GA with binary representation and its explicit statistics in a form of probability distribution of unit-values. The binary GA convergence property is discussed and a new prediction method is proposed.

Genetic engineering techniques have been applied in numerous fields including research, agriculture, biotechnology, and medicine. Enzymes used in laundry detergent and medicines such as insulin and human growth hormone are now manufactured in GM cells, experimental GM cell lines and GM animal such as mice or zebra fish. The importance and role of genetics is to develop a better living space. Doctors hope to cure many diseases.

Genetics is providing numerous services to humanity in almost every field of life. Thus, its prominent role can never be neglected in the welfare and betterment of human lives, in one way or the other. Genetics is also applied to the study of micro-organisms.

G

ROBOTICS



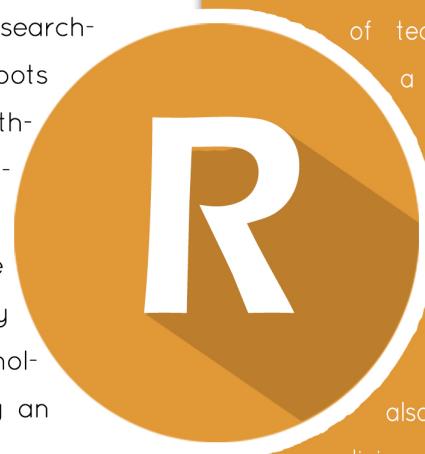
Robotics is the branch of engineering that deals with the design, construction, operation, and application of robots as well as computer systems for their control, sensory feedback, and information processing. These technologies deal with automated machines that can take the place of humans in dangerous environments or manufacturing processes, or resemble humans in appearance, as well as in behavior. Many of today's robots are inspired by nature, working in bio-inspired tasks.

Today, robotics is a rapidly growing field, as technological advances continue, researching, designing, and building new robots serve various practical purposes whether domestically, commercially, or militarily. Robotics has been critical in the growth of the technology and science in the sphere. The robotics technology has always been an asset to the technological atmosphere. Robotics is today an integral part of our growth.

The idea is to create an atmosphere which has every chore done by robots. The popularity and advantages of 'Do It Yourself' jobs has increased the need of robots even more. Concepts like self driving car have increased stake in this field.

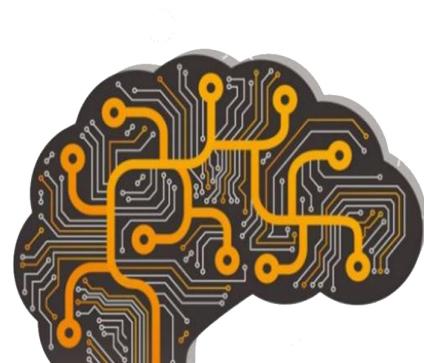


Robotics when combined with genetics make the dreams of technologically sound possible, imagine a world where the cure of all possible diseases is done on the basis of robotic diagnosis. This will lead to a life expectancy and better treatment of diseases. Robotics have not only created a massive impact on the increase of life expectancy but has also modified completely the way we take medicines.



Imagine a situation in which the diagnosis is not possible through a normal LUMBER puncher, that is where Robotics comes into place. The number of lives saved by this process are going to be huge, finding their ways through blood streams.

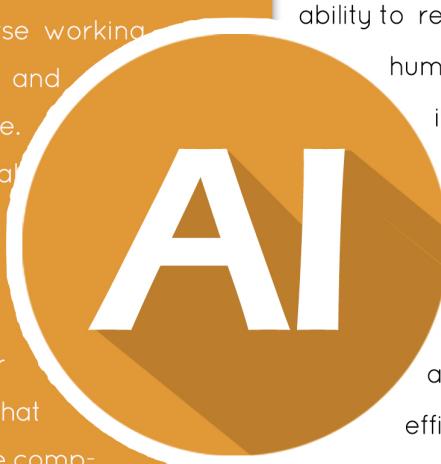
ARTIFICIAL INTELLIGENCE



AI research has developed methods for dealing with uncertain or incomplete information, employing concepts from probability and economics. For difficult problems, algorithms require enormous computational resources—most experience a "combinatorial explosion": the amount of memory or computer time required becomes astronomical for problems of a certain size. Natural language processing gives machines the ability to read and understand the languages that humans speak.

Natural language processing gives machines the ability to read and understand the languages that humans speak. A common method of processing and extracting meaning from natural language is through semantic indexing. Increases in processing speed and the drop in the cost of data storage makes indexing many large volumes of abstractions of the user's input much more efficient. Goals of AI is to create expert systems which show intelligence and learning.

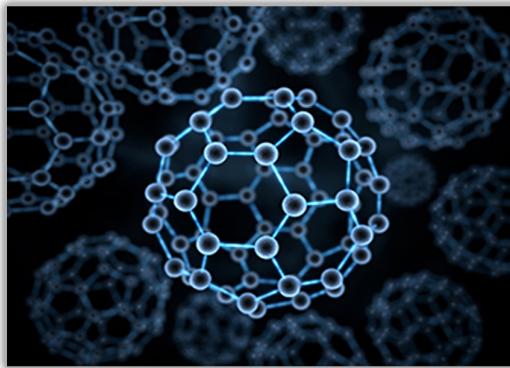
Humans have developed the power of computer systems in terms of their diverse working domains, their increased speed, and reduced size with respect to time. According to the father of Artificial Intelligence, John McCarthy, it is, "The science and engineering of making intelligent machines, especially intelligent computer programs". Philosophy of AI is that while exploiting the power of the computer systems, , the curiosity of human leads him to wonder, "Can a machine think and behave like humans do?", in other words, AI is accomplished by studying how human brain thinks, learn, decide, work while trying to solve a problem, and then using the results of this study to develop smart softwares.



AI

Everybody agrees that a robot can work in an assembly line, but there's a completely positive consensus, also on whether robot can ever be intelligent. AI would be a recreation of the human thought process -- a man-made machine with our intellectual abilities.

NANOTECHNOLOGY



The term "nanotechnology" has evolved over the years via terminology drift to mean "anything smaller than microtechnology," such as nanopowders, and other things that are nanoscale ($\sim 10^{-9}$) in size. This evolved version of the term is more properly labeled "nanoscale bulk technology." This evolved version of the term is also called label as MNT- Molecular Nano-Technology. Foresight institute has suggested an alternative term to represent the original meaning of nanotechnology : Zetotechnology.

At the most basic technical level, MNT is building ,with intent and design, and molecule by molecule, these two things: 1) Incredibly advanced and extremely capable nano-scale and micro-scale machines and computers 2) Ordinary size objects using other incredibly small machines called assemblers or fabricators. One of the prime applications of MNT is to create any sort of material design, engineered at the nanometer scale to be smart for a specific tasks.

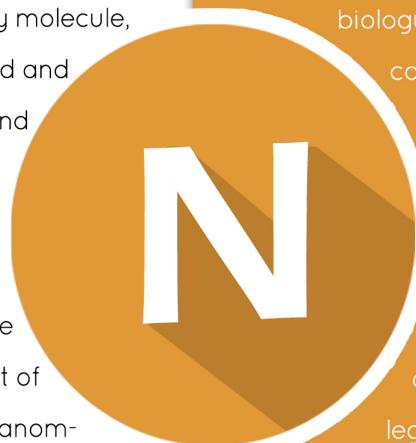
In a nutshell, by taking advantage of quantum-level properties, MNT allows for unprecedented control of the material world, at the nanoscale, providing the means by which systems and materials can be built with exacting specifications and characteristics.



MNT represents the state of the art advances in biology, chemistry, physics, engineering, computer science and mathematics.

The major research objectives in MNT are the designing, modeling, and fabrication of the molecular machines and molecular devices.

The emergence of MNT -both infant and mature - has numerous social, legal, cultural, ethical, religious, philosophical and political implications.



At the most basic social level, MNT is going to be responsible for massive changes in the way we live, the way we interact with one another and our environment, and the things we are capable of doing, possibly improving our lives at a large scale.

KNOCKI

Make Any Surface Smart

Have you ever imagined turning any surface of your home in a remote control?

