CHRIST
(DEEMED TO BE UNIVERSITY)
BANGALORE · INDIA

DEPARTMENT OF COMPUTER SCIENCE

INFOBAHN

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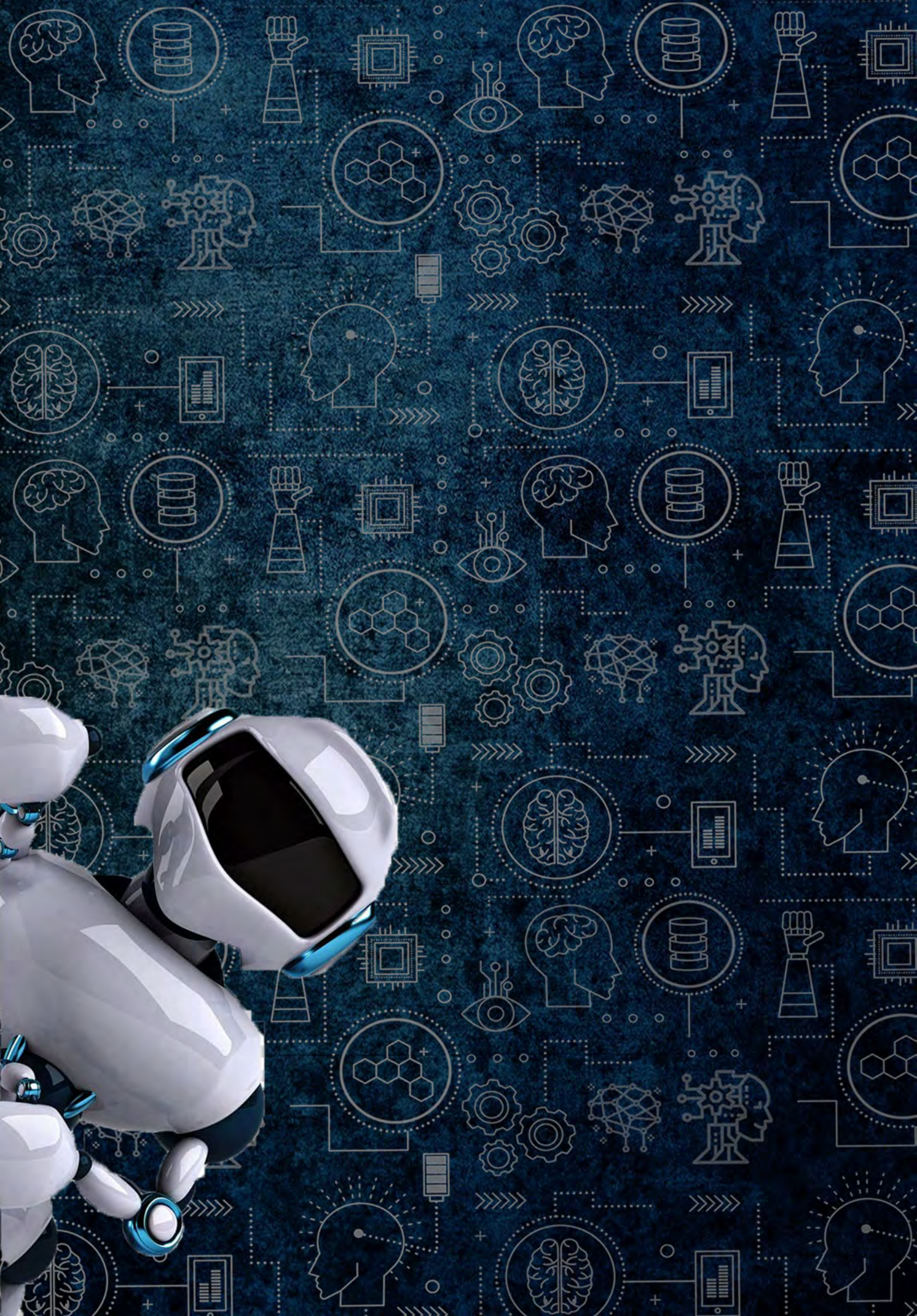

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From VC's Desk

Dr Fr Abraham Vettiyankal Mani

It has been our constant endeavor in CHRIST (Deemed to be University) through teaching, training and exposures to the ever-changing scenario of the world to well equip our students with skills, technology and an appropriate mindset.

Since we work in a constantly varying national and global environment, our students have been trained and shaped well to have the right type of approach and awareness to perceive things, this prepares them to work in a challenging context and be innovative in the face of disruptions. In fact, the students have been taught to assess their own jobs and responsibilities and take initiative to develop their approach and devise strategies to solve problems.

Infobahn is one such initiative taken by the Post Graduate students of Computer Science Department, to showcase their various talents and vast knowledge in their respective domains.

I congratulate everyone for the 23rd volume of Infobahn.

From the HOD's Desk

Prof. Joy Paulose

Along the long run of fifty years, CHRIST(Deemed to be University) has focused on inculcating its vision; "Excellence and Service". The institution continues to be the nurturing ground for individuals to develop holistically, thus acting as a guiding light in their lives. It bestows us with utmost satisfaction to see that the abilities of our students are sound, leading them towards their successful career.

The punctilious curriculum at CHRIST instills humility and adaptability in its students, ensuring to serve as a boon in the long run.
Over the past twenty-five years, the Computer Science Department has undergone various challenges which moulded it towards excellence. Students are given the freedom to select their research domains assisted with proper guidance.

The continuous tests and events scheduled throughout the academic year provide students with various opportunities to showcase their talent both in technical and soft skills. The department believes in creating a learning environment for its students by organizing training sessions to prepare young minds for the demanding roles of IT industry with worldwide awareness.

Infobahn is a prime example of the variety of skills our students develop and their ability to showcase them in an orderly and aesthetically pleasing fashion.

I hope the 23rd volume of Infobahn, like its previous versions, brings ample knowledge and entertainment to its readers, and inspires our students to enthusiastically participate in all initiatives taken by the Department of Computer Science.

Animotronix - A Philosophical Approach.

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The whole purpose of education at one point was to expose you to views that contradicted your own, and help you to find values in those alternative views, the reason for that was to help you get out of your confirmation bias and the tendency of that to auger you into a narrow viewpoint that is no longer representative of the world, because it is a really bad thing when that happens. Education now treats you as a celebrity, who's completely surrounded by sycophants who only tell you what you want to hear, now what happens is, because you are not getting any corrective information anymore, your weaknesses don't get corrected and they start to take you over. This is precisely what's happening in our polarised education landscape, the weaknesses of the radicle liberal viewpoint are dominating the entire spectrum of the liberal ideology, and arguably the conservative side is suffering the same.

This can be partially blamed on temperamental proclivities, conservatives consume media that fosters the conservative viewpoint, and liberals watch media that affirms their ideology. To bring people together, what is needed is for us to adopt the methodology of reenforced learning.

As in Artificial Intelligence, we make machines learn through corrective information, our education system needs to adopt the same approach. Computer Science has answered the most difficult questions humanity has thrown at it, from space travel to cryptography, I don't see why we can't look for Computer Science based solutions when it comes to education.

Animatronics is the art of bringing inanimate objects to life, and because it is such a philosophical concept, we can redefine the meaning of machine learning. Instead of reaffirming the beliefs of students, we need to incorporate collaborative structures that expose them to different viewpoints and teach them the importance of respecting and considering alternative ideas.

This is the ideology with which we move forward with Gateways 2019. Animotronix (Gateways 2019) hopes to bring people together from all backgrounds and provide a platform for collaboration, learning, and fun.

Let us use our IT expertise, to make the world a better place.

The NoSQL Family

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Computer Science Dept.

Data Analysis, Data Prediction, Data Visualization, Data Communication etc. everything revolves around the single word called "data". To mark the importance of data, IBM in 2013 said that 90% of the world's data has been created in the last two years alone. In computer science, data is a collection of raw facts and figures usually stored in a digital format. Alternatively, it can also be defined as a set of unprocessed information. Huge amount of digital data is stored in a repository and managed using software called Database Management System (DBMS) which is more effective and efficient than file systems. Ever since its birth, the DBMS has been considered as an evergreen area of research where new inventions and discoveries are carried out on a regular basis. One such research is the invention of NoSQL, which is quite different from traditional SQL based databases.

The term NoSQL generally means Not only SQL and encompasses the fact that it is no more restricted to the traditional SQL databases. NoSQL databases are an alternative to traditional databases where more focus is on large amounts of, wide variety of (semi structured and unstructured) schema -less data in a distributed environment. The general difference between a traditional database and a NoSQL database and variation among each flavor is given in Table-1

Table 1 Difference between Traditional databases and NoSQL databases

Sl.No	Traditional Database	NoSQL Database
1	Relational databases	Non-relational or distributed databases
2	Fixed Schema	Non-fixed Schema
3	Handles Structured data	Handles semi-structured or unstructured data
4	Support ACID properties	Support BASE properties
5	Supports Normalization, Joins and Complex queries	No Normalization, Joins and Complex query support
6	Does not supports Big data efficiently	Supports Big data and multimedia applications efficiently
7	Ex: MySQL, Oracle, Sqlite, PostgreSQL and MS-SQL etc	Ex: MongoDB, BigTable, Redis, RavenDB, Cassandra, Hbase, Neo4j, CouchDB etc.

