



INSTITUTE OF ENGINEERING

DEPARTMENT OF COMPUTER ENGINEERING



TECH FACTS FORUM

VOLUME - 1

14TH JULY - 21ST OCT 2020

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INSTITUTE OF ENGINEERING

DTE CODE : 5151

MESSAGE FROM HEAD OF DEPARTMENT



The Computer Engineering Department of MET's Institute of Engineering is established in the year 2006, and has grown over the years into a competent department with state-of-the-art computing facilities, and dedicated faculty. Having started with a four-year under-graduate program, B.E (Computer Engineering), the department now proudly host of the Post Graduate program, M.E Computer (Computer Engineering) along with Research Centre.

The goal of the department is to establish state of the art computing environment to develop competent computer engineers imbibe with the spirit of professionalism and responsible citizenship. The department emphasizes the Vision of the Mumbai Education Trust's, for excellence in education. Highly qualified, dedicated faculty and good infra-structure facilities, make this dream realizable.

Computer Engineering department is promoting this student's technical activity, and regularly publishing it in the form of technical magazine of the department.

Dr. M. U. Kharat
Professor & Head
Department of Computer Engineering

Editorial Committee

- Publisher:** Department of Computer Engineering,
MET's, Institute of Engineering, Bhujbal
Knowledge City, Nashik.
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- **Akshaya Bhansali** SE Computer
- **Pallavi Gavali** SE Computer
- **Sayali Nalawade** SE Computer
- **Rushikesh Bhandare** SE Computer
- **Kunal Kamodkar** SE Computer
- **Aditya Rokade** SE Computer
- **Ashutosh Kakad** SE Computer
- **Abhishek Mali** SE Computer
- **Aditya Tawar** SE Computer
- **Yash Kapure** SE Computer
- **Siddharth Oturkar** SE Computer
- **Onkar Dighe** SE Computer

“As engineers, we were going to be in a position to change the world – not just study it.” —Henry Petroski

Tech Facts Forum Post No. : 01

Title : India continues to remain vulnerable to cyber-attacks amidst growing security concerns.



Details :

1] Majority of Indian companies are on the path of digital transformation. However, the risk of cyberattacks is a major impediment in digitalization progress. India have experienced a significant cyber-attack in the past 12 months.

2] Murali Rao, Partner & Cyber Security Leader, EY India said “The pandemic is proving to be not only a health, economic, political or social hazard but also a cybersecurity scare. Digital hygiene is the need of the hour and CISOs need to protect organizations from disruptive attacks by adopting a ‘Security by Design’ approach.”

3] There are, five actions that every organization can prioritize to avoid Cyber- Attacks threats:

Establish cybersecurity as a key value enabler in digital transformation

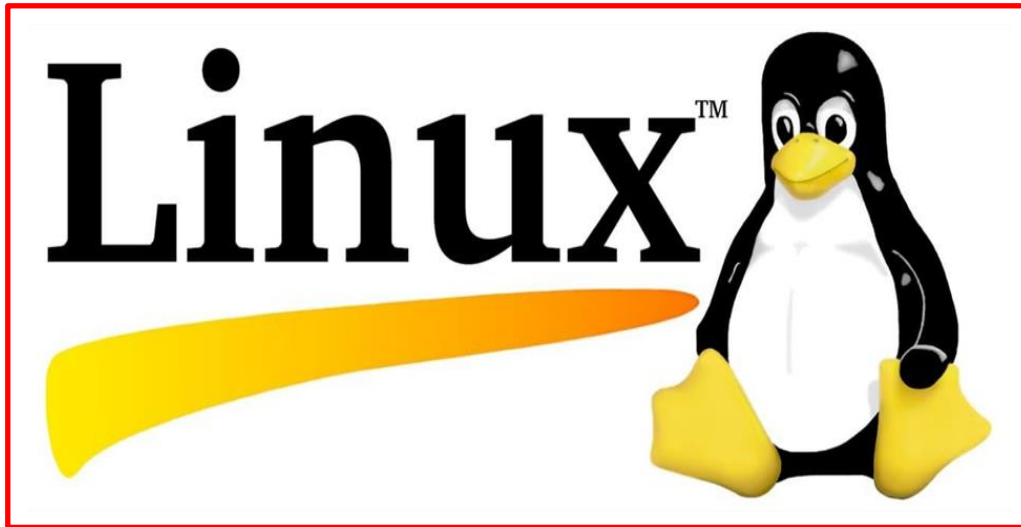
Focus on board engagement

Source : <http://bwsmartcities.businessworld.in/article/India-Inc-continues-to-remain-vulnerable-to-cyber-attacks->

Prepared By : Siddharth Oturkar (Comp Engineering)

Date : 14th July 2020

Title : Interesting Facts about Linux



Details :

- 1] The first ever Linux kernel just occupied only 65 KB.
- 2] As of 2018, there are 20, 323, 379 lines of code in the Linux kernel. 3] All of the 500 fastest supercomputers run Linux
- 3] Linux runs on everything, smartphones, servers, submarines or space rockets.
- 4] Huawei, Intel, Google, Red Hat, Facebook, Canonical and Samsung are among the top contributors to Linux kernel development in recent years.

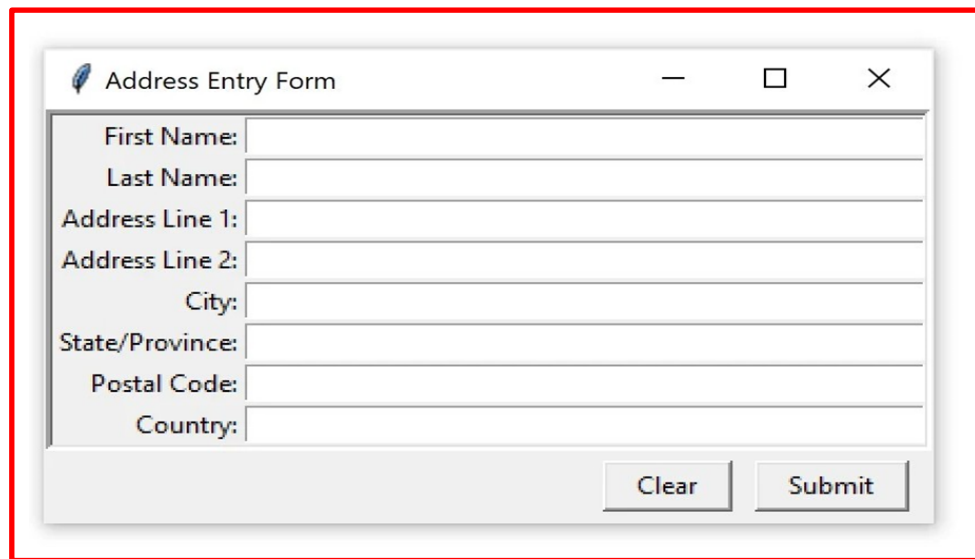
Source : www.Geeksforgeeks.com

Prepared By : Kunal N Kamodkar (Comp Engineering)

Date : 15th July 2020

Tech Facts Forum Post No. : 03

Title : GUI(Graphical User Interface) using tkinter package in Python



The image shows a screenshot of a Python GUI window titled "Address Entry Form". The window has a standard title bar with minimize, maximize, and close buttons. The main content area contains several input fields with labels: "First Name:", "Last Name:", "Address Line 1:", "Address Line 2:", "City:", "State/Province:", "Postal Code:", and "Country:". At the bottom right of the window, there are two buttons labeled "Clear" and "Submit".

Details :

1] Python offers multiple options for developing GUI(Graphical User Interface). Out of all the GUI methods, tkinter is the most commonly used method.

2] tkinter is distributed along with Python software. It is a cross-platform, stable, reliable and easy to learn package. It has variety of commonly used GUI elements (like buttons, menus, labels, entry areas, etc.) which can be used to build the interface. These elements are called widgets.

3] Widgets are the building blocks of GUI programming and are used to display information or get input from the user.

Source : www.geeksforgeeks.org

Prepared By : Rushikesh Vikas Bhandare (Comp Engineering)

Date : 15th July 2020

Title : What is IOT & its Real Time Applications



Details :

1] IoT is essentially a platform where embedded devices are connected to the internet, so they can collect and exchange data with each other. It enables devices to interact, collaborate just like humans do.

2] IoT applications promise to bring immense value into our lives. With newer wireless networks, superior sensors and revolutionary computing capabilities.

connected vehicles, home automation, wearable technology, connected health, remote health monitoring and emergency notification systems this are the growing portion of IoT.

3] IoT also plays very important role in Smart City projects.