Wouldn't it be quite fascinating if we could just tap on our kitchen countertop to turn on our favourite song?

The new advancements in technology has made life easier, but controlling it is not everyone's cup of tea. Knocki offers the simplest, fun and most natural way to control the world inside our home and office. Technology should make our lives easier, so why does controlling it feels so complicated? An endless maze of mobile apps, smart switches, and other interfaces create a confusing and fragmented experience. Knocki uses non-acoustic sensor technology to detect gentle surface gestures even a distance away, but Knocki also has the intelligence to filter. Therefore, Knocki works under busy breakfast tables and other "high-activity" surfaces.



Make Your
Home Smart



Find Your
Phone



Get Alert
When Mail
Arrives



Trigger a
Text Message



Turn Light
On/Off



Door Knock
Sends a Text



Ever Expanding
Possibilities

HOW IT WORKS ?

Knocki comes with built-in vibration-sensing technology, connects to Wi-Fi and uses AAA batteries. It is well equipped with accelerometers and when it is attached to any particular surface, it turns the whole surface into a touch interface.

Knocki can recognise upto 10 unique patterns of knocks and taps. Each knock pattern can be programmed to trigger specific actions through a companion application. For instance, knock twice at a relaxed place on your knocki-enabled nightstand. Knocki also supports larger universe of interoperability via IFTTT recipes, and you can group several controls together under a single knock or tap pattern.

Each Knocki includes a special mount featuring our patent-pending Surface Link technology to ensure a solid connection to a surface for transmission of gesture signals. Knocki uses non-acoustic sensor technology to detect gentle surface gestures even a distance away. Once it's setup, we can directly control supported appliances such as light bulbs and smart locks with programmable series of knocks and taps. Knocki can make a difference in anyone's life. However, it can be truly life-changing for people with mobility or vision impairments.

BLIPS

Magnify The World

BLIPS is an ultra portable and very affordable set of mini lenses which turn our devices into photo digital microscopes in seconds and now they are being referred as "The world's thinnest set of microscopic lenses for smartphones and tablets". BLIPS is so slim that we can connect it to our device and keep it in our pocket without having to worry about losing it. BLIPS works on all models of smartphones and tablets.

BLIPS is made up of composite multi-layered structures. Each element is composed of specifically designed objective lens, placed on a flexible film. The backside surface sticks on the glass of the mobile device or tablet covering the camera by electrostatic forces. No glue is used behind the lenses. The film is long enough to ensure easy handling and correct lens alignment on the mobile device camera. Two sticky bands are made up of a specially engineered material for multiple uses to keep the BLIPS on the device surface without using heavy spring clips pressing against the touch screen of our devices.

The unique set of mini-objectives for smart phones allow us to see deep inside the micro-world. Two mini-objectives on flexible film which cleanly stick on our smartphone or tablet are the entrance doors to the microscopic world for everyone.

BLIPS is a highly adjustable device that is easy to clean. It uses electrostatic adherence. But it supports only ios and android devices. Other devices need to install the applications to use it.



BLIPS MACRO

Blips Macro allows us to take high definition macro pictures, with optical magnification of about 10 times.

It is extremely thin, about 1/50 inch ($\approx 0.5\text{mm}$), and very user friendly. This is the first step from "standard" photography toward portable microscopy.

BLIPS MICRO

Blips Micro permits the use of your smartphone for real microscopy applications.

BLIPS Micro is less than 1/20 inch ($\approx 1.2\text{mm}$) high, and it turns your phone into a real digital microscope. We need to keep a distance of $\frac{1}{4}$ inch (6mm) between the lens and the sample under observation to discover tiny details at high definition. With the use of digital zoom it is possible to achieve magnification over 100x.

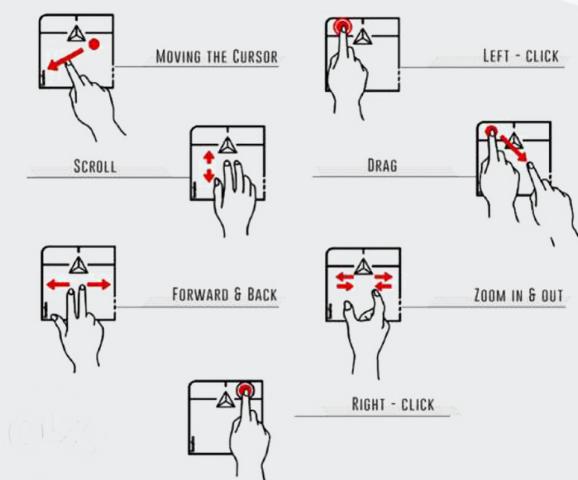
ODIN

WORLD'S FIRST PROJECTION MOUSE

Most computer mice are made of plastic, glass or metal. But Serafim Technologies, a Taiwanese company has done away with those materials, and created a virtual mouse beamed from a laser projector.

The product receives a small projector that can sit on top of a table, and connects to a PC via its USB port. It works by displaying a virtual trackpad on a hard surface like a table. For users, this means they'll essentially see a small box, made out of red light, with the right and left click buttons projected at the top of the trackpad. To read the gestures, the projector has built-in sensors that can track a user's finger movements over the trackpad. The company created the product as a way to meld together mouse and touchscreen functions together.

To read the gestures, the projector has built-in sensors that can track a user's finger movements over the trackpad. The company created the product as a way to meld together mouse and touchscreen functions together.



The **ODIN** Aurora consists of a robot module that perches on your desk and projects a trackpad onto it that you can manipulate with your fingers to control your computer. The company promises it will "redefine your daily user habits for designing, gaming, work and everything".

Supposedly the mouse has been inspired by Nordic myth of spear-throwing Odin (instead of throwing spears, the robot head throws laser beams). The 8cm x 8cm projected area supports multipoint controls and also contains left- and right-click panels, as well as a programmable, triangular button in the centre.

The fun fact about this cool gadget is that it is inspired by the Norse God ODIN, more popularly known as the father of comic book favorite hammer wielding Thor. ODIN will do away with all the pain and tiredness your hand is subjected to. By having your hand laid out normally on the table, you can avoid wrist pain and can also avert the risks of carpal tunnel syndrome.

CORSAIR

HYDRO GFX 1080 LIQUID COOLED GRAPHICS CARD

CORSAIR a world leader in enthusiast memory, PC components and high-performance gaming hardware announced the release of its second generation of Hydro GFX Series graphics cards, the CORSAIR Hydro GTX 1080.

Harnessing the phenomenal power of an overclocked NVIDIA GeForce GTX 1080 GPU and co-developed in partnership with the expert graphics card team at MSI, the Hydro GFX GTX 1080 completes the package with CORSAIR's industry leading liquid cooling .

The result is a graphics card with the overclocked power to push the limits of 4K and VR gaming performance, while running not just cooler, but also significantly quieter than a stock GeForce GTX 1080. Up to 10% faster and 50% cooler than stock cards, the Hydro GFX GTX 1080 is the GeForce GTX 1080 as it should be . It is today's most advanced GPU alongside the best in liquid cooled overlocked performance.

The CORSAIR Hydro GFX GTX 1080 brings all the benefits of liquid cooling to the GeForce GTX 1080, boasting an integrated CORSAIR Hydro Series H55 cooler that draws heat from the GPU via a micro-fin copper base cold plate and dissipates it efficiently using a 120mm high-surface area radiator. A pre-installed low-noise LED-lit 120mm fan ensures steady, reliable air-flow, keeping GPU temperatures down and clock speeds high. With a low-profile PCB and pre-fitted, fully-sealed liquid cooler, the Hydro GFX GTX 1080 is simple and easy to install.