Evolution of NoSQL

Since the development of "first DBMS" at IBM which was an Information Management System (IMS), a hierarchical database written for Apollo space program, it took almost forty years to design a completely new alternative database that can work in a different way from traditional databases. At the same time, care was taken to retain the simplicity and the basic functionalities of traditional databases in terms of query languages and functionalities so that the users won't feel the difficulties in getting adapted to the new flavors.

Berkeley DB was a significant system in the early evolution of NoSQL database. It was an open source distributed database software providing a simple key-value store. It was released in the year 1999 and commercially announced by Sleepy cat Software in the same year. In 2006, Oracle acquired the company and continued to support open source Berkeley DB. Graph database Neo4j started in 2000 by Neo4J enterprise. Google released BigTable, a column based database in 2004 and the related research article in 2006. Amazon released Dynamo, a key-value based database and its related research article in 2007. In 2007, a NoSQL called MongoDB was released as an open source and now is one of the widely used document oriented database with wide set of applications. Another key-value based database called Memcachedb was released in 2008 by Danga from Memcache organisation. To maintain its big multimedia data, Facebook came up with the column based database called Cassandra project, an open source hosted on Apache in 2008. Dynomite, a near clone of Dynamo and HBase a near clone of BigTable were

released in 2009. From 2010, NOSQL Live, an international conference is held annually to promote new flavors of NoSQL. The very first NoSQL conference was hosted at Boston in 2010.

Types of NoSQL

There are various flavors of NoSQL databases collectively called as NOSQL family which include Document-oriented store, Key-Value based store, Column-based store and Graph based store is given in Fig 1.

Conclusion

The IT monopoly of relational databases have been broken by NoSQL, but it isn't likely to completely break the bonds between users and SQL technology. It is to be noted that there are many applications which demand normalization support, which required well-defined fixed schema and the transaction support with ACID properties, especially in banking and finance sector. Till such demands exist, traditional SQL based databases will always remain active. However, when it comes to handling big data and internet of everything, NoSQL databases and their proper combinations are the better alternative. There are a wide range of NoSQL databases available, the selection of NoSQL depends upon the application and infrastructure and is left to the decision of the user.

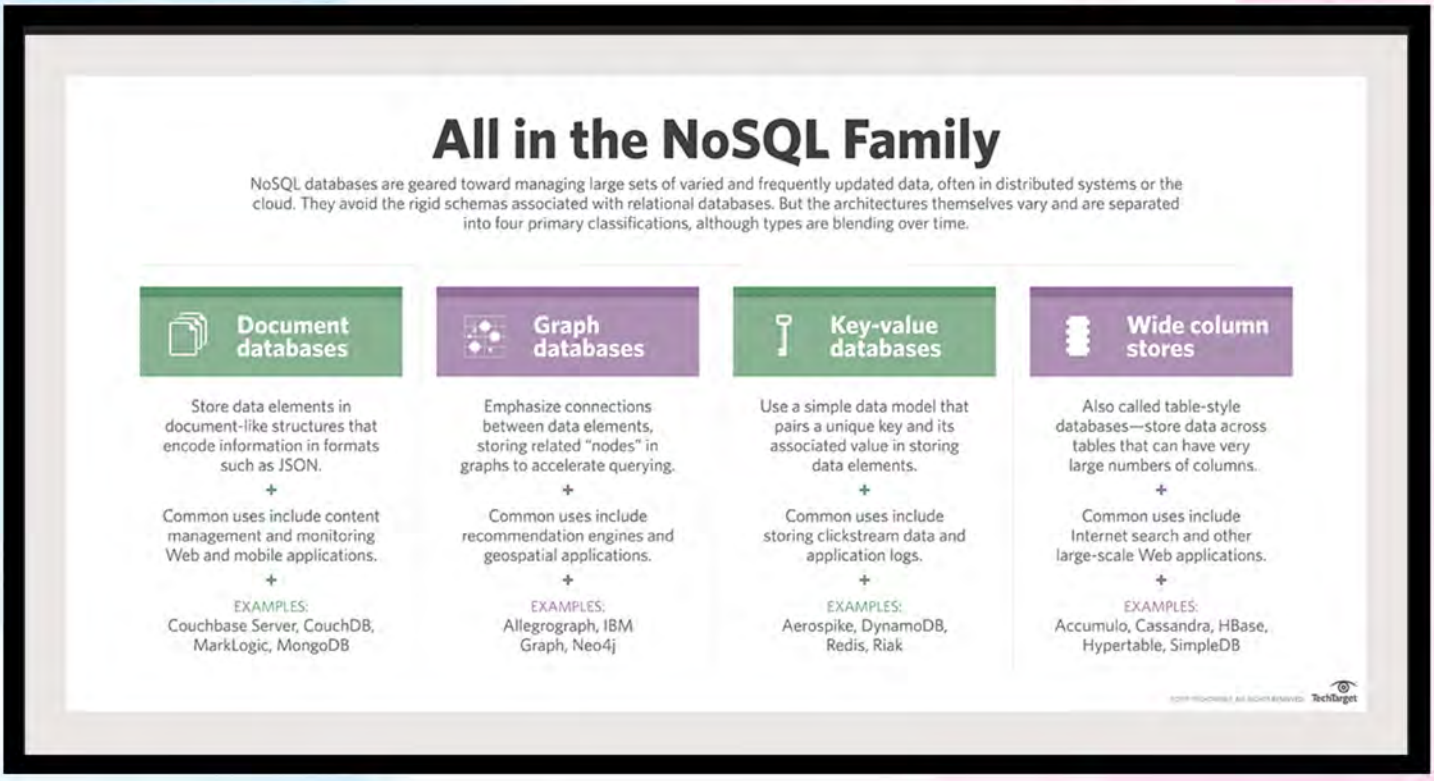

Figure 1Types of NoSQL

Applications of NoSQL

Ø Media and Entertainments-creating multimedia databases for movies and songs
Ø Retail management- creating dynamic databases for e-companies like eBay, Amazon, Alibaba etc.
Ø Big data analytics
Ø Medical analytics
Ø Stock market trading
Ø IoT applications
Ø Block chain related applications
Ø OLTP and OLAP applications handling large datasets
Ø Data Mining and Warehousing

ARTIFICAL INTELLIGENCE IN EDUCATION

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Assistant Professor

In the last few decades, Artificial Intelligence (AI) has been emerging technology in the field of computer science research. Typically, AI is integrated of two words namely Artificial and Intelligence. Artificial represents "man-made" and Intelligent represents "Power of Thinking". Hence, AI can be refered as Man-made power of Thinking. The technology AI is introduced where a machine can able to do all the works as human do. With the help of AI, a machine can be trained and programmed with some set of algorithms which can mimic the role of human being. For example, it can take decision, learn and able to solve the technical problems in problematic situations. AI has been associated with distinct applications such as healthcare, entertainment, finance, education, etc.

AI has some of the features as follows:

E-mail Filtering: E-mail system use AI for filtering the incoming e-mails whether it is important or anonymous (spam). Also, it reply back to the user with respect to relevant message such as thank you, welcome based on the message context.

Personalization: The E-commerce providers such as amazon and flipkart can able to learn from your previous purchasing order based on which they can recommend relevant order for the specific user. Netflix recommends relevant movies/series to user which would most likely to be watched.

Speech Recognition: AI optimizes the speech using some recognition functions. For example, when users talk to over the computer or phone, it triggers some action then it will fetch out some information using Natural Language Processing (NLP).

Smart Grading System: It can be automated by training the machine with some programmable devices and languages. Hence, teacher can have more time to teach. Moreover, AI chat bot can communicate with students as a teaching assistant.

Smart Content: AI takes the attempt to constrict text books into tool for exam preparation like it can have true or false question with problem solving.

Smart Pen: Pen can be programmed for blind people to write their examination.
Out of these information with respect to above said applications, AI seems to have most progress for the next 25 years in education sector whereas in the other sectors.

K.Saravanakumar
Associate Professor

Animation Transformation - Animatronics

Disney's Tiki room creation in 1963
Pioneer in audio-animation!
Novel into wonderful Movie Jurassic Park!
Special effects DTS Engineering technology
Wow! Reel dinosaurs were Real in nature
Baby and Gigantic dinosaurs amazed thrilled
Fossil to Fantastic creation
Splendid effort by Steven Spielberg!

Puppets into purpose
Depict the Design
2D to 3D form Sculpting
Character skin Mold making
Assembling for action Armature Fabrication
Character and movement Costuming
End with computer language
Make soft by software!

Character gets life!
One two three Action
Move rotate gesture
Hard work by hardware!
Translate transform transplant
Design Civil Controls Mechanical
Actuators Electrical Signals Electronical
Structures are Structural Ultimately into Technical!

Lightning bolt Usain
Performing Bot Animatronics
Small soft animation matured
Reform Transform Perform
Recreation Run Return
Strong Scale Stable
Effort Elegant Enjoy
Tiny to Titanics– Animatronics!!!

From Why to Why Not!

Vipul Agarwal

The general thought process always asks "Why" for every possible scenario but the thought about bending the mind to answer as "Why Not" was rare!