In Agriculture, A greenhouse farming technique enhances the yield of crops by controlling environmental parameters

Source : Edureka & Wikipedia

Prepared By : Siddharth Oturkar (Comp Engineering)

Date : 21th July 2020

Tech Facts Forum Post No. : 05

Title : Facts about ISRO every Indian must know.



Details :

1] India on 15-Feb-2017 became the first nation in the world to have launched over a hundred satellites in one mission. ISRO launch 104 satellites on single rocket. Motion is hearty congratulate ISRO for this mission and feel us proud. Here we share some interesting facts about ISRO. We think every Indian must know about him.

2] ISRO was formed on Independence Day, 1969 by Dr.Vikram Sarabh

3] SLV-3 was India's first indigenous satellite launch vehicle and A.P.J. Abdum Kalam Ji was the director of the project.

4] ISRO's expenditure in the last 40 years = Half of NASA's single year budget.

Source : <http://blog.motioniitjee.com> <https://youtu.be/THE07iW35V4>

Prepared By : Sayali Nalawade (Comp Engineering)

Date : 21th July 2020

Tech Facts Forum Post No. : 06

Title : NEOWISE Comet (NASA's Near-Earth Object Wide-field infrared Survey Explorer).



Details :

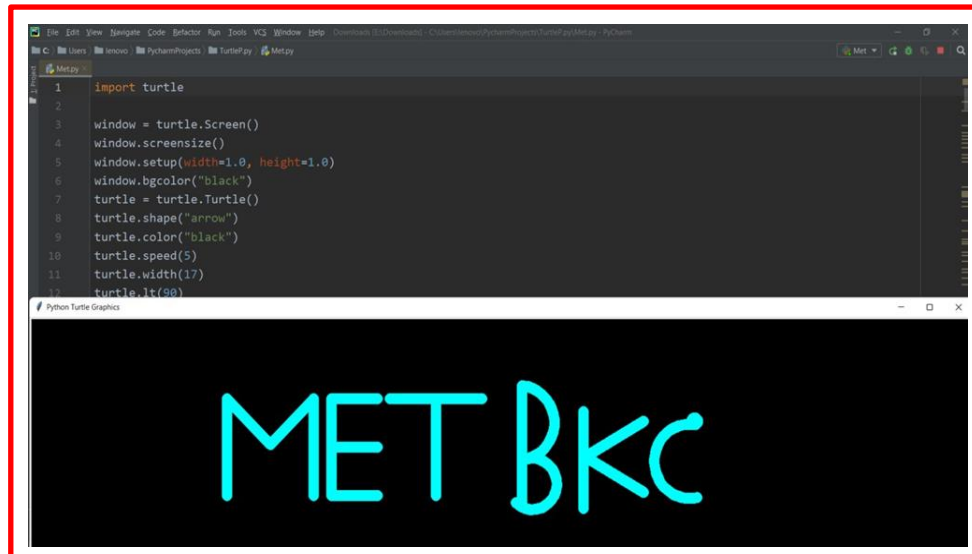
- 1] The comet was discovered by NASA's NEOWISE mission back in March 27 this year
- 2] The comet will make its closest approach to Earth on July 22 - at a distance of about 103 million kilometres from Earth.
- 3] This was also stated by the deputy director of Pathani Samanta Planetarium in Odisha's Bhubaneswar. "From July 14, C/2020 F3 will be clearly visible in the north-western sky. It will be visible after sunset for around 20 minutes for the next 20 days.
- 4] The comet is to make it's closest approach to earth on July 23 when it's about 64 million miles away according to calculations bh NASA JPL

Source : WWW.TIMESNOWNEWS.COM

Prepared By : Pallavi. R. Gavali (Comp Engineering)

Date : 22nd Jul 2020

Title : GUI(Graphical User Interface) using turtle module in Python



```
1 import turtle
2
3 window = turtle.Screen()
4 window.screensize()
5 window.setup(width=1.0, height=1.0)
6 window.bgcolor("black")
7 turtle = turtle.Turtle()
8 turtle.shape("arrow")
9 turtle.color("black")
10 turtle.speed(5)
11 turtle.width(17)
12 turtle.lt(90)
```

Python Turtle Graphics

MET BKC

Details :

1] Turtle is a pre-installed Python library that enables users to create pictures and shapes by providing them with a virtual canvas. The onscreen pen that you use for drawing is called the turtle and this is what gives the library its name.

2] In short, the Python turtle library helps new programmers get a feel for what programming with Python is like in a fun and interactive way.

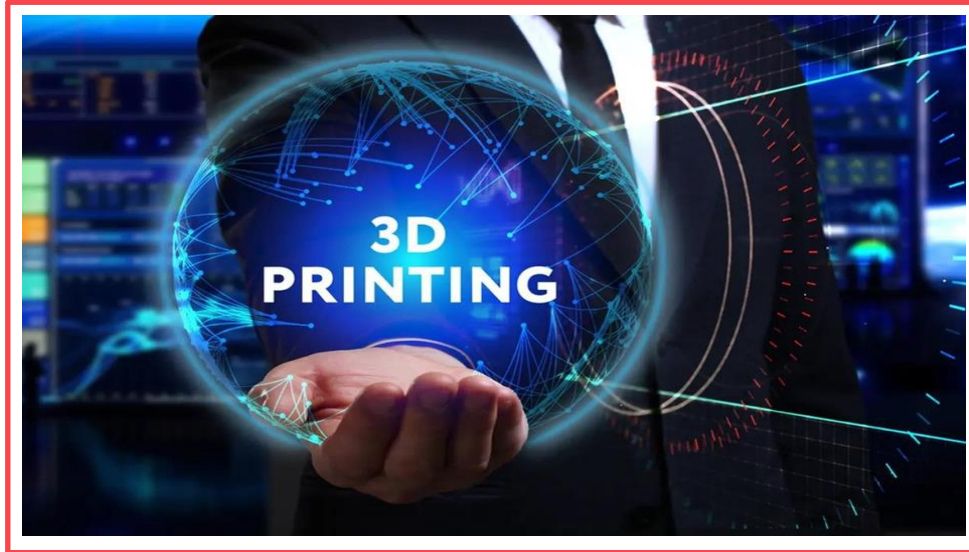
3] With the Python turtle library, you can draw and create various types of shapes and images. Here's a sample of the kinds of drawings you can make with turtle.

Source : www.geeksforgeeks.org

Prepared By : Rushikesh Vikas Bhandare (Comp Engineering)

Date : 25th July 2020

Title : 3D Printing Technology



Details :

1] 3D printing has its roots in the 1980s. In 1984, Chuck Hull, invented a process called “stereolithography” which used UV lasers to solidify photopolymer that created 3D parts layer by layer.

2] 3D printers are already being used for movies. Props can take hours of hard work to create and apply. With 3D printing, many of those props can be created and re- created faster, easier, and without starting from scratch. 3D printing techniques have been featured in movies such as IronMan, The Hobbit, Jurassic Park.

3] NASA researches are currently working on figuring out how to bring 3D printing technology to space. The idea is to send robots ahead of astronauts to construct buildings and infrastructure on lunar surfaces.

Source : <https://i.materialise.com/>

Prepared By : Aditya Tawar (Comp Engineering)

Date : 26th July 2020

Tech Facts Forum Post No. : 09

Title : Nasa's latest Mars craft nears landing for unprecedented seismic mission



Details :

1] Nasa's first spacecraft built to explore the deep interior of another world streaked toward a landing scheduled for Monday on a vast, barren plain on Mars, carrying instruments to detect planetary heat and seismic rumblings never measured anywhere but Earth.

2] After sailing 301 million miles (548 million km) on a six-month voyage through deep space, the robotic lander InSight was due to touch down on the dusty, rock-strewn surface of the Red Planet.