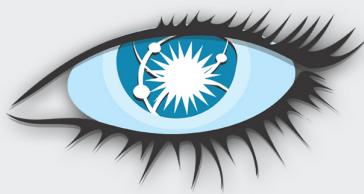
SPECIFICATIONS

- GPU: NVIDIA GeForce GTX 1080
- CUDA Cores: 2,560
- Interface: PCI Express 3.0 x16
- Boost / Base Core Clock:
 - 1,847 MHz / 1,708 MHz (OC Mode)
 - 1,822 MHz / 1,683 MHz (Gaming Mode)
 - 1,733 MHz / 1,607 MHz (Silent Mode)
- Memory Clock:
 - 10,108 MHz (OC Mode)
 - 10,010 MHZ (Gaming Mode)
 - 10,010 MHz (Silent Mode)
- Memory Size: 8192MB
- Memory Type: 8GB GDDR5X
- Memory Bus: 256-bit



SOFTWARES

APACHE CASSANDRA



Apache Cassandra, a top level Apache project born at Facebook and built on Amazon's Dynamo and Google's BigTable, is a distributed database for managing large amounts of structured data across many commodity servers, while providing highly available service and no single point of failure. The stable version of Apache Cassandra was released on June 13, 2016.

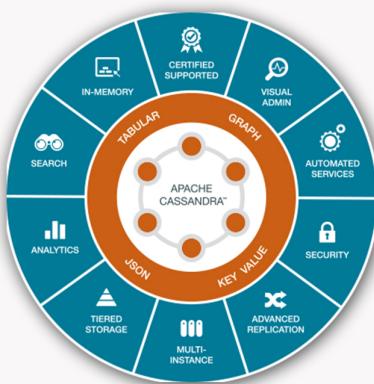
Many companies have successfully deployed and benefited from Apache Cassandra including some large companies such as: Apple, Comcast, Instagram, Spotify, eBay, Rackspace, Netflix, and many more.

Many of today's online applications have database requirements that exceed the capabilities of legacy relational databases.. Cassandra's architecture is responsible for its ability to scale, perform, and offer continuous uptime. Rather than using a legacy master-slave or a manual and difficult-to-maintain sharded architecture, Cassandra has a masterless "ring" design that is elegant, easy to setup and easy to maintain.

Cassandra's built-for-scale architecture means that it is capable of handling large amounts of data and thousands of concurrent users or operations per second—even across multiple data centers—as easily as it can manage much smaller amounts of data and user traffic.

Cassandra provides a number of key features and benefits for those looking to use it as the underlying database for modern online applications:

- **Massively scalable architecture** a master less design where all nodes are the same.
- **Flexible and dynamic data model** supports modern data types with fast writes and reads.
- **Strong data protection** a commit log design ensures no data loss and built in security with backup/restore keeps data protected and safe.
- **Tunable data consistency** support for strong or eventual data consistency across a widely distributed cluster.
- **Data compression** data compressed up to 80% without performance overhead.
- **CQL (Cassandra Query Language)** SQL-like language that makes moving from a relational database very easy.
- Internet of things applications.
- Product catalogs and retail apps.
- User activity tracking and monitoring – many media and entertainment companies use Cassandra to track and monitor the activity of their users' interactions with their movies, music, website and online applications.





Microsoft Dynamics CRM is a customer relationship management software package developed by Microsoft. Out of the box, the product focuses mainly on Sales, Marketing, and Service (help desk) sectors. It is also an XRM platform that encourages partners to use proprietary .NET framework to customize it to meet many different demands. Microsoft Dynamics CRM 2016 was officially released on November 30, 2015. Microsoft Dynamics CRM encompasses all of the best practices of CRM, with the flexibility, familiarity, and functionality we would expect from Microsoft. It's a solution that helps organizations in all industries to build more productive relationships with current customers and forge relationships with new ones. Microsoft Dynamics™ CRM gives every customer-facing employee the information they need to truly impress customers.

Microsoft calls this "The most comprehensive upgrade ever for Dynamics CRM" and says it "includes advancements in intelligence, mobility and service, with significant productivity enhancements". Bob Stutz, corporate vice president, Microsoft Dynamics CRM, calls the release "a milestone in the company's efforts to reinvent productivity." The latest updated version 8.1.0.0365 was released in June, 2016, is available for general purpose distribution and Microsoft released its online version 8.1.0.0452 in August, 2016.



Microsoft has made a point of saying that this release focuses on enhancements that eliminate the distractions that occur when bouncing from application to application. A few highlights announced for Microsoft Dynamics CRM 2016 are:

- Comfortable and intuitive look along with a user friendly interface.
- Flexible platform allows user to define the relationships between the people, money, services and things important than organization and manage the information and interactions between these relationships.
- An enhanced Excel experience.
- Contextual documents across SharePoint,
- OneDrive for Business, and Office 365 Groups for any CRM record.
- Next generation Cortana integration.
- Full offline capabilities on phones/tablets across all major platforms (Android, iOS, Windows).

CALL OF DUTY[®] INFINITE WARFARE

Infinity Ward is back with yet another entry in the blockbuster shooter franchise. This time the famed developer is venturing into space with Infinite Warfare, a futuristic experience that will pit you against rival PMCs, evil robots and inevitable space terrorists. The elements of parkour found in Advanced Warfare and Black Ops 3 are back, enhanced by a slew of futuristic new weapons, abilities and zero gravity combat. It all sounds pretty exciting but many of us are arguably more hyped for the release of Call of Duty: Modern Warfare Remastered, a complete remake of the 2007 classic.

GAME PLAY

Infinite Warfare will mix traditional shooter mechanics with some vehicular combat, specifically piloting spacecraft in epic battles. This tried and true formula will be accompanied by cool new additions such as a grappling hook and battles across vast spaces dominated by zero gravity. Infinity Ward also says you'll play as the captain of a warship and be forced to make tough decisions, although how this works is still a mystery.

Given Call of Duty is historically about following orders rather than giving them, this could be a big departure for the series.

There's also a smattering of Titanfall like mechs in the trailer and we can't believe Infinity Ward won't give you the chance to pilot one.

Unfortunately, Infinite Warfare will not support local co-op for the single player campaign. The four player option for online/offline play found in last year's Black Ops 3 is no longer present.

ZOMBIES

The latest entry in Call of Duty's popular undead mode is known as "Zombies in Spaceland". Taking clear inspiration from the cheesy pop music and outlandish fashion of the 1980s, Spaceland features four distinctive heroes as they battle through a neon centric theme park filled with shambling corpses. Zombies in Spaceland even stars David Hasselhoff as a mysterious DJ helping you acquire weapon and power ups to combat the undead. It's all a bit over the top, wearing its archetypal 80's tropes on its sleeve with silly fashion, ridiculous music and break dancing zombies. It could be fun if not a little grating for those hoping for something more spooky and traditional.

MULTIPLAYER

Infinite Warfare introduces a major overhaul to the class system called the "Combat Rigs". Similar to the Specialist system in Black Ops III, there will be six rigs in total, including Warfighter, Merc, FTL, Stryker, Phantom and Synaptic all of which have different payloads weapons,



abilities and playstyles. For example, the Synaptic rig is designed for players who prefer to run and gun, while the Phantom rig is suited for players who want to play stealthily. Players can also gain access to several persistent perks, known as "Traits", which give players advantages in combat situations. Additionally, the game retains the chain-based momentum movement system of Black Ops III, allowing players to perform thrust jumps, sliding, and wallrunning.

THE PLOT

Call of Duty: Infinite Warfare is set in a distant future beyond any previous game. From the trailers it's clear that a group called the Settlement Defence Front is responsible for a surprise attack on Geneva and it seems dead set on wiping out everyone. We also now know that Game of Thrones' **Jon Snow**, played by **Kit Harington**, will play the lead villain in the game. In a press release, Activision revealed that both Harington and famed British director Guy Ritchie have worked on Infinite Warfare.

"Kit is an amazing talent and the consummate pro", said Taylor Kurosaki, narrative director, Infinity Ward. "Our story is about an epic showdown of opposing forces, and Kit immersed himself into the role and truly became the embodiment of the enemy. We can't wait for fans to see Kit play an entirely different kind of character."

In the reveal trailer, what sounds like a newsreader says something along the lines of "the biggest surprise attack in the history of the world... how could they have not seen this coming from one of our own." It cuts off there, but everything in the trailer suggests the Settlement Defense Front (SDF) wasn't deemed an enemy until this surprise attack. What triggers the attack is unknown, but judging from the teasers, we can't rule out some kind of internal coup or revolution. After all, for terrorists the SDF seems awfully well equipped.