We come across various difficult scenarios in life where we switch to self-interrogation mode. The question bank surprisingly being common in most of the individual's mind, asking "WHY am I doing this", "WHY is life so partial", "WHY this thing is so hard", "WHY is that person so difficult" and the list continues with such unconstructiveness. We fail to reassure ourselves that we have the response to all these questions, and we can answer them on our own, but again is it essential to have these judgements in our mind and feel low?

Here is the need to have the "Why Not!" attitude to comfort our work and be optimistic. The similar interrogation which floods our mind with negativity will have a response. It would renovate our thought process to "Why Not give it a try", "Why Not take life with a grain of salt", "Why Not take it as a challenge" and eventually "Why Not have better terms with the person". Doesn't this development suffice for being in a healthy state of mind, combat all the odds and strive?

It surely does. All one must do is take a journey From Why to Why Not!

Artificial Intelligence in Education System

Karthik Raj P R

Artificial Intelligence has been one of the most trending topics in the recent years, everyone has an admiration over the AI's applications. What is an Artificial Intelligence? It's every aspect of the learning that you learn and try to simulate it using a machine. In simple words, it could be defined as the simulation of Human Intelligence by Machines. Sounds simple, but it has been applied into different domains like Healthcare, Education, Finance etc., to simplify the work done.

Ever imagined that how an AI can help in your Education System. I'm not talking about learning AI in your semester, I'm talking about implementing the AI's applications within the Education system and helping them to solve the real-life problems. The common traits of AI into the Education system would look like:

1. A system that interacts with the students 24/7 to answer their queries and assist them (Chatbots).
2. For teachers, it could help in gathering the students of similar caliber and determine the sets in class.
3. For the generation of Question papers, it would help as it can be developed to fetch data across the web.
4. Provides a helping hand in learning what you lack at (Feedback based on the data provided).
5. Moreover, gives you a Guide or a Friend who is at your finger touch (Chatbots).

6. Enhances the advanced level of Learning by providing resources at ease.By Applying such applications into the System, it provides a Global learning as well as provides a consistent monitoring over the students to improve them by giving a consistent feedback. The above are few applications of AI into the Educational field but there can be even many of such sorts. Since, we are moving into the world of AI's and implementing these kinds of technologies into the Education system can make the system much better and possess a skillful learning. One common example taken from the West is that, they have an AI that automatically takes attendance of students and submits it, apparently these are some of the time-consuming process that happens in the class, this had minimized some efforts put by the Professor's Daily. Artificial Intelligence can improvise on the things based on the consistent training provided by the Guides. These wouldn't replace the tutors available for tutoring instead these would enhance the learning by providing a consistent support 24/7 when needed.

"AI is likely to be either the Best or Worst thing happen to Humanity." – Stephen Hawking

Snapdragon 855 vs Exynos 9820 vs Kirin 980

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Snapdragon 855

At the heart of Snapdragon 855 is the new 7nm chipset with four new Kryo 485 CPUs based on Arm's new Cortex A76 cores. The octacore in SD855 is implemented in 3 parts. It has 3 Kryo 485 CPUs clocked at 2.42 GHz, 4 Kryo 385 CPUs clocked at 1.8 and 1 Kryo 485 Prime CPU which is clocked at 2.84 GHz. Snapdragon 855 is 5G compatible but the smartphone manufacturers will have to pay extra premium to be able to use this in their smartphones. SD 855 is based on the 7nm process which makes it more power efficient and also boosts the performance of the smartphones. The SD855 will support upto 16GB LPDDR4 RAM. The maximum frequency it can go upto is 2133 MHz. Adreno 640 GPU is used in the SD855 which helps in the graphics processing of the smartphone. SD855 supports upto H.265 video encoding ,so the smartphones can play high quality videos.

Exynos 9820

Featuring the 4th generation CPU, the all new Exynos 9820 has the innovative tri-cluster architecture which delivers premium processing power. The CPU consists of two 4th generation custom cores, two Cortex-A75 cores for optimal performance and four Cortex-A55 for greater efficiency. The tri-cluster architecture boosts performance by 15 percent when compared to the earlier Exynos 9810. Exynos 9820 has the latest NPU which aids in the Artificial Intelligence processing of the CPU.

Exynos 9820 has MFC (Multi-Format Codec) which supports encoding and decoding of 8K videos at 30fps. Exyos9820 has UFS 3.0 storage which allows the fast transferring of files and provides more security. The processor is equipped with high performing Mali-G76 MP12 GPU, which delivers the ultimate gaming experience.

Kirin 980

Kirin 980 is the world's first chipset which is made based on the 7nm process. The Huwaei HiSilicon Kirin 980 has octa-core processor which includes two high performance Cortex A76cores , two high-efficiency Cortex-A76 cores and four Cortex-A55 cores. This chipset is the first Cortex-A76 based in the world and has a 75% improvement in single core performance. The Kirin 980 also includes the world's first commercial use Mali-G76 GPU, which improves the performance by 46%. This chipset has LPDDR4X RAM which operates at 2133MHz. The Huawei Kirin 980 SoC offers a fourth-gen ISP (Image Signal Processor) from the manufacturer. The new ISP captures 46% higher data than its predecessor. The Kirin 980 also has dual NPU (neural processing unit) which delivers improved ai capabilities and a better photography experience.

SEO: Search Engine Optimzation

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SEO stands for Search Engine Optimization, which is a technique of optimizing your website or webpage to get organic, un-paid/free traffic through search engine results page. In order to get these traffic we need to make changes within the HTML code such as title tag, structured data, Meta description tag, Header tag.

Title tag: - Choose a unique title for your website that stands out from the crowd. At the same time the title has to be descriptive.

Structured data: - Is a markup code to explain the content, where the results are converted into rich snippets.

Meta description tag: - Allows you to suggest how one's site will look in the search results page. It's like the blurb on the backside of the novel.

Header tag: - Is basically used to make your text pop up from other content, and contain the trending keywords related to your domain.

There are types of SEO namely: - White hat, Black hat and lastly Grey hat SEO.

White Hat SEO: - uses legalized methods to attain higher position in the search engine page.

Black Hat SEO: - uses fraud or loopholes to gain the top position in the search engine page.

There are two types of optimization. **On-Page and Of-Page optimization.**

On-Page optimization:
Backlinking
Giving a backlink to another highly ranked site increases the authority of the site and also increases the chances of them giving backlinks to your site.

Infusing keywords
Primary keywords occur at least 15-20 times and secondary. keywords occur 2-3 times in 1500-2000 words document.

Image SEO
Image plays an important role in ranking of the website in the search results. Clicking on an image redirects the user to the particular page. This indicates the user looks at the suitable image for his/her query and clicks.

Off-page optimization:
Sharing
Sharing your website across the globe using social media have higher chances of traffic.

Commenting and Likes
Post with higher comments and likes tend to appear at a higher position in the news feed. Choose your content wisely.

Answering Questions
Most of the sites have a separate section or page called as FAQ, where users can enter their queries.

Achieving Autonomous Driving in Tesla Cars

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Introduction- The automobile industry is one of the most important industry in the world and is one of the world's largest economic sector by revenue. The Industry began in 1860s when we started using vehicles that moved on its own energy instead being pulled by animals such as horses. [1] Now the industry is in brink of another great advancement as self-driving cars are becoming a reality with manufactures such as Tesla claiming their vehicles will be fully autonomous by mid-2020

TESLA AND AUTONOMY

For many years tesla motors have heavily invested in autonomous driving and they started manufacturing cars with some autonomous capabilities such as drive assist from 2014 and they are providing incremental updates to software and hardware constantly based on the data collected from on-board sensors and analyzing them. Their hardware and software became better and better and now it reached to a point where the hardware become powerful enough to support level 5 autonomous driving. In fact every tesla car produced today are already having hardware necessary for fully autonomous driving

Tesla is using eight surround cameras which is providing 360 degrees of visibility around the car at up to 250 meters of range. 12 ultrasonic sensors complement this vision, allowing for detection of both hard and soft objects at nearly twice the distance of the prior system. A forward-facing radar with enhanced processing provides additional data about the world on a redundant wavelength that is able to see through heavy rain, fog, dust and even the car ahead this data is fed to onboard computer which is having twin-neural network capable of 36 trillion operations per second (each) which will make decisions and give inputs based on the data.

The main advantage of tesla compared to other manufactures is that they have very high amount of real-world data from the every tesla on the road as all the cars are constantly sending data on every parameter to the company.The company's artificial-intelligence program is being trained on by this real time data collected, every touch of the steering wheel and every input driver makes helps inform the company's software of how to react to various scenarios.

CONCLUSION

This is an exciting time in automotive industry and if Elon Musk (founder of Tesla) is able to fulfill his promise we will be able to see fully autonomous cars as soon as next year itself, other manufactures such as Uber, Google and numerous small companies are still racing to be the first to achieve fully autonomous driving, let's wait and see who will be the final winner even though tesla is currently on lead.