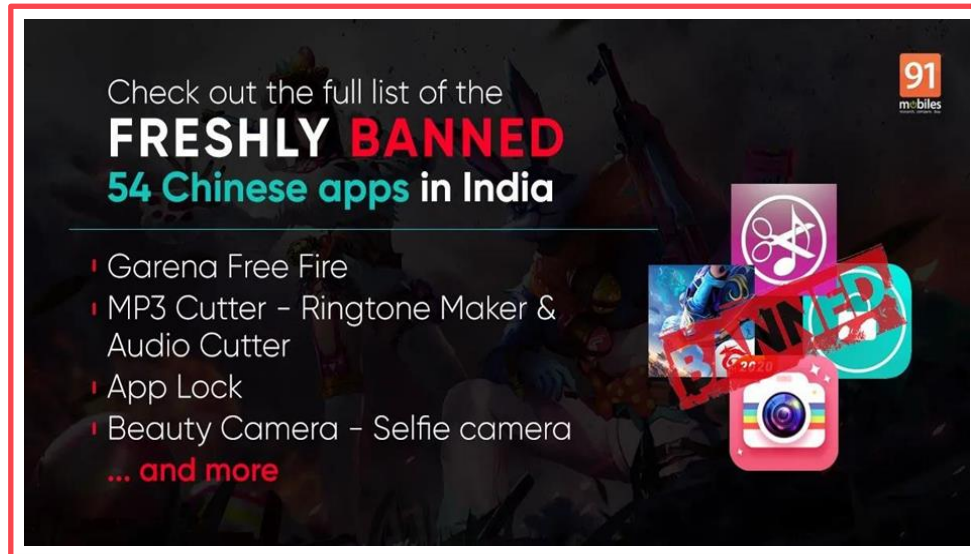
3] If all goes according to plan, InSight will hurtle through the top of the thin Martian atmosphere at 12,000 miles per hour (19,310 kilometers per hour).

Source : Indiatoday

Prepared By : Akshaya Bhansali (Comp Engineering)

Date : 27th Jul 2020

Title : New Opportunities for Indian app developers



Details :

1] On jun 29 Indian Govt. banned 59 chinese apps including tiktok, camscanner, UC browser, helo etc, These apps were banned because they were a threat to the country's sovereignty and security.

2] Keeping the patriotic feelings aside everyone can agree that these apps were user friendly, simple and easy to use. They were probably the best and wildly used apps.

3] Now that these apps are banned there is a high demand for apps with similar functions. This is a golden opportunity for Indian app developers.

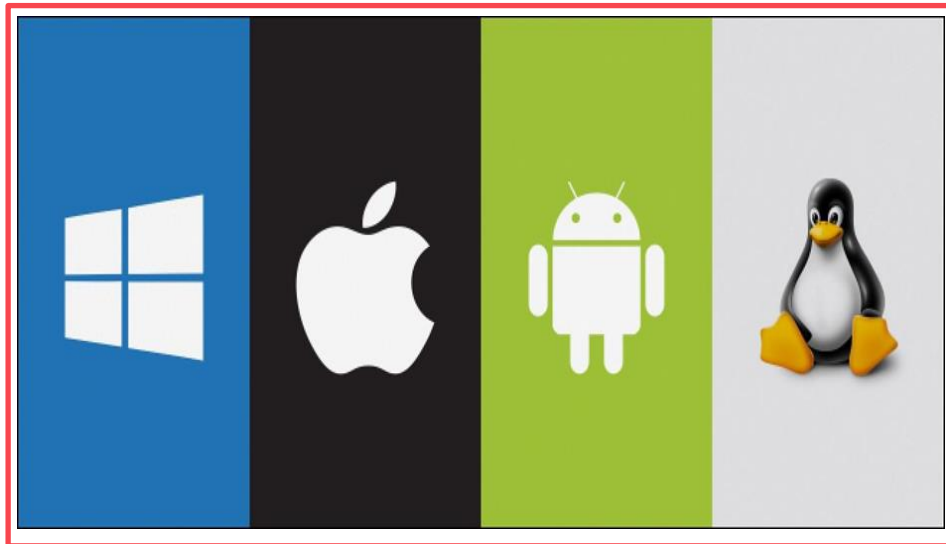
4] Developing alternative indian apps can support our country and also will be a great achievement in Prime Minster's vision of "Aatmanirbhar Bharat".

Source : gadget360

Prepared By : Ashutosh kakad (Comp Engineering)

Date : 28th July 2020

Title : Understanding Different Operating Systems



Details :

1] Operating system (OS) manages all of the software and hardware on the computer. There are several different computer programs running at the same time, OS manage it to complete each & every task within time.

2] Linux : Linux is a family of open-source operating systems, which means they can be modified and distributed by anyone around the world.

3] Microsoft Windows : Microsoft created the Windows operating system in the mid-1980s. This OS can only be modified by the company that owns it. This is one of the most used OS & user need to pay for its licence.

4] macOS : macOS is a line of operating systems created by Apple. It comes preloaded on all Macintosh computers, or Macs. It is specially known for most secured OS.

Source : Wikipedia & GCF global org. & Microsoft, Apple, Linux, Android.

Prepared By : Siddharth Oturkar (Comp Engineering)

Date : 28th July 2020

Tech Facts Forum Post No. : 12

Title : How Curiosity Takes a Selfie



Details :

- 1] Video in this link <https://mars.nasa.gov/resources/24834/navcam-movie-of-how-curiosity-takes-a-selfie/?site=msl>, taken by the Navigation Cameras, or Navcams, on the Mast of NASA's Curiosity Mars rover, shows the rover's robotic arm as it rotates to take a selfie.
- 2] A camera at the end of the arm captured 86 individual images that were later stitched into a panorama.
- 3] The Navcams are black-and-white cameras generally used to help engineers plan Curiosity's movements.
- 4] Image attached to this post is Curiosity's Dusty Selfie at Duluth.
- 5] Total Days on Mars: 2829+ and distance travelled by Curiosity: 14.27 miles (22.97km)

Source : <https://mars.nasa.gov/>

Prepared By : Mr. Vaibhav Dabhade (Assistant Professor)

Date : 30th Jul 2020

Tech Facts Forum Post No. : 13

Title : Surprising Technology Facts That You Didn't Know.....



Details :

1] Video in this link <https://mars.nasa.gov/resources/24834/navcam-movie-of-how-curiosity-takes-a-selfie/?site=msl>, taken by the Navigation Cameras, or Navcams, on the Mast of NASA's Curiosity Mars rover, shows the rover's robotic arm as it rotates to take a selfie.

2] A camera at the end of the arm captured 86 individual images that were later stitched into a panorama.

3] The Navcams are black-and-white cameras generally used to help engineers plan Curiosity's movements.

4] Image attached to this post is Curiosity's Dusty Selfie at Duluth.

5] Total Days on Mars: 2829+ and distance traveled by Curiosity: 14.27 miles (22.97km)

Source : <https://www.thefactsite.com>

Prepared By : Sayali Nalawade (Comp Engineering)

Date : 31th July 2020

Tech Facts Forum Post No. : 14

Title : Indian schoolgirls discover asteroid moving towards Earth.



Details :

- 1] Two Indian schoolgirls have discovered an asteroid which is slowly shifting its orbit and moving towards Earth.
- 2] Radhika Lakhani and Vaidehi Vekariya, both studying in Grade 10, were working on a school project when they discovered the asteroid, which they named HLV2514.
- 3] They were working on a project by Space India and NASA.
- 4] Space India's astronomer told CNN that the girls were able to identify the body using a software which analysed images captured by NASA's PAN Star telescope.

Source : CTV NEWS

Prepared By : Pallavi. R. Gavali (Comp Engineering)

Date : 03rd Aug 2020

Tech Facts Forum Post No. : 15

Title : Edge Computing



Details :

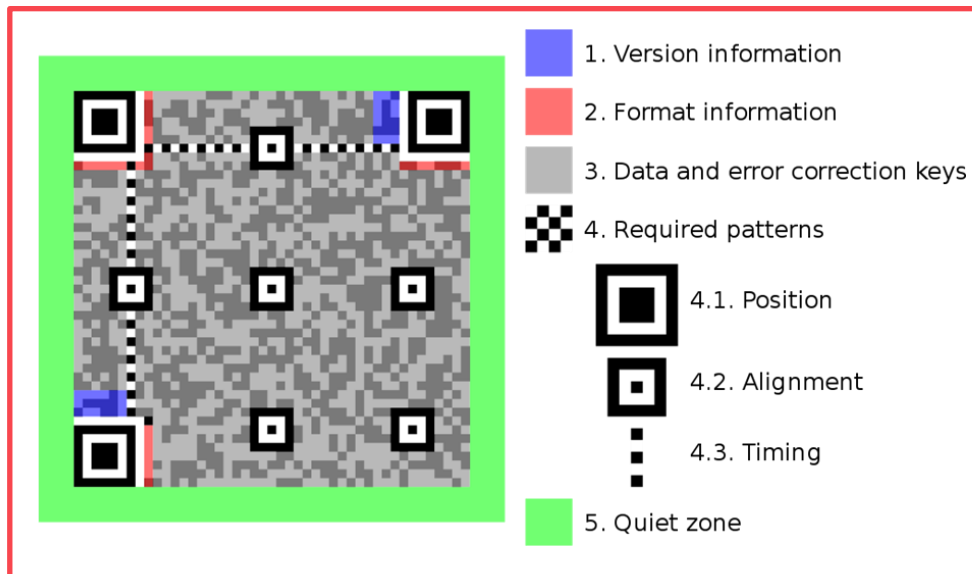
- 1] One definition of edge computing is any type of computer program that delivers low latency nearer to the requests.
- 2] Edge computing brings computation and data storage closer to the devices where it's being gathered, rather than relying on a central location that can be thousands of miles away.
- 3] With deployments of IoT devices and the arrival of 5G fast wireless, placing compute and analytics close to where data is created is making the case for edge computing.
- 4] Edge computing is transforming the way data is being handled, processed, and delivered from millions of devices around the world.