OPENING IMPRESSIONS

It's CoD with a twist. We hope it's more twist than CoD, because space based warfare is a chance to really rejuvenate the franchise. However, with all the extra weapons, abilities and settings, the base game is very much the same. If you're into that, you'll be pleased. If not, there are many more games coming out this year that will provide a more varied experience.

CONOSCENZA

RATING

3.5 / 5

NEED FOR SPEED™

Need For Speed has always been an integral part of every gamer's collection, the magnitude of success has been massive, the result: a successful movie franchise.

After a year off, Need for Speed has the series coasting back over familiar turf, resurrecting the spirit of 2003 and 2004's successful underground games. It is, at least a more clearly distinct game than the last few NFS installments were from one another. It looks incredible, sounds fantastic, and while the handling is still, standard arcade fare developer Ghost Games has added a welcome dose of nuance by letting us tune our cars for either grip or drift. However, the single player component is over too soon, the multiplayer under delivers, the cut scene dialogue often had us wincing, and the game is stung by the side effects of being online.

It is astonishing with great overall experience. There are dark and gritty instances where it feels a little like the whole thing has been shot on Michael Mann's iPhone but racing at speed through the soaked streets here (particularly in bumpercam) is really something else. The cars glisten with beaded water droplets and the streets gleam, a shiny tapestry of mirror-like asphalt reflecting artificial light from all angles. Need for Speed also sounds nearly as good as it looks the

throaty burble of performance tuned engines is well realised and the crackle of exhaust overrun and the KERS (Kinetic Energy Reservation System) chunk of slamming gears is similarly respectable. However, the sudden jarring transitions from the dead of night to pre-dawn, and then back to night again are horribly ill conceived.

These transitions seem to be baked into parts of the environment so they can actually happen multiple times over the course of a single race. The move has heavily back fired. The eclectic roster of cars is only a fraction of what's on offer in, say, *Forza Horizon 2*, but it has a little something for most gearheads. Garage spots are limited to five but the focus here is in collecting it's perfecting. The game can be easily completed in a single car, constantly cramming upgrades into it to keep it ahead of the competition (though it considerably shoots the overall playing forbearance).

It's still good to have customisation of any sort back in Need for Speed, and with it comes several basic tuning options you can use to alter your car's driving characteristics. The main slider adjusts all settings, nudging the car towards a drift setup or a grip setup, but the driver can dive deeper and massage certain steering, tyre pressure, and braking power settings individually to fine tune your ride. The drift setup offers great race day experience for all race types because it was found far easier to get around corners by poising our focus in a slide via a injection throttle



and liberal use of opposite lock, rather than navigate the bends with a grip tune.

At various points, NFS has been all police chase simulator, a realistic track racer, and even a Cannonball Run-style action movie on wheels. This latest Need For Speed follows in the footsteps of the first Fast and Furious film by exploring the white-knuckled world of illegal street racing. While it's not a completely novel approach for the series it does open a few new avenues for Need For Speed's arcadey but nuanced style of racing most notably in its progression and customization systems.

Need for Speed's light narrative plays out in a series of short, live action cut scenes, brimming with third world language slangs, excessive energy drink consumption and a slightly comical amount of first person first bumping. There are five main characters who, when they aren't speaking to each other like living, breathing internet memes, each represent a different one of Need for Speed's five themed racing threads. All of these threads lead to an encounter with a real-life automotive icon, an idea which is genuinely awesome. The best thread is '**Outlaw**', which is really just a mix of all the game's race types with the cops on the driver's tail. The cop action is scaled back from Hot Pursuit and Rivals but certainly how the police seems a lot more fair and bound by the in game physics than it ever did in **Ubisoft's**. Considering it was the standout mode in the old Underground games, the lack of any drag racing in Need for Speed seems like a misguided omission.

It's not an especially long story, though there are 79 main events, but they are relatively easy than other versions. This modest length might be less of a problem if the multiplayer was more robust, but it isn't.

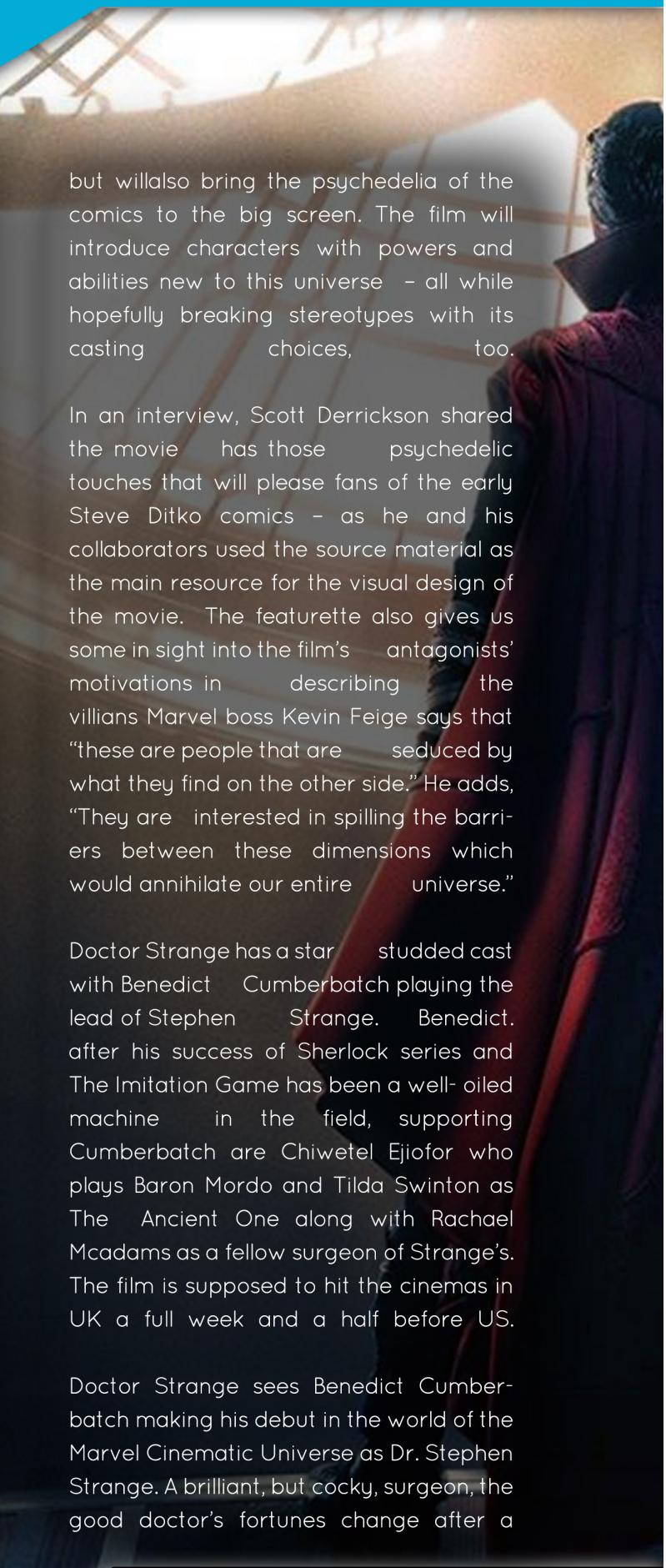
THE VERDICT

Need for Speed looks the part, sounds the part, and is surprisingly reverent to real world car culture. The direction Ghost has taken here and it's the right one, but beneath its flashy exterior it's not quite firing on all cylinders.

The game is far from perfect, but it is, at points, truly exceptional. Its jaw-dropping visuals, adrenaline-pumping audio, and highly-customizable handling make screaming around the darkened streets of Ventura Bay an intense thrill. The sense of ownership that comes with tuning a single ride to perfection rather than simply grabbing the flashiest vehicle available proved tremendously rewarding. Even just the breathtaking speed of upgraded vehicles makes the driving in Need For Speed absolutely gripping.

CONOSCENZA
RATING

4 / 5



Who do you call when things are coming out of your dreams and trying to kill you? When your dog keeps screaming at you to strangle your neighbours? **Doctor Strange**, of course....He's the only person standing between us and the forces of darkness, but has he been paying his tab? Every act of magic has a cost and **Jason Aaron** and **Chris Bachalo** are going to put Stephen Strange through hell to even the scales.