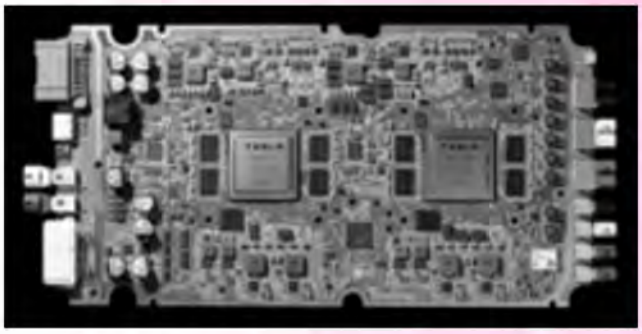

Fig 1: - Tesla's onboard computer

Rise of the Quantum Realm Among Classical Beings

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Quantum is a state where we immerse ourselves into another microscopic realm which has its own set of rules. One such rule is the Heisenberg Uncertainty Principle which states that both the position and velocity of a particle cannot be measured at the same time. This gives us an idea regarding how to manipulate speed in the quantum world. In the classical world, a limit appears concerning the computation power and speed of various systems whereas this limit can be overcome by introducing these physical systems inside the quantum mind so as to boost their processing speed tenfold.

Classical methods of computation use binary codes i.e. 0's and 1's to store and retrieve information whereas in the quantum mode of computation, quantum bits a.k.a. qubits are used to process information in the quantum state. Since qubits are superimposed, a pair of two qubits can exist in 4 states and a pair of three qubits can exist in 8 states. Very large datasets can be condensed smoothly and processed efficiently inside the quantum realm due to the superposition property .

What exactly is a quantum algorithm ?
A quantum algorithm is a step-wise procedure performed on a quantum computer to solve a problem. For example: searching a database. A quantum machine learning software makes use of quantum algorithms to process information. As of now, quantum algorithms easily outperform the best known classical algorithms when solving certain specific problems. This term is known as a 'quantum speedup'.

Ideally, a quantum computer having advanced software that enables the use of quantum algorithms is a blessing in disguise when it comes to analyzing data with optimized levels of speed. This is where quantum machine learning can exhibit its powers in its truest form. Currently, small-scale experiments are conducted where classical data is input into a quantum state using quantum algorithms to test the speed of computation. The test holds true only for a specific set of quantum algorithms.

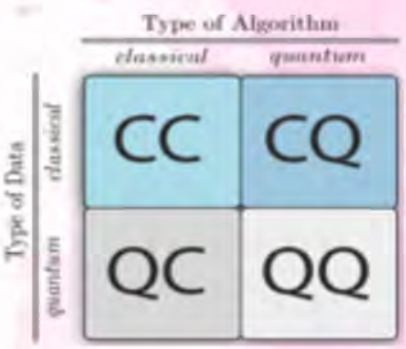

Fig.1 From the figure above, we can rightly state that a quantum mind coupled with a quantum body will produce the most desirable outcome in terms of analyzing massive amounts of data.

A lot of technical terms have been used to explain the quantum world. An idea that can be put forth is whether the future of mankind lies with the birth of a 'quantum being'.
A quantum being can be a walking talking computer having a quantum brain where information is processed with the help of a series of quantum algorithms which update automatically with the help of reinforcement learning. Whether this can be implemented seems to remain a question as of now but the uses of quantum technology can truly revolutionize the next generation.

CONTINUOUS INTELLIGENCE

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INTRODUCTION

The rise of digital technologies have helped the industries and the people to explore the opportunities and possibilities to redefine every aspect of their business , In Fact that is what exactly Business 4.0 means. Continuous Intelligence is a business saving technique that helps the companies to analyses the results in real time from the previous experience and make use of those results to get an optimized result which will facilitate the business results as well as the overall growth of the company.

Continuous Intelligence is a design framework in which real-time analytics are appended with the operations on a business perspective. It is a machine-driven technique that allows businesses quick access to data, no matter the complexity, volume, or diversity of data sources. Previously finding real-time data for these kind of operational and stream processing activities itself was a big task. Companies will be having their own data banks for their previous operations but they need techniques to bring the data into the right place for continuous intelligence. Continuous Intelligence will help us for decision automation with the help of various technologies like augmented analytics, stream processing, optimization, business rule management.

As per gartner.Inc , By 2022, more than half of major new business systems will incorporate continuous intelligence that uses real-time context data to improve decisions.

Techniques which will help us to implement Continuous Intelligence are as follows

1. Stream Processing
It is big data technique which will help the users to query continuous data from past records and detect conditions fast within a small time period from the time of receiving the data.

2. Optimization
Optimization is a process of improving the quality of the throughput after getting the feedback from the customer or collected by a qualitative research setting — as a means of narrowing and optimizing marketing concepts in an iterative fashion

3. Data/Model versioning tools
Data modeling (data modelling) is the analysis of data objects and their relationships to other data objects. Its basically describes how the data structure that is aligned with company works.

4. Augmented analytics
Augmented analytics is an approach of automating the results using machine learning (ML) and
Natural language processing (NLP) to enhance data analytics, data sharing and business intelligence.

5. Business Rules Management System
BRMS is a technology system used to capture decision logic as a business rule, which is then automated across applications. Instead of putting implementation of rules as code within multiple applications with a BRMS, the rules are externalized and managed away from application code.

MACHINE VISION SYSTEMS

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The integration of Computer Vision (CV) into processes with the help of machine vision systems is termed as Machine Vision (MV). It is used to implement automatic inspection and analysis for applications such as robotics, process control and so on in the industry.

MV was first used on the 1950's and "Two-Dimensional imaging for statistical pattern recognition" was developed. Gibson introduced optical flow and developed mathematical models for the same. MV systems were then developed through the years that followed.

Machine vision used in the manufacturing industry is used to sort defects in the products and completer tasks faster than when done manually. Machine vision is an engineering-based system that existed before computer vision. The difference between the two is that the former needs a computer and a software at its core to perform but the latter does not require a system and can be used individually.

MV can be looked at as the body and CV as the retina, brain and nervous system. Images can be viewed using MV and the interpretation and processing are done by CV algorithms which then inform the other elements to operate in that data accordingly.

The combination of these components is known as a smart camera. This smart camera can be incorporated in MV systems with additional features such as lenses, light sources, an actuator to separate parts that are defective, frame-grabber, software for processing images.

Each component has its own function but in a MV system these components will have a distinct purpose. The systems have sensors that detect if a product exists or not. If it exists, the camera will be set off and an image of it will be captured. The light sources will help to focus on key features. After which, the frame-grabber which is a digitizing device takes the image and then converts it into digital output. This is stored in the memory and is processed by the software. This is the basic working of a MV system.

Numerous difficulties still exist in the advancement of MV systems. The ordinarily acknowledged "bottom-up" structure is being tested, as it has restrictions in speed, accuracy, and resolution. Several advanced machine vision specialists advocate a progressively "top-down" and heterogeneous methodology. Another hypothesis, called "Purposive Vision" is exploring the idea that you don't need complete 3D object models so as to accomplish many machine vision goals. Purposive vision calls for algorithms that are objective driven and could be qualitative in nature.

The machine vision market is balanced for long haul development. The IIoT, developing non-industrial applications and usability are generally helping float the present machine vision advertise. MV is still continuing to develop today and the 3D vision systems are becoming more available and affordable.

Artificial Intelligence to end traffic jams

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In the recent survey, the term "Data" means a lot in the field of science. Machine Learning is one of the core techniques in it. The intense of Data science is in every part of the day-to-day life of an individual. The Machine minds with Predictability technique in the field of traffic control system.

'*Artificial Intelligence*' has got a great impact nowadays in the society of science. We all have been to be stuck in most of the traffic signals, hoping for the green indication to rush out. Besides, there would be a large queue making upon the roads to make the field, the most frustrated one. Traffic also triggers the human routine life to be a challenging one particularly in the metro cities.

It is the 'lights' that are ahead struggling along with us. 'Jam busting' is the crucial term to be experienced. The timers which are integrated with the lights also get out-synchronized along with the natural calamities that occur, which makes it more complicated. By 2040, it is expected to be a huge mass of 2 billion vehicles to be got birth which gets to the current situation to be applied even in the bye-passes and highways.

ROBOTIC VEHICLE

To resolve this, communication technology can be integrated with Artificial Intelligence to extract the data of the real-time traffic conditions using traffic cameras. A well-tuned Robotic vehicle can be introduced to make the issue fade out, which requires a time of two decades to get its recognition among the pupil.

SIEMENS MOBILITY

Beyond this in Bengaluru, the principle of 'Siemens Mobility' is working with a prototype which senses the traffic congestion with the use of traffic cameras and the Artificial Intelligence technique. This model automatically detects the intensity of the traffic and sends the codes to the control center which estimates the traffic density and alters the lights based on the real-time scenario. Responding to this makes a huge number of collection of data to be accustomed. Although the software on the mobile phone does a great job in predicting the traffic according to the variant of the vehicles.

TECHNOLOGIES

The Surtrac technology uses video feeds to analyze the road users including pedestrians. The AI then makes the vehicles to be interconnected to each other to make out the most effective means of moving away from the congestion happening in the traffic. In this technique, mobiles will play a significant role in making that inter connection using wireless technology.

At this moment the factor we tend to do is learning but in the future this will be all Pervasive. In the field of growing science, 'Artificial Intelligence' is making a prominent role.