Source : <https://www.networkworld.com/>

Prepared By : Aditya Tawar (Comp Engineering)

Date : 04th Aug 2020

Title : What is QR Code & How it Works ?



Details :

1] A QR code (Quick Response code) is a type of matrix barcode (or two- dimensional barcode) .A barcode is a machine-readable optical label that contains information about the item to which it is attached.

2] A QR code uses four standardized encoding modes (numeric, alphanumeric, byte/binary, and kanji) to store data efficiently.

3] The Quick Response system became popular outside the automotive industry due to its fast readability and greater storage capacity.

4] Applications include product tracking, item identification, time tracking, document management, and general marketing.

Source : QR Code Wikipedia

Prepared By : Siddharth Oturkar (Comp Engineering)

Date : 05th August 2020

Tech Facts Forum Post No. : 17

Title : Supercomputer generates 3D videos that show how Earth may have lost half of its atmosphere to create the Moon.



Details :

- 1] The COSMA supercomputer was used to create 3D simulations of what would happen to a planet's atmosphere due to giant impacts.
- 2] Scientists at Durham University created 3D videos of what it would look like if an object were to come hurtling towards an Earth-like planet in the early universe.
- 3] Using the results of the study, scientists estimate that the Earth got lucky with its impact that created the Moon.

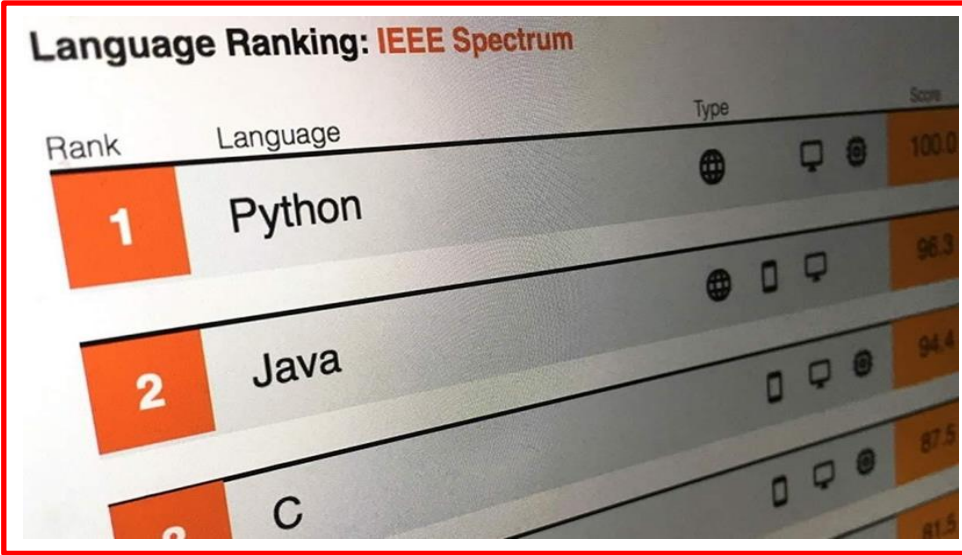
Source : <https://en.wikipedia.org/wiki/Supercomputer>

Prepared By : Yash V. Kapure (Comp Engineering)

Date : 07th Aug 2020

Tech Facts Forum Post No. : 18

Title : Python rules the IEEE 2020 programming language list



The image shows a screenshot of the IEEE Spectrum Language Ranking for 2020. The table lists the top three programming languages based on their score. Python is ranked first with a score of 100.0, Java is ranked second with a score of 96.3, and C is ranked third with a score of 94.4. The table also includes a 'Type' column with icons representing different categories of languages.

Rank	Language	Type	Score
1	Python	🌐 🗨️ 📱	100.0
2	Java	🌐 📱 🗨️	96.3
3	C	📱 🗨️ 📱	94.4

Details :

1] The popular open source programming language, Python has secured the top position in this year's top programming languages list by IEEE. In this list of 55 languages, Python holds the first rank.

2] IEEE is the largest organisation devoted to engineering, applied science and research. It publishes the list of rankings based on what is trending, languages that are in demand by companies, languages that are popular among open source community and more.

3] In the list of languages having top demand by employers, C stands third. Java is still the most trending programming language after Python.

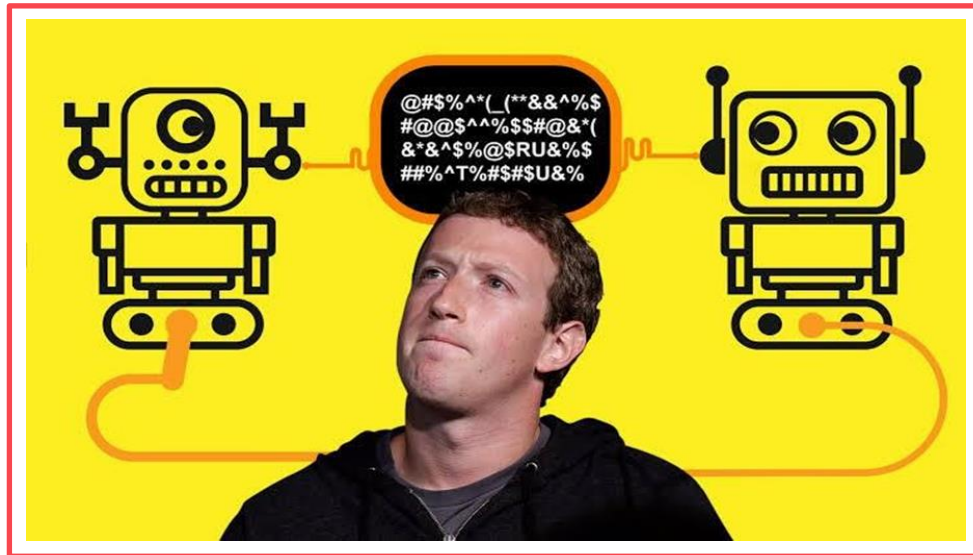
Source : www.techgig.com

Prepared By : Rushikesh Vikas Bhandare

Date : 09th August 2020

Tech Facts Forum Post No. : 19

Title : Facebook AI bots created own language that humans couldn't understand!



Details :

- 1] In 2017, Facebook shutdown the AI chatbots Alice and Bob, because they started speaking in a language that is not comprehensible to us.* (check it out source)
- 2] World's first AI robot citizen "Sophia" , created and programmed by Hanson Robotics, "Sophia" is the first robot in the world to be recognised with a citizenship of Saudi Arabia.
- 3] Most AI Bots Are Female. If you ask Siri, Alexa, Cortana.
- 4] In the next decade, AI is thought to replace 16% of jobs: This is due to their increasing intelligence.

Source : <https://thenextweb.com>

Prepared By : Aditya Rokade (Comp Engineering)

Date : 11th Aug 2020

Tech Facts Forum Post No. : 20

Title : What is GitHub ? The best place for Coding.



Details :

- 1] GitHub is a code hosting platform for collaboration and version control. GitHub lets you (and others) work together on projects.
- 2] GitHub is a Git repository hosting service, but it adds many of its own features. It provides a Web-based graphical interface.
- 3] A GitHub repository can be used to store a development project. It can contain folders and any type of files (HTML, CSS, JavaScript, Documents, Data, Images).
- 4] The flagship functionality of GitHub is “forking” – copying a repository from one user’s account to another. This enables you to take a project that you don’t have write access to and modify it under your own account.
- 5] A GitHub branch is used to work with different versions of a repository at the same time. By default, a repository has a master branch (a production branch).

Source : <https://ai.facebook.com/blog/ai-powered-audio-compression-technique/>

Prepared By : Siddharth Oturkar (Comp Engineering)

Date : 12th Aug 2020

Tech Facts Forum Post No. : 21

Title : Facts about C++ language.