In fact, according to **Chiwetel Ejiofor** who plays **Baron Mordo** and **Anthony Mackie** **Doctor Strange** will be 2016's biggest superhero movie hit. Stephen Strange will start out as a talented surgeon whose hands are damaged in a car accident. Desperate to get them cured, he'll eventually come across ancient One, who teaches him the ways of magic and sets him on his path to being Earth's defender from supernatural forces. Unlike his comic book counterpart, Ejiofor's Baron Mordo is said to not be completely villainous, and instead an "amalgamation" of several characters. Based in New York City's Greenwich Village, Doctor Strange must act as an intermediary between the real world and what lies beyond, utilising a vast array of metaphysical abilities and artefacts to protect the Marvel cinematic universe.

Doctor Strange is a difficult character to get right, because every story requires writers and artists to stretch the limits of their imaginations. As Marvel begins weaving their Doctor Strange film, these are the creators that excelled at the imaginative, the unknowable, and the sublime, and should provide the framework for the impossible. Doctor Strange will not only take the audience to an overthrilling and amazing experience

but will also bring the psychedelia of the comics to the big screen. The film will introduce characters with powers and abilities new to this universe – all while hopefully breaking stereotypes with its casting choices, too.

In an interview, Scott Derrickson shared the movie has those psychedelic touches that will please fans of the early Steve Ditko comics – as he and his collaborators used the source material as the main resource for the visual design of the movie. The featurette also gives us some insight into the film's antagonists' motivations in describing the villains. Marvel boss Kevin Feige says that "these are people that are seduced by what they find on the other side." He adds, "They are interested in spilling the barriers between these dimensions which would annihilate our entire universe."

Doctor Strange has a star studded cast with Benedict Cumberbatch playing the lead of Stephen Strange. Benedict, after his success of Sherlock series and The Imitation Game has been a well-oiled machine in the field, supporting Cumberbatch are Chiwetel Ejiofor who plays Baron Mordo and Tilda Swinton as The Ancient One along with Rachael Mcadams as a fellow surgeon of Strange's. The film is supposed to hit the cinemas in UK a full week and a half before US.

Doctor Strange sees Benedict Cumberbatch making his debut in the world of the Marvel Cinematic Universe as Dr. Stephen Strange. A brilliant, but cocky, surgeon, the good doctor's fortunes change after a

DOCTOR STRANGE

tragic accident leaves him with hands unable to carry on as they once had. Desperate to regain his talents, Stephen dabbles in the mystic arts, and becomes more powerful than he could have ever imagined which means that he'll be inheriting the standard "great responsibilities" thanks to his new found powers. The film is directed by Scott Derrickson, and will also star Chiwetel Ejiofor as Karl "Baron" Mordo and Tilda Swinton as The Ancient One, as well as Rachel McAdams, Michael Stuhlbarg, and Mads Mikkelsen – all in unspecified roles.

While we don't know his character's name, the enigmatic figure that Mads Mikkelsen plays in the trailer appears to have honed the abilities that Doctor Strange is just getting used to. So there's a good chance that while Tilda Swinton's Ancient One is trying to train Stephen to use his powers for good, Mikkelsen's baddie may try to sway him to work for the darker side of the equation. Either way, Benedict Cumberbatch's famed sorcerer is about to learn a thing or two about how to operate in multiple realities, while speaking with a convincing American accent that will definitely take some getting used to.

This fall's Doctor Strange is Marvel's first foray into its more mystical canon, and if the first look at Scott Derrickson's recently wrapped picture has anything to say about it, the wait has indeed been worth it. We can definitely say we're looking forward to seeing what comes next with this flick, and we're already marking November 4th on our calendars.

MCU, whose slate of films past the next two Avengers installments is, so far, shrouded in mystery.

| | | |
|--------------------|---|--|
| Rating | : | NR |
| Genre | : | Action & Adventure , Science Fiction & Fantasy. |
| Directed By | : | Scott Derrickson, |
| Written By | : | Thomas Dean Donnelly,Joshua Oppenheimer, Jon spaights, Steve Ditko |
| In Theatres | : | Nov 4, 2016 world wide |
| Studio | : | Walt Disney Pictures |

TO BE
RELEASED...

INDEPENDENCE DAY RESURGENCE

Independence Day : Resurgence is a 2016 American movie which is the sequel to the 1996 film Independence Day and stars an ensemble cast featuring **Liam Hemsworth, Jeff Goldblum, Bill Pullman and Jessie Usher**. It was released by 20th Century Fox in 2D, 3D and IMAX 3D in the United States on June 24, 2016. The film received mixed reviews from critics, who found the plot convoluted and action sequences overblown, though some praised its overall humor. The film has grossed **\$385 million** against its \$165 million production budget.

Two decades after the freak alien invasion that nearly destroyed mankind a new threat emerges. This **Alien** mothership is more than twice the size as the last one and once again, the world's armies must band together to save the world. Do they have enough firepower or will this battle change and will aliens take over?

Roland Emmerich returns to the helm for this long-awaited sequel to the 1996 blockbuster. Independence Day. Fearful of another attack, the nations of Earth have teamed up against their common enemy extraterrestrials who brought humanity to the brink of extinction. Using recovered alien technology to bolster their defenses, the alliance braces itself for another invasion.

Jeff Goldblum and Bill Pullman reprise their roles from the original film,

while Liam Hemsworth, Jessie Usher, and Maika Monroe are among the new additions to the cast.

Roland Emmerich tries very hard to put his 2012 and White House Down magic on the screen but even for a director of his caliber the movie stands weak. The screen play is engrossing with common ritual of blowing monuments up taken into specific consideration. In the acting department too the movie is frail as the aura created by Will Smith in the prequel are absent. Will Smith who gladly refused to return to his character of an Air Force pilot took the right call here. The rest of the cast also disappoint as the pace of the movie never picks up. Emmerich made the right decision in the field of cinematography as the alien ship is well planned a looks cynical.

Resurgence makes the similarly 9/11 - themed politics of Man of Steel seem profoundly progressive where that film tried to humanise an alien, Emmerich and his team of six writers clearly took the satire of Team America: World Police as an obvious fact.

So let's take a moment and talk about those tragically incompetent aliens. We always knew they were coming back. We had 20 years to prepare. But as the tagline helpfully reminds us, so did they. Now, we know : An Independence Day sequel that missed the boat by 20 years is hardly a movie to find logic in it is, after all a movie in which the Burj Khalifa spears London in the Thames.

But when both sides' strategies consist exclusively of shooting at each other, with the exact same weapons (we've utilised the stray alien tech they left behind from '96) and varying degrees of enthusiasm, it can all get a little tedious.

Joining the new guard, and seemingly assuming the lead role for further franchise entries is Liam Hemsworth as Jake, a renegade pilot with all the palatable roguishness and toothy luster of "Top Gun's" Maverick Mitchell; while he's not a blood relative of any known characters, it is informed that he was orphaned in the first alien attack.

Filming began on April 20, 2015, and wrapped on August 22, 2015. Filming for additional scenes also took place in early 2016 in Los Angeles. Due to the availability of regional filming, the producers decided to shoot the film largely in New Mexico. Albuquerque Studios was a major venue

Even if its storytelling occasionally tests patience, however, "Independence Day : Resurgence" delivers swiftly and generously when it comes to the goods most viewers will have come for — the time-honored joys of blowing stuff up, in set pieces that escalate dizzyingly in size and context. The film's music was composed by **Thomas Wander and Harald Kloser**. The soundtrack also contains "Electric U", performed by Kid Bloom and "Bang Bang" performed by Annie Trousseau. In an interview with Empire magazine, Emmerich stated that a third film will be made, depending on the success

of the second one. According to Emmerich, the third film will depict an **intergalactic journey**, possibly set a year or two later since he wants to maintain the same group of people, especially the young characters. It's all too much too fast, and the cumulative effect is like watching a two hour trailer—more dizzying than thrilling and also tarnishes the image of its predecessor.

| | |
|----------------------|--|
| Genre : | Action & Adventure, Drama, Science Fiction & Fantasy |
| Directed By : | Roland Emmerich |
| Written By : | Nicolas Wright , James A. Woods , Dean Devlin , Roland Emmerich, Jamie Vanderbilt, James Vanderbilt |
| In Theatres : | June 24, 2016 world wide |
| Box Office : | \$64,771.00 |
| Runtime : | 119 minutes |
| Studio : | 20th Century Fox |

CONOSCENZA
RATING

3.5/5

E-LEARNING PORTALS



The National Programme on Technology Enhanced Learning (NPTEL), a project funded by the Ministry of Human Resource Development (MHRD), provides e-learning through online Web and Video courses in Engineering, Sciences, Technology, Management and Humanities. This is a joint initiative by seven IITs and IISc Bangalore.