SIXTH SENSE TECHNOLOGY

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Sixth sense is a wearable interface that augments the real world that we live in with digital information. Sixth sense device is a mini project built with a camera and a cell phone that acts
as computer. It enables us to use our hand gestures to interact with both the objects in real world and augmented world. The sixth sense prototype consist of a

- Pocket projector
- Mirror
- Coloured marker
- Camera

There is a Bluetooth connection between the camera, mirror and projector to a smartphone which are usually fits in user's pocket. Then a software is used to process the data that is collected via the capturing device and results in analysis. Most often used software are open source type.

Gesture Recognition:
Gesture recognition technique aims to interpreting human gestures using mathematical algorithm which are achieved using computer applications. The technique focuses on broadly three kind of recognition:

-Emotion recognition
-Gesture recognition
-Gender recognition

The emotion recognition is achieved from facial expression and the gesture recognition is achieved from body movement. Gender recognition technique enables users to interact with computers in a more direct way without any usage of external interfacing devices. It can be utilized as a better alternative to text user interfaces and graphical user interface which requires the need of a keyboard or mouse to interact with the computer.

In early versions of gesture recognition process, a special type of hand gloves was used which provides information about the hand and finger positions. In sixth sense instead of hand gloves device coloured bands are used for the same purpose. After capturing the hand positions the gesture is recognized using different techniques like:

-Neural Network
-Statistical templates

These two techniques have high accuracy rate, almost 95%. For better real time recognition time dependent neural network can be used.

Application:

The basic advantage of sixth sense technology is that it bridges the gap by introducing the digital world into the real world and in that process allowing the users to interact with the information without any machine interfaces as mediator. This sixth sense prototype has demonstrated
-Visibility
-Usefulness
-Flexibility

The sixth sense developers say that the extend of the application of sixth sense is left to human being imagination. It also supports multi user and multi touch possibilities.
Sixth sense is does not aims in changing human regular habits but enables the machines to adapt to human need.

Amazon SageMaker

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Nowadays, the field of data science is the most blooming one. Machine Learning has grown so much that almost all sectors have the automation process. It takes a lot of time to design a proper machine learning algorithm and to make the system process the activities done by a human. Certain machine learning algorithms take more time to get a real-time solution. Many MNC's faced issue while using the Machine Learning for their software development and it was also expensive. To overcome all those shortcomings, the Amazon Sage maker was brought into the picture.

Amazon Sagemaker was mainly developed to provide every developer and data scientist, the ability to build, train, and deploy machine learning models quickly. SageMaker Ground Truth helps you to build highly accurate training datasets for machine learning quickly. Amazon Sagemaker is designed in such a way that it covers the entire machine learning workflow to label, create our data, choose the best algorithm, train the model, tune and optimize it for deployment, make predictions and take action. This model was designed get to the production faster with much less effort and lower cost. It is found that usage of Sagemaker can lower your labelling costs by up to 70% using automatic labelling, which works by training Ground Truth from data labelled by humans so that the service learns to label data independently. It also provides common machine learning algorithms that are optimized to run efficiently against extremely large data in a distributed environment. With native support for bring-your-own-algorithms and frameworks, it provides an integrated Jupyter authoring notebook instance for easy access to your data sources for exploration and analysis, so you don't have to manage servers.

MODULES

Process

The process includes the collection and preparation of training data. Data labelling and pre-built notebooks are used to fix common problems. The second step involved in this is choosing and optimizing the Machine Learning algorithm.

Train

The process of training a data set includes setup and managing environments. The main advantage is one-click training on the highest performing infrastructure. SageMaker allows machine learning models to train once and run anywhere in the cloud. Model optimization are the added advantages of this Sagemaker.

Deploy

Deploying the model in production is an easy task and can be executed in just one click. On the whole, the deployment process can be completed in one-click. SageMaker manages your production with auto-scaling.

Benefits

It can reduce data labelling costs by up to 70%. You can choose to use your team of labelers and route labelling requests directly to them. Alternatively, if you need to scale up, options are provided directly in the Amazon Sagemaker Ground Tooth console to work with labelers outside of your organization.

GOD'S NEXT CREATION

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God's Idea

Some supreme power created us that may be god. God might have created this universe which involves planets, Milky Way, stars, etc. God might have thought that every creation should enjoy its living. But, is the wish of the god fulfilled? No, his creations were something fruitful and acknowledging except our mankind.

Reason to create

The god's wish wasn't fulfilled by our mankind. The primary motive for the creation may be to enjoy the life with his other creations. We mankind never enjoy the individual lives of each instead we keep looking and comparing our lives with others. We have so many diversities among us which may be social status, casteism regionalism, etc. The mankinds are in life race, they want to overtake other mankind to prove them. Many mankinds did not want to enjoy their life by exploring the universe. Will the god be satisfied with his/her creation of human being? The motive on creating the mankind isn't fulfilled.

Solution made

On planning of creating a new creation god doesn't want the new creation to spoil the others. So, God started designing the new creation with some restrictions. God finally came into a solution which doesn't disturb any of other creations.

New creation

Now, God came with an idea on creation of a Spirit. Spirit is the one which has no structure to identify them. This creation has designed to enjoy the every circumstances of the life. The spirit will feel all the consequences faced by the normal human being.

Life cycle of the spirit

For all creation of the god there will be minimum three stages .And they are Born, Life and Death. Even Spirit has three stages which God might have designed. The life of the spirit is the life of the human being as the spirit will live their lives on different human beings day by day.

Born Spirit

The spirit is born when some human being is born. The spirit doesn't affect the normal lives of different people.

Living Spirit

The spirit's living is much similar to the normal fellow human beings. It may be inside the human being where it can only feel the emotions of human beings. So, after living the life of one individual human being, it gets into the other different human beings to lead a different life. The spirit enjoys the value of mankind from each of the human being and feels like it fulfilled the need of god's creation. The spirit won't disturb the life of human being.

Dead Spirit

Every creation has an end. Here, if the other human beings are dead, then the Spirit also dies. The spirit can get into the same human being again. The satisfaction on creating these Spirits may satisfy God. Thus, if there is a new creation done by the God, it would be a spirit .

Dark Data and Dark Analytics

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Introduction —This article explains dark data analytics and how it can be used in the field of businesses as well as various fields where data science can be applied.
I. What is dark data? In our daily day to day life, we can refer dark to something which cannot be seen or unseen and when it comes to data, we can refer to dark to hidden or unused data i.e. Data which is collected but not used for more than its purpose or anything it is intended to do. Dark data mainly comprises of unstructured data which mean that the information is not categorized or analysed before. Data can contain text messages, emails, audios, videos and images, etc. We can also include data from the internet that is not indexed by search engines and also data from dark web too.

Dark data often remains unexplored because most of the dark data is unstructured or categorized which makes it difficult to explore and draw insights out of the data. Moreover, analysing such huge amount of data would require a lot of time and resources which would directly impact the cost for business.

Dimensions of Dark Data

Traditional unstructured data: This refers to the unused data that remains within an organisation which has never been explored and remains idle. Unstructured data usually contains emails, documents, messages, etc.,

Non-Traditional unstructured data: This comprises of unstructured data that cannot be mined and analysed using traditional analytics techniques. This comprises of audio and video files, still, images that could not be explored until now. These may help to get more insights on customers, employees, markets, and operations.

Data in the deep web: This dimension covers the largest body of untapped information covering data from academics, government agencies, communities, and other third-party It is roughly estimated that the size of the deep web is 500 times larger than the surface web which is commonly searched by people.

Associated risks with respect to dark data analytics Data source and it authenticity Respecting privacy Legal and regulatory risks Reputation compromise Leveraging deep web signals Open-ended exposure Preventive measures to be taken when dealing with dark data

•Regular auditing and trimming of database.
•Data should be encrypted to ensure data security.
•Data retention and self-disposal policies should be in place.

Conclusion

The field of dark data analytics might be new but the scope it holds in the near future is very exciting. Until now we have been working on structured data, but now we have moved to a bigger challenge that is exploring and analysing unstructured data. Nowadays a lot of companies are upskilling themselves and building tools to analyse dark data to avoid losing their business in the market.

The Next Generation of WI-FI

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Wi-Fi is on the edge of getting better and faster with a major update. The next-generation Wi-Fi standard is Wi-Fi 6, also known as 802.11ax, which is the recent step in a journey of constant innovation. We are currently using the fifth generation of Wi-Fi, which is also known as 802.11ac which became a standard in 2014. Since then, there has been an enormous increase in the number of internet users and devices. All of this has been accompanied by the need for faster connectivity. The IEEE is currently scheduled to formalize the WI-FI 6 amendment in the latter half of 2019. Even the Wi-Fi alliance has a similar timeline for Wi-Fi 6 certification. Wi-Fi 6 is expected to work efficiently in crowded areas such as stadiums, public gatherings, and other crowded environments.