Details :

- 1] The name of C++ signifies the evolutionary nature of the changes from C. “++” is the C increment operator.
- 2] C++ is one of the predominant languages for the development of all kind of technical and commercial software.
- 3] C++ introduces Object-Oriented Programming, not present in C. Like other things, C++ supports the four primary features of OOP: encapsulation, polymorphism, abstraction, and inheritance.
- 4] C++ got the OOP features from Simula67 Programming language.
- 5] Many programming languages are influenced by c++, some of which include C#, Java and even newer versions of C.

Source : www.geekforgeeks.org

Prepared By : Pallavi. R. Gavali (Comp Engineering)

Date : 13th Aug 2020

Tech Facts Forum Post No. : 22

Title : Top 5 Technology Trends That You Can Learn in 2020



Details:

1] Artificial Intelligence and Machine Learning (AI & ML) : Artificial intelligence has had a great impact among the top technological developments, and for quite a few years, too.

2] Internet of Things (IOT) : IoT will soon establish a strong foothold for all of us in the near future, and our lives will be completely transformed. It will connect each object to the internet in some way or the other.

3] 5G: By the time of 2020, the whole world, as well as nations, would be under the spell of lightning-fast internet connection. Plus, don't forget about all the benefits that are attached to it.

Source : www.GeeksforGeeks.com

Prepared By : Kunal N Kamodkar (Comp Engineering)

Date : 14th Aug 2020

Title : Programming Languages used in PubG..!



Details :

1] UNREAL Engine 4 : PubG is developed in special game engine IDE platform called Unreal Engine 4 by Epic games. This engine is coded in C++ with the features of huge portability and tools for realistic graphics.

2] Java : PubG is an cross-platform game which is available for PC as well as Mobile. So for developing the cross platform games java is must and can also be considered as the side sourcing language.

3] Python : The core of the PubG is developed in python. Python also helped PubG to become more secure and hack-proof from hackers.

4] Pearl : Pearl 6 is used to develop the PubG along with the "Game of Thrones".

Source : www.pinprogram.com

Prepared By : Rushikesh Vikas Bhandare (Comp Engineering)

Date : 15th August 2020

Title : Why WhatsApp is so popular?



Details:

1] WhatsApp, the popular messaging app owned by Facebook, which has more than 5 Billion Downloads. Why is it so popular, even when faced with some big competitors? There are a number of reasons.

2] WhatsApp Was First : When WhatsApp rolled out in 2009, it was the first of its kind where peoples can send message instantly.

3] WhatsApp Killed SMS : When WhatsApp launched, at that time messaging price was costly and limited. So WhatsApp solved this problem by allowing you to send SMS messages to other WhatsApp users by using some amount of Data..

4] Time Advantage : People can message easily & instantly through whatsapp, which is the most important factor in its success. Also people feel's it handy & friendly to use it because of its user interface.

Source : Wikipedia & Lifewire.com

Prepared By : Siddharth Oturkar (Comp Engineering)

Date : 19th Aug 2020

Title : RPA or Robot Process Automation



Details :

1] RPA is the use of software to automate business processes such as interpreting applications, processing transactions, dealing with data, and even replying to emails.

2] Robotic process automation (or RPA) is a form of business process automation technology based on metaphorical software robots (bots) or on artificial intelligence (AI)/digital workers.

3] RPA systems develop the action list by watching the user perform that task in the application's graphical user interface (GUI), and then perform the automation by repeating those tasks directly in the GUI. This can lower the barrier to use of automation in products that might not otherwise feature APIs for this purpose.

Source : <http://www.simplilearn.com/>

Prepared By : Aditya Tawar (Comp Engineering)

Date : 19th Aug 2020

Tech Facts Forum Post No. : 26

Title : Facts About Google.



Details :

1] When "Brin" and "Page" first developed an algorithm for searching the net, they dubbed it "BackRub". Changing the name from Backrub to Google was probably a smart choice. Can you imagine what life would be like constantly saying "Let me just BackRub it!"

2] Search "atari breakout" in Google Images and you can play the game (click on image-visit). Try it now.

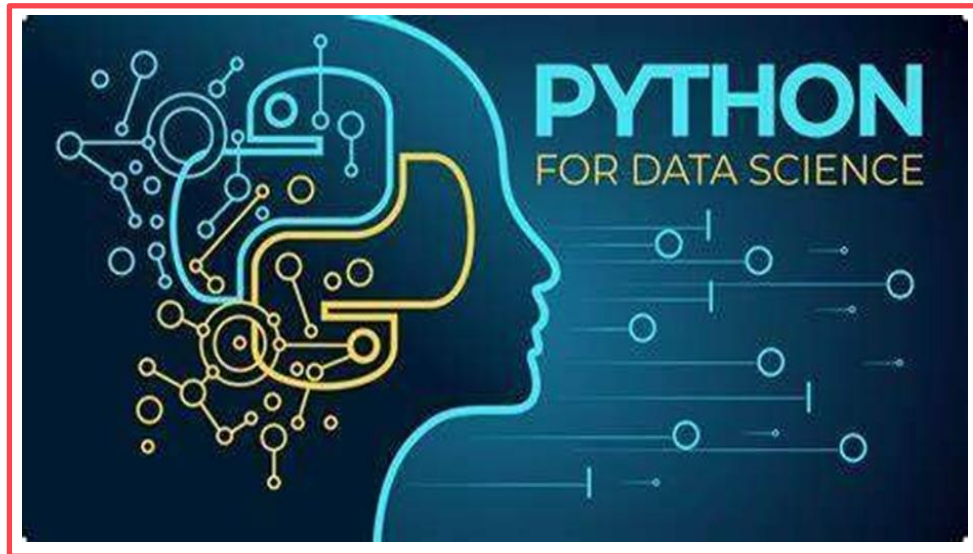
3] The word "Google" has been derived from a mathematical term "Googol", which means 1 with a hundred zeroes.

Source : <https://blog.sagipl.com/interesting-google-facts/>

Prepared By : Aditya Rokade (Comp Engineering)

Date : 22th Aug 2020

Title : How To Effectively Learn And Master Python For Data Science, Artificial Intelligence, Or Machine learning.



Details :

1] Python is a truly wonderful language. When somebody comes up with a good idea it takes about 1 minute and five lines to program something that almost does what you want. Then it takes only an hour to extend the script to 300 lines, after which it still does almost what you want. — Jack Jansen

2] Main Points :

- a) Be consistent
- b) Write Notes On What You Learn
- c) Have Fun, Try Experimenting
- d) Rest, Do Not Wear Yourself Out
- e) Get Yourself A Partner

Source : <https://towardsdatascience.com>

Prepared By : Yash V. Kapure (Comp Engineering)

Date : 23rd Aug 2020

Title : Facts about black hole.



Details :

- 1] Black holes are volumes of space where gravity is extreme enough to prevent the escape of even the fastest moving particles.
- 2] A German physicist and astronomer named Karl Schwarzschild proposed the modern version of a black hole in 1915 after coming up with an exact solution to Einstein's approximations of general relativity.
- 3] Black holes do not suck. Black holes could spawn new universes.
- 4] Black holes are the ultimate energy factories. There is a supermassive black hole at the centre of our galaxy.

Source : www.space.com

Prepared By : Sayali Nalawade (Comp Engineering)

Date : 28th Aug 2020

Title : Bookmark.com! Application of AI. AI Website Builder.



Details :

1] Bookmark.com is a quick website builder website, where user can create website for his/her own business, start-up, etc. User can build brand new website in just 2 minutes.

2] Bookmark.com totally works on Artificial Intelligence & In this website they implemented AiDA (Artificial intelligence Design Assistant) Model for fast website creation.

3] AiDA eliminates 90% of the pain points associated with web design. As there is no need to code using HTML, CSS & JS. Smart Predictions: Using proprietary machine learning algorithms, AiDA predicts which sections, elements, images, text, and design styles work best for your industry and conversion goals. The result: a unique website specifically suited for users business needs.

Source : Bookmark.com

Prepared By : Siddharth Oturkar (Comp Engineering)

Date : 29th Aug 2020

Title : Facts about Virtual Reality(VR)



Details :

- 1]** The first VR headset was patented in the 1960's and was named the 'Telesphere Mask' by inventor Morton Heilig.
- 2]** VR isn't all fun and games – the technology is now being used in healthcare to treat depression, anxiety and PTSD amongst other things.
- 3]** VR enables both students and teachers to learn and experience concepts with ease. They are also able to interact with these concepts in an immersive environment.
- 4]** In the U.S., virtual reality is used by all three branches of the military, to train personnel in various terrains and environments.
- 5]** Virtual reality is a fast developing technology and there is more to its evolution. The next frontier is working with human senses.