NPTEL provides free online courseware in the form of web courses and video lectures. These lectures utilize a multitude of facilities of the video medium such as chalk-and-talk, power point, two and three dimensional animations, interactive codes, etc. NPTEL contents are being used by various educational institutions as part of their teaching-learning process.

While faculty members are using these contents as part of their lesson plan to teach university curriculum, students are using NPTEL.

The online courseware provided by NPTEL is free. One may access these courses utilizing any of the following methods:

1. Through the official NPTEL website <http://nptel.ac.in>. These videos may be downloaded in MP4, FLV and 3gp formats.
2. As video streams on demand through YouTube <http://www.youtube.com/iit>.
3. Institutions may provide hard disks and receive copies of these courses free of cost at the NPTEL office, IIT Madras.

You can visit NPTEL at
<https://www.nptel.ac.in>.



Codecademy is an online interactive platform that offers free coding classes in 12 different programming languages including Python, Java, PHP, JavaScript, Ruby, SQL, and Sass, as well as markup languages like HTML and CSS.

Codecademy works as an education company. It is which a perfect spot for place to code , learn and implement one's ideas. It is one of the most interactive and usefull platform for keen learners and people who want to explore about various languages.

The platform also provides courses for learning command line and Git. Code Year is a free incentive Codecademy program that intends to help people follow through on a New Year's Resolution to learn how to program. Codecademy, an online coding school with 16 million registered users, has built out its footprint without charging its students a penny to use it. Due to this free of cost feature of Codecademy, the number of users on it have increased exponentially in the last few years.

Codecademy is committed to building the best learning experience inside and out, making Codecademy the best place for their any budding coder to learn, teach, and create the online learning experience of the future.

Codecademy has been one of the most sorted out sites for courses on basic as well as advanced developer languages. The idea behind codecademy is to provide a simple and easily accessible platform to the users. Unfortunately a chunk of coders don't get enough exposures as well as platforms to harvest their potential to the maximum. Codecademy has extensively targeted this audience to take their online portals to bigger heights.

The framework consists of practices and concepts that serve as a platform for schools to create their own computer science standards.

Codecademy has been different from other online portals due to its extremely simple and attractive interface and bottom-up thinking. The online portal takes more cues from Facebook and Zynga in creating an engaging educational experience. Education has been revolutionised since the shooting of codecademy to the scene.

Try it yourself at: www.codecademy.com



E-LEARNING PORTALS



[edX.org](https://www.edx.org) is an open-source platform that powers edX courses and is freely available. With edX, educators and technologists can build learning tools and contribute new features to the platform, creating innovative solutions to benefit students everywhere.

It hosts online university-level courses in a wide range of disciplines to a worldwide student body, including some courses at no charge. It also conducts research in learning, based on how people use its platform.

Founded by Harvard University and MIT in 2012, edX is an online learning destination and an MOOC provider, offering high-quality courses from the world's best universities and institutions to learners everywhere.

Their students come from every country in the world! Whether you are interested in computer science languages, engineering, psychology, writing, electronics, biology, or marketing. Having more than 90 global partners, they are proud to count the world's leading universities, nonprofits, and institutions as their members.

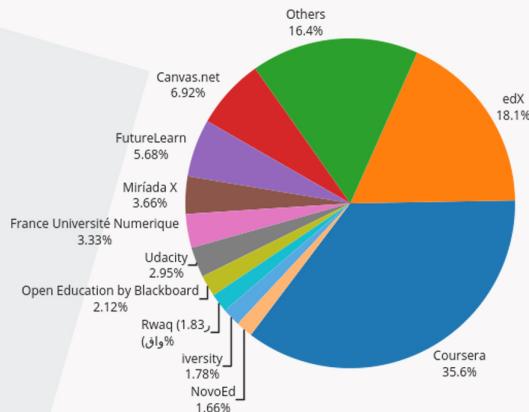
EdX university members top the QS World University Rankings® with their founders receiving the top honors, and edX partner institutions ranking highly on the full list.

In addition to educational offerings, edX is utilized for research into learning and distance education by collecting learner's clicks and analyzing the data, as well as collecting demographics from each registrant.

Research focuses on improving retention, course completion and learning outcomes in traditional campus and online courses.

<https://www.edx.org/>

Course Distribution by Providers

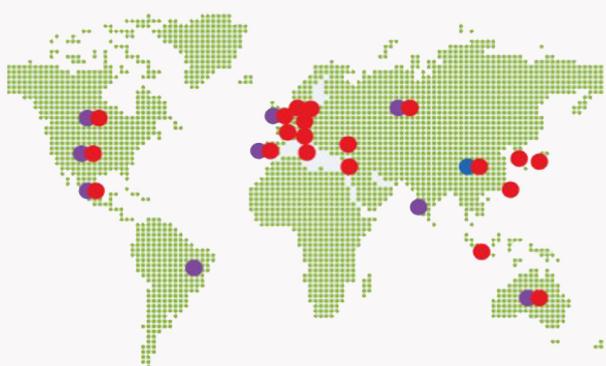


coursera

EDUCATION FOR EVERYONE

Coursera is an education platform that partners with top universities and organizations worldwide, to offer courses online for anyone to take.

Coursera is a venture backed, for profit and educational technology company that offers Massive Open Online Courses (MOOCs). Coursera works with universities and other organizations to make some of their courses available online, offering courses in subjects, such as: physics, engineering, humanities, medicine, biology, social sciences, mathematics, business, computer science, digital marketing, data science, and other subjects.

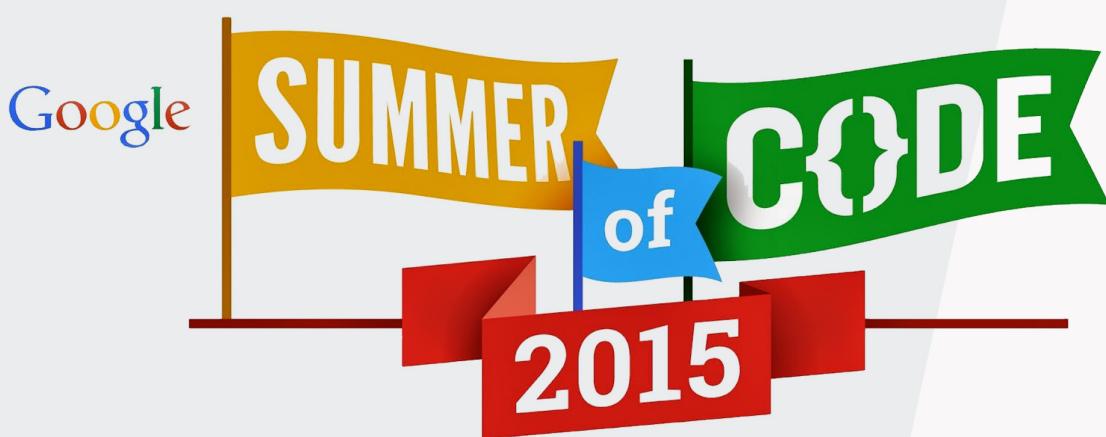


Coursera provides a Financial Aid program that is designed for those who face significant economic hardships, so that those individuals with genuine needs may be given the chance to earn a Course Certificate at no cost.