The technology behind it

By enabling faster connection speeds for all devices on busy networks, Wi-Fi 6 is fundamentally intended to battle congestion. It is loaded with new features but the two main technologies that improve the capacity and performance by providing simultaneous connections are OFDMA and MU-MIMO.
OFDMA stands for "Orthogonal Frequency Division Multiple Access," which divides a Wi-Fi channel into a large number of subchannels. Each subchannel provides a faster data rate while carrying the data to the intended devices in the network. Moreover, the Wi-Fi 6 Access Point (AP) can remain connected or talk to more than one device at a time. MU-MIMO stands for "Multi-User, Multiple Input, Multiple Output". Until Wi-Fi 5, though access points were able to communicate to various devices concurrently, those devices connected to the network were unable to communicate simultaneously. This issue is addressed by Wi-Fi 6 and it allows routers to communicate with multiple devices simultaneously.

What can you expect from Wi-Fi 6?

-Improvement in battery life: A new feature Target Wake Time will make the access point smarter and allows the router to schedule the device check-in times. That means, a router can tell a client when to wake up and when to sleep, which will make a significant difference in battery life.

-Better security: There has been a major security upgrade, which is a new security protocol known as WPA3, the successor of the WPA2 security protocol. WPA3 protocol makes it difficult for hackers to crack the passwords by guessing it again and again. And it also limits the hackers to access your data even if they have succeeded to hack your passcode.

-Increase in network capacity: It's all about improving network when a lot of devices are connected and having a bunch of devices on a single network. As wireless includes more IoT devices, Wi-Fi 6 handles more data and is also capable of handling more clients per access point.

By the end of this year, Wi-Fi 6 will begin to arrive on high-end phones. Reconsidering Wi-Fi 6 more widely, the increase in multi-user support, especially the boost in upstream parallel connections will come along with an accelerating demand for user data that will be collected from IoT devices and used for reasons such as artificial intelligence, machine learning, the future of technology on the whole and a growing digital economy.

Edge AI – Together Defining a Profitable Use of Real-time Data

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Till now, much of the AI discussion has always been about using enormous data centers to process and evaluate information transferred to the point where they can be used. In the heart of digital transformation, however, information from smart devices can profitably be used to meet the company's goals, such as enhancing customer experience and operational efficiency, even developing new completely new services and products in the industry. The digital transformation is thus progressing collectively with artificial intelligence (AI) and the Internet of Things (IoT). We all know that Artificial intelligence could forecast stocks, diagnose patients, employ work seekers, perform chess games and go, and do many more or better duties than people. However, humans still have the benefit of having intelligence on the brink. In contrast, most mobile apps, the Internet of Things and other AI-workable applications and machine learning algorithms are depended on cloud or data center and have little intelligence at its brink, which is like processing of energy thousands of miles away. So when it comes to the purposes such as quick response time, privacy and safety and effectiveness, designers and technology businesses are increasingly deploying Edge AI.

The Edge AI works alongside the Edge Computing that is defined as the means of streamlining the flow of data traffic from IoT devices and also helps to provide real-time local data analysis. The basic definition of Edge computing is that "It enables the information which is generated by Internet of Things (IoT) devices in order to be processed closer to the place where it is generated rather than sending that data to the data-centers or clouds over lengthy paths as they can be located at very off places from the place where the data is collected. It is actually a network of micro-data centers which can process, analyze or store the critical real-time data locally and then forward all the received data to a Cloud Data Centre or Cloud Storage Repository which is available in less than 100 sq. feet area (as found by research firm IDC). When considering the usage of the cloud, the apps depend on a wide range of data being sent to the cloud, causing fresh issues.

Such concerns include data sensitivity and difficulties to maintain safety and privacy. In real-time, Edge AI enables the development, choice-making, and operation of information in milliseconds. Efficient time operations are important in self-driving cars, robots and numerous other areas Reducing power use and thus improving battery life are of paramount importance for wearable devices. You can avoid the problem of streaming and storing many data to the Cloud by processing data locally, making you less vulnerable from the privacy point of view. The features like data encryption, access privileges, and tunneling of the VPNs are important elements to be considered. We now see internal AI processors like Movidius Neural Compute Stick, which offers profound teaching computing capacity on the brink of advanced systems. Scientists are collaborating on algorithms that can more intimately imitate the role of the human brain, which needs less information to comprehend ideas and decide. This can contribute to a reduction in obstacles to stronger AI. Because of the need for real-time assessment and the capacity to analyze more contextual data immediately, Edge AI provides strong digital transformation possibilities.

Edge AI is actually an essential condition for driving vehicles, industrial IoT apps, which are essential to their tasks, and even for immersive customer experiences. We can predict that AI will relocate quickly to the front line from a centralized model. An example can be taken as: An elderly person wearing a watch that can detect falls is a solution based on Edge AI. The Edge AI system uses accelerometer data in real-time as input to the AI algorithm that will detect when the person is falling. The watch will only connect to the cloud when it has detected a fall. One of the key properties in the example above is to have long battery life. I hope that the development and combination of these trends allow AI algorithms to be executed closer to the place of activities. Edge computing isn't going to be a substitute for cloud power. However, it can resemble that of a more humanly matched AI operating model: which takes routine and time-critical decisions at the edge of the cloud,

Deep Reinforcement Learning in Gaming

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Introduction: Reinforcement learning is an area of machine learning which deals with how a software agent takes actions by learning on itself in an environment to achieve a result. It has been there for a while now all around the globe and are making tremendous progress in recent times. Reinforcement learning is one of the key elements in building AI. It usually employs a trial and error method with which the agent learns its environment and works forward to find a desirable output.

Use in Gaming

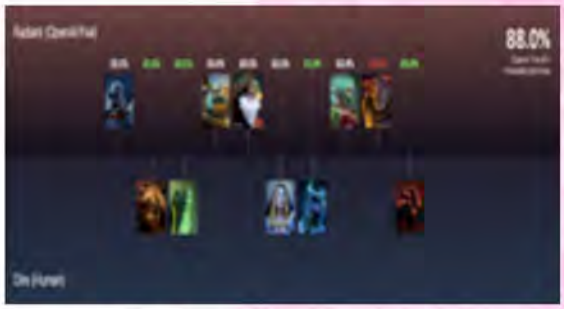
The gaming reinforcement learning was first used to beat human players in the normal logical computer games like chess and backgammon and Go. Then they moved forward to 2D games found in older gaming consoles like Atari and Nintendo. Games like space invaders, Mario and ping pong are some of the examples. Advancements in this field were less for a while till Elon musk and others came up with Open AI- a community which is very active and their core aim is to ensure that artificial general intelligence benefits all of humanity. They started experimenting with Massively Multiplayer Online Role Play game (MMORPG) specifically DOTA 2 which is a huge strategy-oriented game that requires much expertise. It took them about 1 year to train the bot which within that time started beating the top professional human players.

The bot operated off the following interfaces:

Observations: Bot API features, which are intended to have the same set of features that can be seen by humans, related to heroes, creeps, courier, and the terrain near the hero. The game is partially observable.

Actions: Actions accessible by the bot API, chosen at a frequency that is practically identical to humans, including moving to a location, attacking a unit, or using an item.

Feedback: The bot received incentives for winning and basic metrics like health and last hits.



Visualization showing OpenAI Five's expected win probability aftereach hero was picked. (Taken from Open AI)

By August 2018, the team was able to make the Open AI bot which gone through 45,000 years of gameplay data and was able to beat the top 99.95th percentile Dota players. As per the recent advancements, the team is going to be competing with the AI-based agent in Dota 2 on an open platform in August 2019 at The International (TI). Other similar games that are currently being studied are StarCraft 2 and Hearthstone.

This is by far one of the greatest achievements in Deep reinforcement learning. The data and learnings that were collected from this highly strategic and complex game proves promising and are being used in different areas such as robotics and life sciences. These kinds of advancements are getting us closer to the dream where a machine will be able to think like a human with the use of artificial general Intelligence

IMPACT OF AI IN WIMBLEDON TENNIS CHAMPIONSHIPS

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INTRODUCTION

IMPACT of artificial intelligence in the field of broader view in watching sports and makes the game interesting. The analysis involved now a days with respect to sports gives the viewers a great experience.
Wimbledon Tennis Championship is regarded as the most oldest and prestigious tennis tournament all over the world which was founded in the year 1877.IBM has been the Official Technology Partner of Wimbledon since 1990.In the current article we mainly focus on how IBM is implementing an AI-powered highlights system which prevents crowd bias, errors etc which gives the tennis fans a realistic experience in watching the highlights through various platforms.
With hundreds of matches taking place fortnight,it will be tough for humans to edit and generate highlights in a particular way so to make the task faster AI is used. In 2017,Wimbledon highlights generated 14 million views and the upcoming years the highlights should be delivered quicker.

ALL ABOUT AI

Watson Analytics: IBM Watson analytics is a smart data analysis and visualization service on the cloud that helps just about anyone quickly discover patterns and meanings in their data-all on their own. It also automates the predictive analysis and related cognitive processes.

Impact of Highlights generation using AI: IBM uses "Open Scale" technology to help Watson to recognize bias in crowd reaction. OpenScale ensures that there is completefairness in how the AI highlights are generated. Crowd can vary throughout the day based on the ebbs the AI highlights are generated. Crowd can vary throughout the day based on the ebbs and flows of on-court tussle. Sometimes they even need a break after a five-set thriller.

The AI system also provides the best possible highlights and the balance rankings. The best thing about Watson analytics is that it can recognize when a ball is hit means the highlights can be more accurate and can be edited properly.