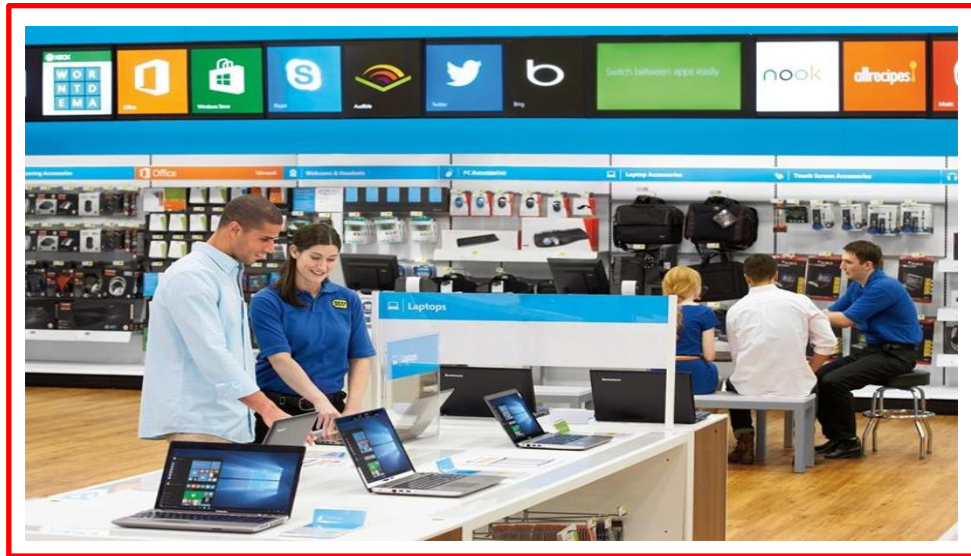
Source : <http://www.thefactsite.com/>

Prepared By : Aditya Tawar (Comp Engineering)

Date : 30th Aug 2020

Tech Facts Forum Post No. : 31

Title : What should I know before I buy a laptop ?



Details :

1] RAM : 4GB of RAM is common these days. You can upgrade your RAM later. 4GB of RAM is appropriate.

2] Processor : There are few processors available in the market, and they are majorly either from Intel or AMD (in case of non-apple laptops). Among them, Intel scores high both in performance and in price.

3] Operating system : Laptops comes with three OS, Windows, Ubuntu (Linux), and DOS. Buy a laptop with Windows OS. Yes, that would costs you extra 6k when compared to a laptop with same configuration with DOS OS, but then, the original Windows CD would costs you 8k(Windows 10).

Source : www.quora.com

Prepared By : Rushikesh Vikas Bhandare (Comp Engineering)

Date : 31st August 2020

Tech Facts Forum Post No. : 32

Title : Jeff Bezos becomes the first person on Earth to be worth more than \$200 billion



Details :

1] Bezos, who founded Amazon in 1994, keeps breaking records with his wealth. In 2017, he became the richest person on the planet. And last month, his estimated net worth jumped to almost \$172 billion, marking a new global high.

2] Jeff Bezos was already the world's richest man. Now his net worth has skyrocketed once again, setting another new record.

3] On Wednesday, the Amazon CEO's wealth reached an estimated \$202 billion, according to the Bloomberg Billionaires index, as the company's shares soared. That's up about \$87 billion since January.

Source : <https://www.cnn.com/2020/08/27/tech/jeff-bezos-net-worth-200-billion-intl-hnk/index.html>

Prepared By : Pallavi. R. Gavali (Comp Engineering)

Date : 05th Sep 2020

Title : Facts About The Pyramids.



Details :

1] The Great Pyramid Has Air Conditioning : Air conditioning may not have been invented yet, but somehow the Egyptians managed to engineer a way to keep the internal temperature of the Great Pyramid at 68 D F.

2] They Were Precise : The Egyptians wanted their building plans to be meaningful, so they aligned the tips of these monstrosities with important stars . They managed this effortlessly with their superior knowledge of the stars.

3] It Is Still A Mystery How They Built Them : The pyramids have been studied for years and professionals are still at a loss how this civilization managed to pull it off.

4] They Took About 23 Years To Complete : The pyramids were not built in a day, rather, they took 23 years to complete. It is estimated that it would take 70 men to cut out a slab of stone with copper chisels.

Source : www.thetravel.com/pyramids-egypt-facts-information/amp/

Prepared By : Aditya Rokade (Comp Engineering)

Date : 06th Sept 2020

Title : Web Scraping using Selenium with Python!



Details :

1] What is Web Scraping? :-

Web Scraping also called “Crawling” or “Spidering” is the technique to gather data automatically from an online source usually from a website. While Web Scraping is an easy way to get a large volume of data in a relatively short time frame, it adds stress to the server where the source is hosted.

2] Table of Contents: –

1. What is Web Scraping
2. Why Web Scraping
3. How Web Scraping is useful
4. What is Selenium
 - i. Setup & tools

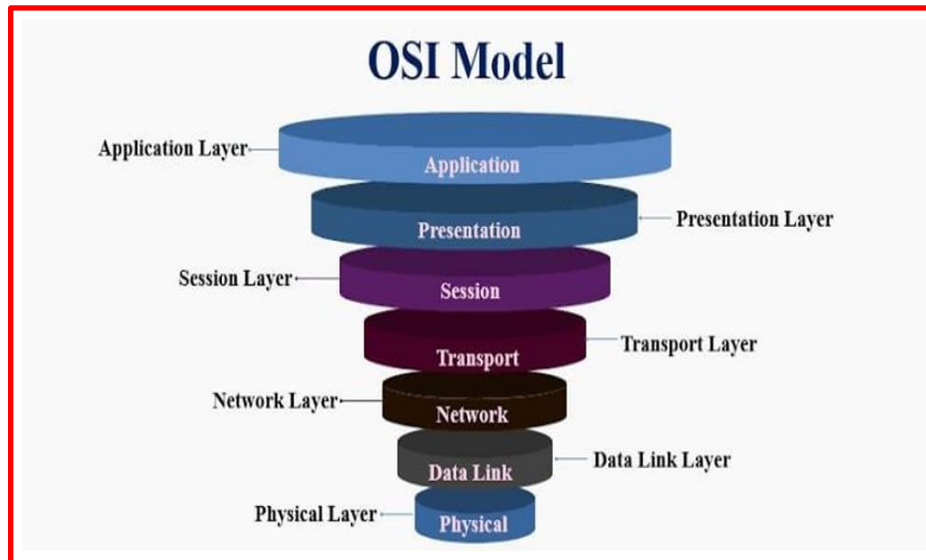
Source : www.analyticsvidhya.com/blog/2020/08/web-scraping-selenium-with-python/

Prepared By : Yash V. Kapure (Comp Engineering)

Date : 08th Sept 2020

Tech Facts Forum Post No. : 35

Title : The 7 Layers of the OSI Model.



Details :

- 1] Application Layer : At this layer, both the end user and the application layer interact directly with the software application.
- 2] Presentation Layer : The data from the application layer is extracted here and manipulated as per the required format to transmit over the network.
- 3] Session Layer : The session layer controls the conversations between different computers.
- 4] Transport Layer : The transport layer manages the delivery and error checking of data packets.
- 5] Network Layer : Network layer works for the transmission of data from one host to the other located in different networks.

Source : www.geeksforgeeks.org/layers-of-osi-model/amp/

Prepared By : Aditya Rokade (Comp Engineering)

Date : 13th Sep 2020

Title : Ethical Hacking



Details :

- 1] Ethical Hacking is an authorized practice of bypassing system security to identify potential data breaches and threats in a network.
- 2] The company that owns the system or network allows Cyber Security engineers to perform such activities in order to test the system's defenses.
- 3] Ethical hackers aim to investigate the system or network for weak points that malicious hackers can exploit or destroy
- 4] They collect and analyze the information to figure out ways to strengthen the security of the system, network or applications. By doing so, they can improve the security footprint so that it can better withstand attacks or divert them.

Source : Wikipedia

Prepared By : Ashutosh Kakad (Comp Engineering)

Date : 17th Sep 2020

Tech Facts Forum Post No. : 37

Title : Indian schoolgirls discover asteroid moving towards Earth.