Coursera reduces the cost of courses it offers by using instant computer based marking where ever appropriate, making students grade their homework in some cases, where computer-based marking cannot be used, such as for poetry composition exercises and employing statistical methods to validate the assessment. Coursera courses last approximately four to ten weeks, with one to two hours of video lectures a week. These courses provide quizzes, weekly exercises, peer-graded assignments, and sometimes a final project or exam. Courses are also provided on demand, in which case users can take their time in completing the course with all of the material available at once. As of 2012 Coursera was reported to have 1.5 million students signed up for its programs serving at 100 online courses. In September 2013, Coursera announced it had earned \$1 million in revenue through verified certificates.

<https://www.coursera.org/>

CODING EVENTS



The Google Summer of Code, often abbreviated as GSoC, is an international annual program in which Google awards stipends (of US \$5,500, as of 2015) to all students who successfully complete a requested free and open-source software coding project during the summer. Google Summer of Code is a global program focused on bringing more student developers into open source software development.

As a part of Google Summer of Code, student participants are paired with a mentor from the participating organizations, gaining exposure to real-world software development and techniques. Students have the opportunity of earning a stipend while working in areas related to their interests.

In turn, the participating organizations are able to identify and bring in new developers who implement new features and hopefully continue to contribute to open source even after the program is over. Most importantly, more code is created and released for the use and benefit of all.

It is organized by Google every summer since last decade. It runs for 12 weeks from mid May to Mid August. Students contribute to open-source repositories and get paid by Google in return. Since its inception in 2005, the program has brought together almost 11,000 student participants. Google Summer of Code has produced over 50 million lines of code for 515 open source organizations.

Google announced the Google Summer of Code 2016 on February 9, 2016. The deadline for organization application was set to February 19, 2016. The student application period began on March 14, 2016, and student application deadline was set to March 25, 2016. 180 organizations were accepted.

Eligibility :

You must be a student! That's it, no other criteria. Age, Country, Qualification no criteria.

Application Procedure:

This is not a program where you fill up a form and get selected.

The interested open-source organizations apply and are shortlisted by Google.

acm International Collegiate Programming Contest



The ACM International Collegiate Programming Contest (ICPC) is a multi-tier, team-based, programming competition operating under the auspices of ACM and headquartered at Baylor University. The contest is sponsored by IBM. The ACM ICPC is considered as the "Olympics of Programming Competitions". It is quite simply oldest, largest, and most prestigious programming contest in the world akin to the prestigious sporting event.

The contest promotes creativity, teamwork, and innovation in building new software programs, and enables students to test their ability to perform under pressure. In terms of prize money, the top team takes home \$12,000 along with the ACM ICPC Gold medal. Three other teams getting Gold Medal are awarded \$6,000. Each Silver Medal team gets \$3,000 and each Bronze Medal team is awarded \$1,500.

During contest, the teams are given 5 hours to solve between 8 and 12 programming problems (with 8 typical for regionals and 10 for finals). They must submit solutions as programs in C, C++, Java or Python. Programs are then run on test data. If a program fails to give a correct answer, the team is notified and can submit another program.

To meet the basic eligibility requirements for the contest you must be:

1. Willing and able to compete in the world finals.
2. Enrolled in a degree program at an institution (in or outside India) that can sponsor you.
3. You should not have participated in more than 2 contest finals prior to this attempt.
4. You should not have participated in more than 5 contest regionals prior to this attempt.
5. You cannot participate in more than 2 teams in the same year.

Participation In Indian Regionals:

There will be 5 sites within India hosting the ICPC regionals. The 4 regional sites are - Amritapuri, Hindustan University, National Institute of Technical Teachers' Training and Research, Kolkata and IIT Kharagpur.

1. Each regional site will host a preliminary online round.
2. Students have to pay registration fees.
3. Depending upon the results, each side will decide the number of teams to be invited to the onsite round.
4. Teams securing the top spots in the onsite round will be eligible for advancing to the World Finals.

SANDWEDGES

If you were to make a list of expenses in college, food and beverages would top that list and food hotspots would be the meeting point. It is this love for food that gave birth to Sandwedges, a Sandwich and Burger QSR by the students of IMT Ghaziabad.

The idea was to bring something as popular as sandwiches in Mumbai to the north. "We also followed the philosophy of 'Start small - Break even early - Replicate Success', says Arushi Sachdeva Co-founder of Sandwedges.

Their best selling product currently is the Spicy Veggie Burgwich invented by the co-founders, and has currently sold over 40,000 pieces. Sandwedges is a purely bootstrapped venture, which is generating positive cash flow. As a matter of fact Sandwedges have the director of IMT Ghaziabad as one of their biggest customers and their products are flying off the shelves like hot cakes. Sandwedges is a perfect example of a small venture earning the big moolah.



How it started?

It started with a nine-member team, which pooled in 3 lakh to set up the first store at Raj Nagar, Ghaziabad, in May 2013. But by the time the company was registered, there were only two left in the venture. The two Mumbaikars, 27-year old **Arushi** and 28 year old **Chaman Raj**, were second year MBA students when they became partners.

Since both the Founders Arushi and Chaman had lived in Mumbai, they thought it would be nice to bring the Mumbai street sandwiches to Ghaziabad. Arushi says they believed sandwiches are a great food offering, but it has always been a "side hero" to other delicacies like burgers, pastas and pizzas. Sandwiches are very popular in Mumbai and they thought that there was no reason why Delhi wouldn't enjoy them as well. She also says that despite facing resistance, they were determined to open Sandwedges as they believed that "**Food popular in one part of India would be appreciated in other parts of the country too**".

Post the initial 3 lakh investment, the duo reinvested their profits and the current investment at the two outlets stands at 18 lakh. Their target is to make Sandwedges one of the most hot joints for food and parties. Sandwiches now are certainly one of the most sorted out things in this youth delicacy.

So what is the most challenging thing about food start-up? Arushi gets coy on this one and answers "**Well, we work while others party.**"

CHAI CALLING

It's the story of two engineers and their love for "chai". Former engineering professionals **Parmeet Sharma** and **Abhinav Tandon** left their high-paying jobs in order to start up a successful 'tea-selling' business back in 2014. The duo now have six outlets in Bareilly and three in Noida.

Young entrepreneurs who started 'Chai Calling', a place that will never disappoint you when you need a cup of tea, with Rs 1 lakh investment are witnessing around 1 crore rupees annual turnover. The business is now providing employment to at least 35 people.

Chai Calling as the name explains itself features a home delivery mechanism which enables them to deliver fresh tea to the customers at their home in 15 minutes. This mechanism of 15 minute delivery became a grand success among the consumers. The focus was to deliver the beverage hot and refreshing to the customers as if they are taking it right from the outlet.

The team focusses on providing a variety of options for the beverage and take the average tea consumption to an all-together different level.



How it started?

After saving up 1 lakh rupees, Abhinav and Pramit left their job and opened their first stall in NOIDA, SECTOR-16 at the METRO STATION. After a joyous response from their customers, their motivation went sky high and they took the next step to expand their business further. They worked on their home delivery system which turned out to be a big hit. **They opened up 4 new stores in Noida and 6 new stores in Bareilly** which is in fact the home town of the founders. In the year 2014-15, they had a major turnover of 50 lakhs which is expected to be doubled in the following year.

Tandon mentioned that they serve 15 different varieties of tea at their stall which is freshly prepared. The tea served are of rock bottom price ranging from 10/- to 25/- . They plan to open up 20 stalls in Lucknow and 4 more in Bareilly.

One of the biggest reasons that Chai Calling has been such a great success is its major utility, the authentic and fresh way of serving and of course very reasonable cost. Chai calling has also started a small idea to educate people about the benefits of drinking tea through its ventures. The start-up perfectly tapped the potential of tea in the region as there was not any previously registered brand in the field. The aim of the venture is to provide 100% natural and fresh tea. They are also planning to initiate serving of snacks through their ventures.



IMPROVING HUMAN PERFORMANCE

ISHIKA GARG

CSE

The integration and synergy of the four technologies (nano-bio-info-cogno) originates from the nanoscale, where the building blocks of matter are established.