The 2019 Wimbledon men's singles final which was contested between Novak Djokovic and Roger Federer. The final was a five-set thriller which lasted upto five and a half hours. So the match mentioned above is of long duration so people love to watch the highlights of that particular match. AI plays a vital role in generating high quality classic matches. The best the highlights is more number of viewers will watch it.

CONCLUSION

AI BIAS: For example there is match going on between Roger Federer and a plucky outsider, the crowd is cheering loudly only for Federer, the highlights generated for this match will be affected.

Impact of AI in sports keep on increasing which makes the field of sports more interesting to watch. Upon that AI is playing a vital role in each and every field in today's world.

Millennials and the age of gaming

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Those of us who grew up playing video games constantly heard from elders that it was a waste of time and that it would never help us in the real world, but is that really the case, could gaming actually be good for you? While it's still not great for your mind or body to spend 8 hours a day drinking energy drinks while playing Halo or World of Warcraft, gaming an hour per day can actually help you in a number of ways. So, what is gaming? The dictionary defines it as "The act of playing for stakes in the hope of winning"

But what does it really mean to the generation that lives more in the virtual than the real. Many a times we hear people say that they are gamers for they play mobile games such as Clash of clans, subway surfers etc. Well to be honest such people are not technically gamers, they are just people who like to play games on mobile phones just like most of us; gamers then are those who play with a certain level of commitment and sincerity and not just for fun. Then how do we identify them, well most gamers would typically fall in love with the story behind the game, when we look at games like Call of Duty - Modern Warfare, HALO which have a tremendous folk lore and back-stories that could easily create a commercial film, it is bound to make any person interested in diving deep into the character of the game then making them a part of the experience that the game portrays and not just leave them as a name on a screen pretending to be involved in a virtual setting. Is it not the same as someone obsessed with the universe of the commercially successful films like Harry Potter or Lords of the Rings.

There are many genres of games available in today's market, some of the fan favorite genres are FPS (First Person Shooter), RPG (Role Playing Games), Action-adventure, strategy etc. then there is further classification of these games into online, offline with multi and single player modes. Well then what is the benefit of this nomenclature? The benefits of playing games on a regular basis are wide ranging, from improved hand-eye coordination to vision changes that boost night driving ability, it is perceived that people playing Action-adventure games are observed to make decisions up to 25% faster than others without hesitation and practiced game players can pay attention to more than six things at once without getting confused, compared with the four that someone can normally keep in mind and not just that videogames are also great platforms for socializing, research suggests that about 65% of gamers play with their friends present. Some form of videogames are also used by a lot of Fortune 500 companies for the purpose of training. They tend to make players' visions more sensitive to slightly different shades of color which is called contrast sensitivity, and observed particularly in first person shooter games players. (University of Rochester researchers).

A widely popular myth is that playing video games is bad for eye-sight because staring at a screen for a longer time affects the player, but then excess of anything is bad; however studies prove that most gamers have better than average vision because games help improve eyesight by teaching the brain to spot small details and spot subtle changes. Dr. Adam Gazzaley, a neuroscientist at the University of California states that "playing first person shooter games such as Call of Duty have shown to have a 'benefit on high cognitive abilities' including focusing for long periods and multi-tasking."

Well on a lighter note, for the parents who will read this, your children playing video games is safer than having them indulge in substance abuse and street racing in the real world and violent video games though disregarded as vehicles of releasing

pent-up aggression and frustration are not necessarily means of adapting the same, looking at basic theories of observational learning by people such as Bandura(look his doll experiment up, its fun) we can actually prove the statement we made earlier adding a new discourse that suggests games; provide a positive aggression outlet the same way football and other violent sports do. Marcus Brigstocke has rightly said "If Pac-Man had affected us as kids, we'd all be running around in dark rooms, munching pills and listening to repetitive electronic music." But there are always two sides to the same coin and how can we forget the age old saying internalized within every child ever "Moderation is key" which then scientifically stems from the fact that any habit good or bad, to be formed needs over 21 hours of consistent indulgence in a week's period. There is a general association that society holds between the relationship of compulsive gaming to being overweight, introverted and prone to depression, well that is not all wrong, gamers tend to have higher mood swings and show increased signs of social phobia and switch between mania and melancholy.

C. Shawn Green, a psychologist from University of Wisconsin says "Videogames change your brain". The powerful combination of concentration and rewarding surges of neurotransmitters like dopamine strengthen neural circuits in much the same the way that exercise builds muscles. But "games definitely hit the reward system in a way that not all activities do," he said.

Gaming can also serve as a great factor of being a distraction, people have higher chances of procrastinating important tasks via a surge to play "one last level or one last game". This can have a very serious implication on the person involved for it shows signs such as deviancy from regular behavior and dysfunction of daily activities leading to chances of higher abnormal behavior with some people taking videogames way too seriously and there is always the chance of having issues with regard to privacy with certain cases of meeting strange people online. Online games are great way to meet new people, learn new tricks and occasionally here and there take your pent-up anger about life and channel it into something constructive. Well they also have both positive and negative aspects, its just that the association of that value is in your hands.(Would you let a virtual setting teach you life hacks or would you let it get the best of you and turn you into a virtual zombie who knows).

PREDICTIVE ANALYTICS

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What is predictive analytics?

Predictive analytics is one of the most fascinating and trending branch in data science where we predict the future events that are not known, using the patterns which are found from the existing available data. Even though the predictions made are not always correct, they are the best possible presumption that could be made using these data.
From the available past data we find the hidden patterns that discloses meaningful insights, which when used well cause effective impacts. It is a one such technique which has its application in many fields such as actuarial science, marketing financial services, retail, insurance, telecommunications, travel, mobility, healthcare, forecasting, child protection, pharmaceuticals, capacity planning, social networking and many more .

Predictive analytics incorporates various techniques from data mining, statistics, modeling, machine learning, neural networks and artificial intelligence to analyze the available data and hence to make predictions about what can happen or arrive in the future . However the correctness and the usability of the predicted results will depend majorly on the level of the data analysis and the quality of the assumptions that are made during the analysis. Also note that when the amount of available data increases the prediction become more accurate. There are various steps in the predictive analytics process

The seven steps involved in the predictive analytics process are:-

1) Definingtheproject
2) Data collection
3) Data analysis
4) Statistics
5) Modelling
6) Deployment
7) Model monitoring

Why is predictive analytics so important?

Nowadays predictive analytics is used in almost all the fields to reduce the risk, improve task and increase the profits, by helping the organizations in deciding suitable precautionary arrangements to prevent or minimize the amount of loss that may occur.

PERFECTIONISM

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Does chasing perfectionism bring out the best in one or does it act as a destructive force to one's mental being?

I had a chance to interview these two ladies, together, Ryana and Asher, for my blog. While I was waiting for them at a café, I saw a woman entering, robed in ZARA, feet covered with GUCCI, hanging an H&M and checked time from a RADO, won't deny she looked exquisite. It wasn't too long when the other woman, Asher, I had to meet turned up, dressed in a pair of levis, top, boots and a handbag. She wore a charming smile which appeared to be her best accessory. Soon, we began conversing and made ourselves comfortable, before I began with the interview. Ryana was a PR manager at some MNC while Asher a sports teacher at an International School. Both were successful in their respective fields. The interview was finished soon and now only writing a blog on it was remaining.

My blog was titled, 'What are we chasing and for what?' and it began like,

Perfectionism, as dictionary describes this term, is, "refusal to accept any standard short of perfection." But then what is perfection? Again digging deeper, "having all the required or desirable elements, qualities, or characteristics; as good as it is possible to be." After reading all these certified definitions I fail to understand what is perfect. For me, perfect is a dynamic and an erroneous concept of reality. The reason behind me saying this is an interview with two spectacular ladies, Ryana and Asher. Before meeting them I thought, 'They're perfect, their life, career, everything. I wish I could be like them ever.' But after the interview, I had a change of mind. I felt like I was chasing a mirage, which keeps on moving farther away as soon as I feel am close to it. The truth is, it never exists, its just a mere illusion of our mind.

Both Ryana and Asher were doing pretty good in their respective lives. But there was more to it. They have thrived to be where they are today. Ryana who appeared to me as a walking brand store, just coming out of shopping, was not satisfied by her life at all as it appeared from her talk. She wanted to be perfect at her job, like perfect the way she looked, they way she carried herself, wanted a perfect family where her husband was working really well and a child who never fails at anything. Though she was happy but not content, she wanted more. This was her perception of perfect. While, Asher, a winsome person was grateful for what all she has accomplished. She knew that she was not much of a famous personality, but was renowned amongst her students, that's all that she cared. There are no two thoughts, that both were really good at heart and humble. But what was Ryana chasing? Did that 'perfect life' really exist?

It's not about Ryana or Asher, it's about all of us. Deep within we know that we all are trapped in the vicious cycle of 'Perfectionism'. Sam Berns, who died of progeria in 2014, did everything he wanted to, surely in different ways from ideal ones. Wasn't he perfect? Dan Millman had an ideal life. He was amazing at Olympics but met with a bike accident. His entire life went crumbling in front of him. But he had the courage to pull it together, all from scratch, leading a prosperous one. Isn't it perfect? Peter Dinklage, the actor from famous Game Of

Thrones series, is living a successful life, despite the fact that he is shorter in height. Now, isn't that perfect? There are various other living examples out there in the world who can prove that attaining everything we want or desire does not qualify as a parameter to test how perfect we are. And above all, who are we chasing exactly? All those who seem perfect and ideal for us may be following someone superior to them. Why do we forget that we, ourselves are pretty amazing in our own unique ways?