Details :

- 1] Study of latest data shows that there are almost 1.36 billion active Windows users and that's nearly one and half times, the sum of people living in North and South America.
- 2] According to Bill Gates, Windows 1.0 is 'a unique software designed for serious PC user'. Windows 1.0 includes Paint, Calculator, Notepad and Word processor.
- 3] Windows 1.0 is less than 1 MB in size and had 16-bit colour interface.
- 4] There is significant advancement in Windows 95 as it provides Start Menu, Taskbar and Close buttons.
- 5] On October 25, 2001, Microsoft launched Windows XP, which became the best selling product of Microsoft in their software development history.

Source : www.gadgets.com

Prepared By : Akshaya Bhansali (Comp Engineering)

Date : 18th Sep 2020

Title : What Makes You a Good Programmer?



Details :

1] Enjoy the Process not the Result : Nobody becomes a good programmer in just one day, there is a journey involved in that and you must have to go through the journey. Maybe by doing Copy/Paste, we can score good marks, but it doesn't make you a good programmer.

2] First, Understand the Question, then Write Code : You're recommended to read the question and understand the problem clearly. by reading the same problem multiple times but eventually you'll get the actual scenario of the problem that will help you to solve the problem easily.

3] Don't be Hasty & Don't get Panic : Good programmers always have patience because they know that at one time they will get the right approach and will find the solution. Hence, they never get panic even if they are struggling for solving a single problem.

Source : [www. GeeksforGeeks.com](http://www.GeeksforGeeks.com)

Prepared By : Kunal N Kamodkar (Comp Engineering)

Date : 19th Sep 2020

Title : Video Game Development !!



Details :

1] History : The first games created had little entertainment value, and their development focus was separate from user experience. In fact, these games required mainframe computers to play them. OXO, written by Alexander S. Douglas in 1952, was the first computer game to use a digital display.

2] Roles : i) Producer: The producer working for the developer is known as the internal producer and manages the development team, schedules, etc. ii) Publisher: A video game publisher is a company that publishes video games. iii) Development Team: It consists of Designer, Artist, Programmer, Level designer, Sound engg & Tester.

3] Development process : Game development is a software development process, as a video game is software with art, audio, and gameplay. Formal software development methods are often overlooked. One method employed for game development is agile development. It is based on iterative prototyping, a subset of software prototyping.

Source : <http://wikipedia.org/>

Prepared By : Kunal N Kamodkar (Comp Engineering)

Date : 19th Sep 2020

Tech Facts Forum Post No. : 40

Title : What is artificial intelligence...



Details :

1] Artificial intelligence (AI) is the ability of a computer or a robot controlled by a computer to do tasks that are usually done by humans because they require human intelligence and discernment.

2] What is the main goal of artificial Intelligence?

AI is based on the principle that human intelligence can be defined in a way that a machine can easily mimic it and execute tasks, from the most simple to those that are even more complex. The goals of artificial intelligence include learning, reasoning, and perception.

3] Programming language is used for AI : C ++, Java, Lisp, Prolog, Python and R are the main AI programming languages that are best suited for development and design for different kind of software.

Source : <http://builtin.com> , <http://futureoflife.org> , <http://en.m.wikipedia.org> .

Prepared By : Sayali Nalawade (Comp Engineering)

Date : 22th Sept 2020

Tech Facts Forum Post No. : 41

Title : Interesting Facts about ISRO



Details :

- 1] ISRO formed on August 15, 1969 and superseded INCOSPAR with Vikram Sarabhai.
- 2] Within six years of formation, ISRO launched Aryabhata, the first Indian Satellite.
- 3] Satellite Launch Vehicle-3 or SLV-3, India's first experimental satellite launch vehicle. The project was spearheaded by APJ Abdul Kalam.
- 4] ISRO's budget for 2018 stood at Rs 9,093.71 crore. In comparison, NASA's budget for 2018 was a staggering Rs 149,278.5 crore.
- 5] In 1981, ISRO once transported Apple Satellite, an experimental geo-stationary communication satellite, on a bullock cart for antenna-range test. The satellite was carried on the wooden cart, as the alternative trucks made of metal could interfere with the satellite's signals.

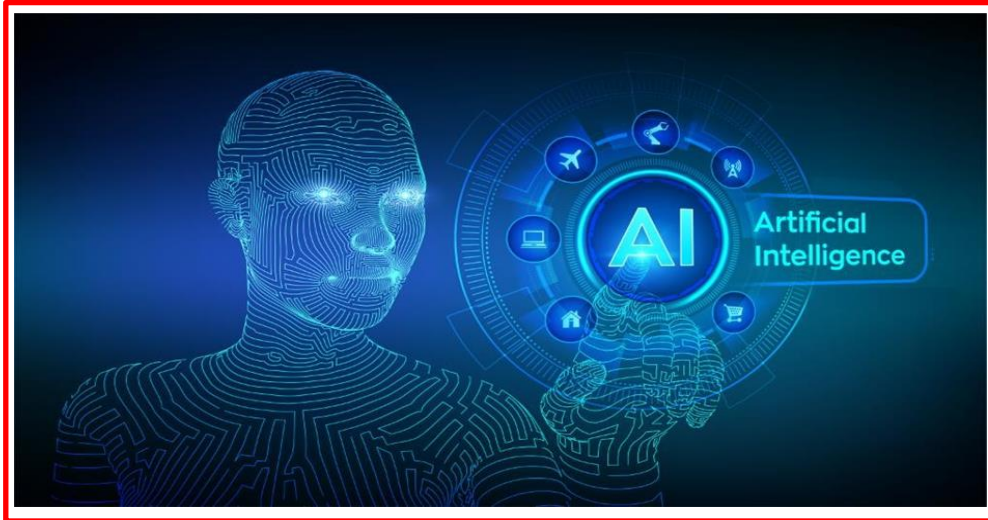
Source : isro.gov.in

Prepared By : Mr. Vaibhav Dabhade (Assistant Professor)

Date : 27th Sept 2020

Tech Facts Forum Post No. : 42

Title : Fields of application for AI



Details :

1] Medicine and Health : In health care, the objective of the implementation of artificial intelligence is to improve patient care and reduce costs. To do this, companies are applying machine learning to make better and faster diagnoses.

2] Business and Companies : The automation of robotic processes is being applied to highly repetitive tasks normally performed by human beings. Thanks to machine learning algorithms, attempts are made to discover information on how to best serve customers. An example is chatbots, which have been incorporated into websites to offer immediate service to customers.

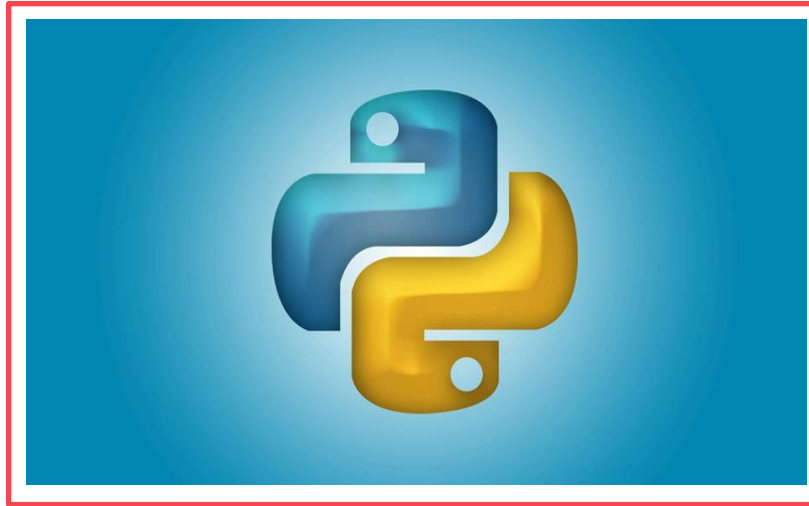
3] Finance : Some applications can collect personal data and provide financial advice. For example, today, the software performs much of the operations on Wall Street. In banks, it is already used to avoid fraud or study clients.

Source : www.newgenapps.com

Prepared By : Pallavi. R. Gavali (Comp Engineering)

Date : 07th Oct 2020

Title : 10 Awesome Python 3.9 Features



Details :

1] The latest Python 3.9.0 final version is out on Monday, 2020-10-05.

2] Several new features have been added from the dictionary update/merge to the addition of new string methods to the introduction of the zoneinfo library. Furthermore, a new stable and high-performant parser has been introduced.