Convergence of diverse technologies is based on material unity at the nanoscale and on technology integration from that scale. Examples of payoffs may include improving work efficiency and learning, enhancing individual sensory and cognitive capabilities, revolutionary changes in healthcare, improving both individual and group creativity, highly effective communication techniques including brain-to-brain interaction, perfecting human machine interfaces, including neuromorphic engineering and "intelligent" environments including neuro-ergonomics, enhancing human capabilities for defense purposes, reaching sustainable development using NBIC tools, and ameliorating the physical and cognitive decline that is common to the aging mind hat scale.

Scientific leaders and policy makers across a range of fields prepared written statements for workshop,

The brain-machine interface effort will require nanotechnologies in order to make the required experimental measurements and to implement the devices for both receiving brain electromagnetic signals and transmitting signals back into the brain.

This is a highly biological, neuroscience effort, which requires detailed understanding and measurements of the brain's electromagnetic activity. It requires a significant measurement protocol. This effort by its very nature will directly affect the cognitive aspects of the individual by externally applied electromagnetic fields by implanting information for the individual. Thus, this effort can lead to increased learning and other cognitive results.

If the Cognitive Scientists can think it
The Nano people can build it
The Bio people can implement it, and
The IT people can monitor and control it..!

FONTUS

ASHUTOSH KUMAR CSE

If you are an adventurer, you know the anxiety that comes with running out of water in the middle of a tour, the last thing you want is dehydration when you are miles away from home!

Fontus is a self filling water bottle that allows you to plan your adventures without having to worry about heavy water loads or where to find the next river or eatery to get your water supply.

Fontus Airo will save you trouble, weight and might even save your life! This water bottle will refill itself while you are hiking, sailing, climbing, camping or just enjoying nature. This device gives you the freedom to plan your adventure without worrying about the most elemental component of survival: water supply. You can clip the Airo to a backpack and fill your bottle while you are hiking. Forget about carrying heavy water loads! One water bottle rather than many disposable plastic bottles.

This device was designed to capture the moisture content in the air, condense it and store it as safe drinking water.



A small fan draws the air from the surrounding environment, runs it through a special filter and presses it into the condensation chamber. A series of small coolers bring the moisture contained in the air to condense on special surfaces.

Fontus Ryde is a self filling water bottle, especially designed to fit your bicycle!. This water bottle will refill itself as you ride on your bike. Its adapted design fits the ergonomics of your bike adopting the shape of a bottle holder. Harvest water while you are on your bike tour and stay regularly hydrated! This bottle uses the air stream you create while riding in order to press humid air into the system. The air stream you generate while riding is used here in place of a fan to press large amounts of air into the chambers without needing extra energy sources. It also supports the performance of small coolers at the heart of the device.



BIG DATA-THE NEXT BIG THING

SUKHNANDAN MALHOTRA
CSE

What is big data?

If we go by the definition big data is:

"Big data is a collection of data sets so large and complex that it becomes difficult to process using onhand data base management tools. The challenges include capture, curation, storage, search, sharing, analysis & visualization."

Big data is becoming one of the most talked about technology now-a-days. Data from various organizations have grown exponentially. A lot of data is constantly produced, for example: via social media, transport, GPS etc. Daily we upload 55 million pictures, 340 million tweets, 1 billion documents. In total we produce 2.5 quintillion bytes a day! This is called BIG DATA. What's more important is actually what we can do with this. We don't need huge supercomputers to process Big data.

People work with cloud and endless network of normal servers and powerful algorithms. This way they can analyze million pieces of data in minutes. So big data analytics gives great insight as to what is happening on very low levels at resolution not possible before.

For instance: Netflix analyze the big data of their viewers like popular shows and watching pattern. This way they produce successful series with perfect combination of actors, directors and storyline.

Big data technologies like Hadoop and cloud based analytics has provided substantial cost advantages. It has led to faster and better decision making. So, big data is not just about lots of data, it is actually a concept providing a opportunity to find new insight into our existing data as well as it guides to capture and analyze future data making big companies and business more agile and robust like never.

PREDICTION OF POLLUTION USING SMARTPHONE

ADARSH PANDEY
ECE



Pollution, as we all know, is a major cause of concern in the recent decades. Pollution cannot be eliminated but can be controlled . A system is proposed to forecast the air pollution using android application. The pollution parameter values such as ammonia, benzene, carbon monoxide, ozone, etc., are extracted from yahoo cloud.

The pollution values from cloud are stored in the application database. This system detects the level of pollution in the specified region and notifies the user. This system can assist the user to make wise decision after getting the pollution results for a specified region or area.

This system has a micro controller and pollution sensors embedded in the mobile (movable) unit called the Mobile DAQ [1], a GPS, a GPRS modem that will communicate with the Pollution Server. The sensor can determine the percentage of NO₂, SO₂, and CO₂ present in the atmosphere.

This information is then sent to the pollution server and analysis via GPRS modem. The GPRS module will look for the current location data and sends the related information to the GPRS modem.

The real time pollution data collection includes placing this Mobile DAQ in locomotives such as cycle, passenger vehicle, trucks.

The pollution server fetches the required data and tags them in Google maps using the Google Mapper module and this information can come in handy to environmental research organizations, government and other bodies, whenever necessary.



Convergence is an often used but rarely defined concept. Ideas such as the creation of synergies, disappearance of industry boundaries, integration, or overlapping of markets, are all used to describe this phenomenon. Technological convergence is the tendency for different systems to evolve towards performing similar tasks. In recent industry developments within Information technology(IT), Bio-technology(BT) and Nano-technology(NT), and knowledge bases has induced a variety of industrial points of inflection. Hence, industry boundaries have become blurred and innovation does not take place within previously existing industrial silos anymore, but rather between them.

To continue with, technological convergence influenced the everyday life by affecting the telecommunications as well. A major example of convergence in telecommunications is "triple play".

CONVERGENCE OF TECHNOLOGY

SHIVANKSHI TYAGI
CSE

In other words, most customers access the Internet by a DSL line using a specific IP address and offered different services such as Internet TV, Voice Telephony such as Skype and other general Internet services including Facebook.

One advancement in manufacturing industry happening in the near future is 3D printing. 3D printing, also known as additive manufacturing, is the process of printing, layer by layer, any three-dimensional object based on a digital file. In this one or more print heads extrude a small amount of materials in precise locations to build objects point by point from bottom to up. Today we can 3D print in full color and in over 250 different materials ranging from titanium to rubber, plastic, glass, ceramic, leather and even chocolate.

3D printers can create very complex structures of mixed materials and print almost anything. 3D printing shares different characteristics and attributes of other technologies in order to take their advantages and acquire multi-functionality.

CONVERGENCE OF TECHNOLOGY

DHAWAL BAJAJ
(former Conatus member)

"You'll be working on our web-based software product using the Java technology", remarked my CTO as I entered the office on my very first day. I was left wondering how exactly is Java being used on the web, for instance, Java applets are almost close to deprecation, and all those beautiful and stunning web sites involve CSS 3 designs, jQuery animations, and the countless predesigned libraries based upon them. So where exactly is Java on the web? What about so many other technologies, including PHP, Scala, Ruby, Python, Go, Node.js, AngularJS and what not! How all these different types of technologies converge and form some of the most appealing websites, forms the basis of this article.

The core driving energy, the backbone, the heart and mind of every web site you browse to, from Google to Amazon to Facebook to Quora to every other site, is definitely our one and only, the HyperText Markup Language, abbreviated as, you know already, HTML. There have been particularly heated debates over the argument whether HTML should be regarded as a "technology" or not.



There's only one and a really powerful purpose of HTML, and that is, to interpret the meaning of tags with those opening and closing angle brackets, and to present to the user what the tags intended. Consider, for example, this tag:

<p> Some text here.</p>

This tells that the text "Some text here" is going to be a part of a separate paragraph. Simple and yet so powerful! Next in line comes the most beautiful dream and the most horrible nightmare of every Frontend Engineer, the Cascading Style Sheets (CSS). While HTML tells what to display, CSS goes into the detail and trouble of determining how to display it. For instance, color: blue; tells the web browser to display the content in blue color. HTML and CSS go hand in hand to beautify a web page.



TEAM CONATUS