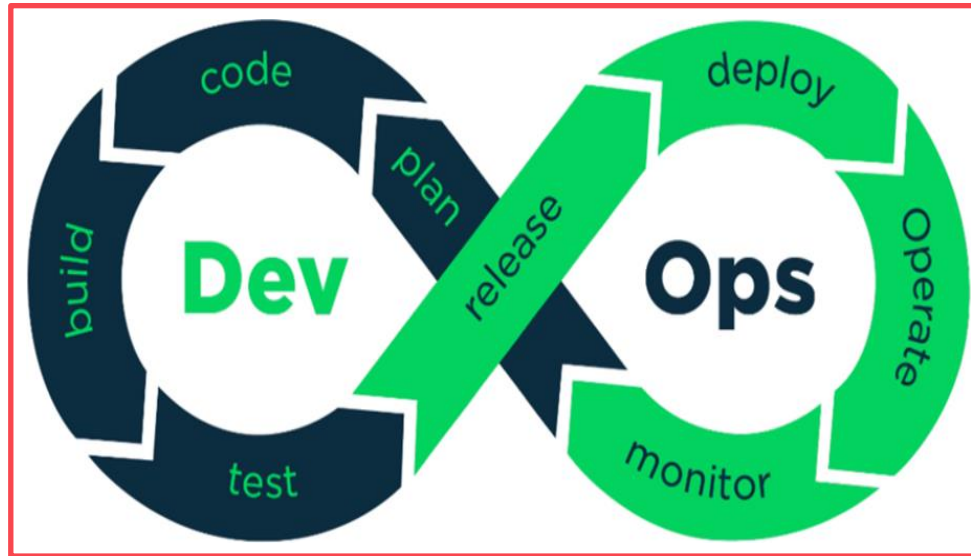
3] The standard library is updated with numerous new features along with the addition of new modules, zoneinfo, and graphic. Several modules have been improved too, such as ast, asyncio, and concurrent. Futures, multiprocessing, XML amongst others.

Source : <https://towardsdatascience.com/10-awesome-python-3-9-features-b8c27f5eba5c>

Prepared By : Yash V. Kapure (Comp Engineering)

Date : 08th Oct 2020

Title : DevOps Methodology



Details :

1] DevOps is a set of practices that combines software development (Dev) and IT operations (Ops). In other words, DevOps is a methodology that ensures that both the development and operations go hand in hand.

2] DevOps cycle is picturized as an infinite loop representing the integration of developers and operation teams by: automating infrastructure, workflows and continuously measuring application performance.

3] As DevOps is intended to be a cross-functional mode of working, those who practice the methodology use different sets of tools—referred to as "toolchains".

Source : <https://devops.com/>

Prepared By : Aditya Tawar (Comp Engineering)

Date : 11th October 2020

Tech Facts Forum Post No. : 45

Title : Kotlin vs Java



Details :

Java:

Pros

- 1] Java is multiplatform and works on practically any device, server or operating system.
- 2] Java is easy to use, compiling and makes debugging and deploying even simpler.

Kotlin:

Pros

- 1] Kotlin Application Deployment is faster to compile and prevent applications from increasing size code written in Kotlin is much smaller compared to Java. Less code means fewer bugs.

Source : www.xenonstack.com

Prepared By : Aditya Rokade (Comp Engineering)

Date : 13th Oct 2020

Title : Interesting Facts about Microsoft



Details :

- 1] The first ever mention of "Microsoft" was in a letter from Bill Gates to co-founder Paul Allen in 1975. Gates initially wrote the company name as Micro-soft, which made sense considering it's a portmanteau of "microcomputer" and "software."
- 2] Pioneering musician Brian Eno was the musical brains behind Window 95's start up tune, dubbed "The Microsoft Sound."
- 3] Microsoft currently employs 88,180 people who work across 32,404,796 square feet of Microsoft's premises, over 50,000 of which are U.S.-based.
- 4] Microsoft is one of the largest corporate collectors of artworks with over 5,000 contemporary pieces including painting, sculpture, works on paper, photographs, ceramics, studio glass, and multimedia works.

Source : www.mashable.com

Prepared By : Abhishek Mali (Comp Engineering)

Date : 14th Oct 2020

Title : Technologies you need to know for Web Development



Details :

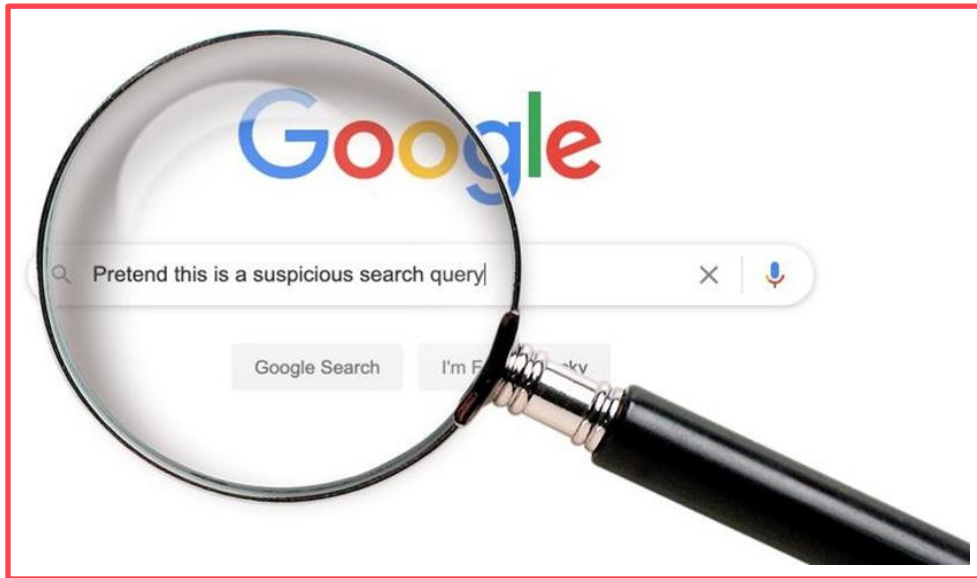
- 1] HTML : HTML makes up the layout and structure for your website.
- 2] CSS : CSS is the language developers can use to style a website. CSS is used hand in hand with HTML to add colours, backgrounds, layouts, font sizes, and more.
- 3] JAVA : Java is the most popular web programming language. It is used to develop website content, games, apps, and software.
- 4] JAVASCRIPT : JavaScript is used in many aspects of web development. Web developers use this language to add interactive elements to their websites.

Source : www.spinxdigital.com

Prepared By : Rushikesh Vikas Bhandare (Comp Engineering)

Date : 16th October 2020

Title : How Google Search Works.



Details :

1] Organizing the content of the web: Even before user search, Google organizes information about webpages in Google's Search index. The index is like a library, except it contains more info than in all the world's libraries put together.

2] Organizing information by indexing: The Google Search index contains hundreds of billions of webpages and is well over 100,000,000 gigabytes in size. It's like the index in the back of a book, with an entry for every word seen on every webpage we index. When we index a webpage, we add it to the entries for all of the words it contains.

3] Instantly matching your search: Google ranking systems help to provide relevant results in a fraction of a second. These ranking systems are made up of not one, but a whole series of algorithms.

Source : <https://www.google.com/search/howsearchworks/>

Prepared By : Siddharth Oturkar (Comp Engineering)

Date : 17th Oct 2020

Title : Meaning of Core i3, i5 & i7



Details :

1] Core i3 : The core i3 is more of a budget friendly processor which comes with dual cores. Core i3 generally has the lowest clockspeed of the three. Good for browsing the web, and doing basic computer tasks, but not great for medium and heavy workloads, etc.

2] Core i5 : The core i5 is a mid range processor which comes with quad cores. Core i5 generally has slightly lower clockspeed than an i7. The i5 has turbo boosting enabled, but it does not have hyper threading enabled. Best to play games or do some photoshopping.

3] Core i7 : The core i7 is the processor for high end PCs and usually have 4 to 8 cores. Core i7 generally has faster clockspeed. It also has two features that sets it apart from the two lower end processors: hyper-threading and turbo boost. Better for multitasking, multimedia tasks, high-end gaming and scientific work.

Source : www.quora.com

Prepared By : Rushikesh Vikas Bhandare (Comp Engineering)

Date : 18th October 2020

Title : What is JIO FIBER?



Details :

1] JioFiber offers superior internet experience to explore your Digital Life. JioFiber is the technology of the future. It offers the ultimate broadband experience to surf, stream, game and work.

2] Reliance Jio Infocomm Limited is an Indian telecommunications company and a subsidiary of Jio Platforms, headquartered in Mumbai, Maharashtra, India. It operates a national LTE network with coverage across all 22 telecom circles.

Parent organization: Jio

Platforms Founder: Mukesh Ambani Founded: 2007

Subsidiaries: LYF, Reliance Jio Infocomm Pte. Ltd

Source : www.jio.com

Prepared By : Akshaya Bhansali (Comp Engineering)

Date : 21th Oct 2020