It is a gentle reminder to all the exceptionally perfect personalities out there, let us run after ourselves, improving and getting better at whatever we do, defining our 'perfect me' within us. Let's set the trail for new 'perfectionism' which doesn't have to be about any illusional idealistic standard, but solely about ourselves. The answer to the question,' Does chasing perfectionism bring out the best in one or does it act as a destructive force to one's mental being?' lies in 'What are we chasing and for what?', be wise while answering this one.

Prakash Kumar

1748246

5 MCA

The New Me

It's not another poem,
But a story.
Some complex trivia,
And a lot of simple theory.

Yes; it's about a boy,
Who had to leave his city.
Though the place had his heart
But lacked opportunity.

He spoke wrong English,
To make people laugh.
You can also try,
It's not at all tough.

He respects everyone,
Being his nature.
If you say it's flattery,
Try considering it a feature

He had his ups-n-down,
But never did he cry.
Once in a while; took a nap,
Then, gave a harder try.

Believes in the Day to come,
To make everyone proud.
A new self to welcome,
He stood there One In A Crowd.

Mohammed Zabeeh

1947242

1 MCA

HOPE

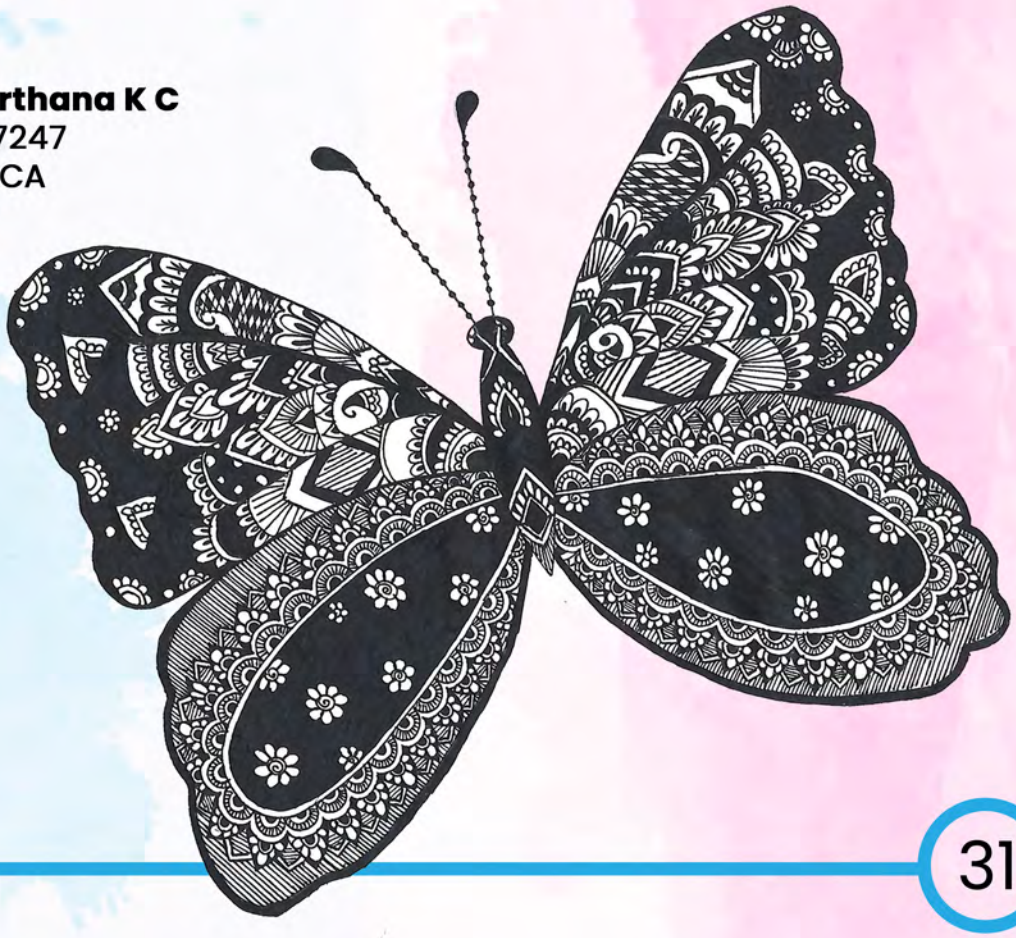
When I look across the blue sky, it feels so close. Yet, it cannot be grabbed, even if I reach out with my hands. I ogled at the blanket of stars. The stars that I cannot reach and the desires that won't be conceded. There is nothing, which I have been able to leave behind. Traces and memories will fade
someday. But there shall remain something that prevails. The hope built from years dwindles, but I lived the same time and gazed towards the same things with the hope that my soul will be at peace.

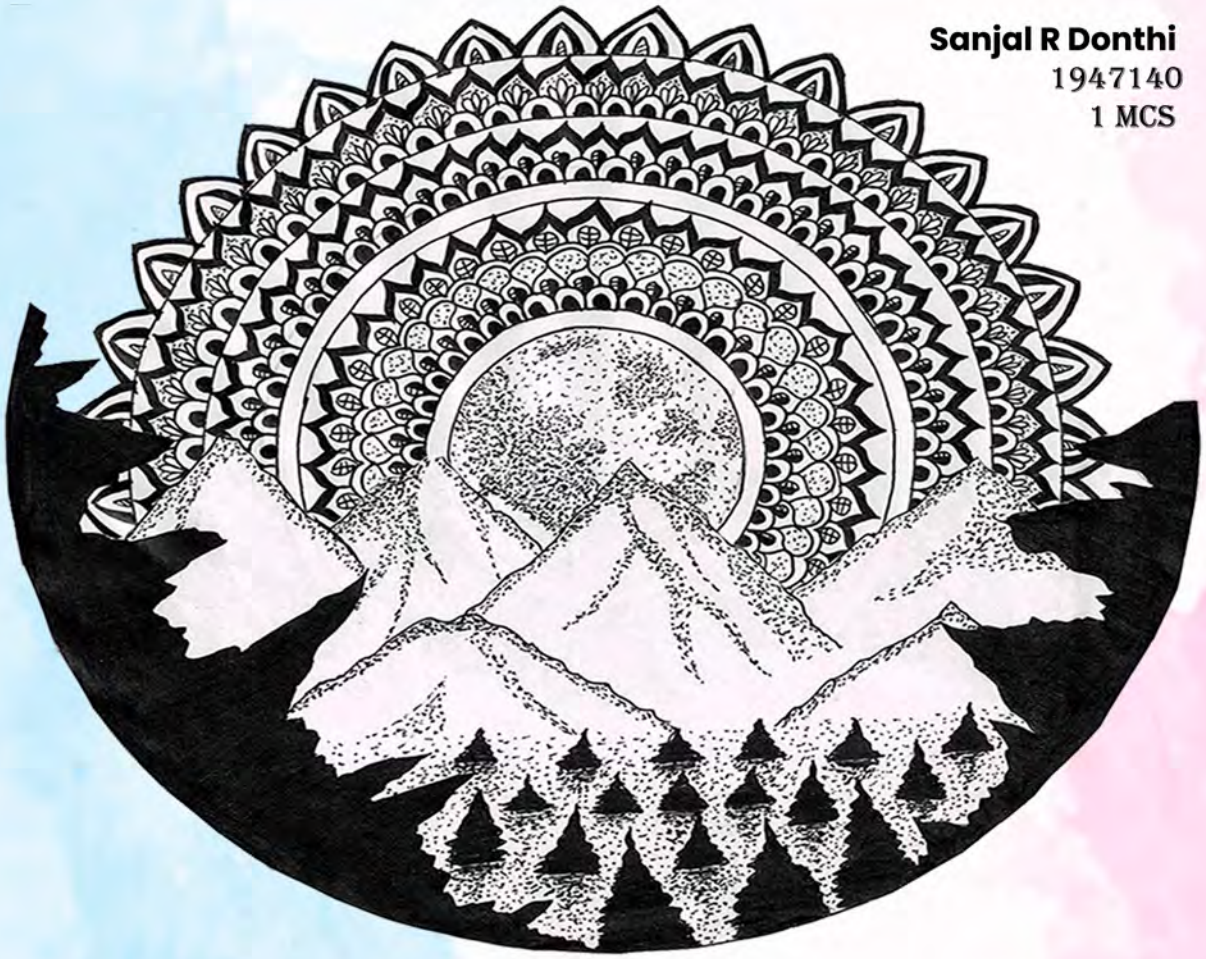
NIGHT WALKS

I could sense the fear by looking at my shadow as the street light flickered making it difficult to walk on a night with no sign of stars. The howling of dogs, chirping of crickets ran a cold shiver down my spine. The rustling of the leaves made me think before I took my next step. The walk looked as though each step made me reflect my life and question it.

Thejas N
1947266
1MCA

Prarthana K C
1747247
5 MCA



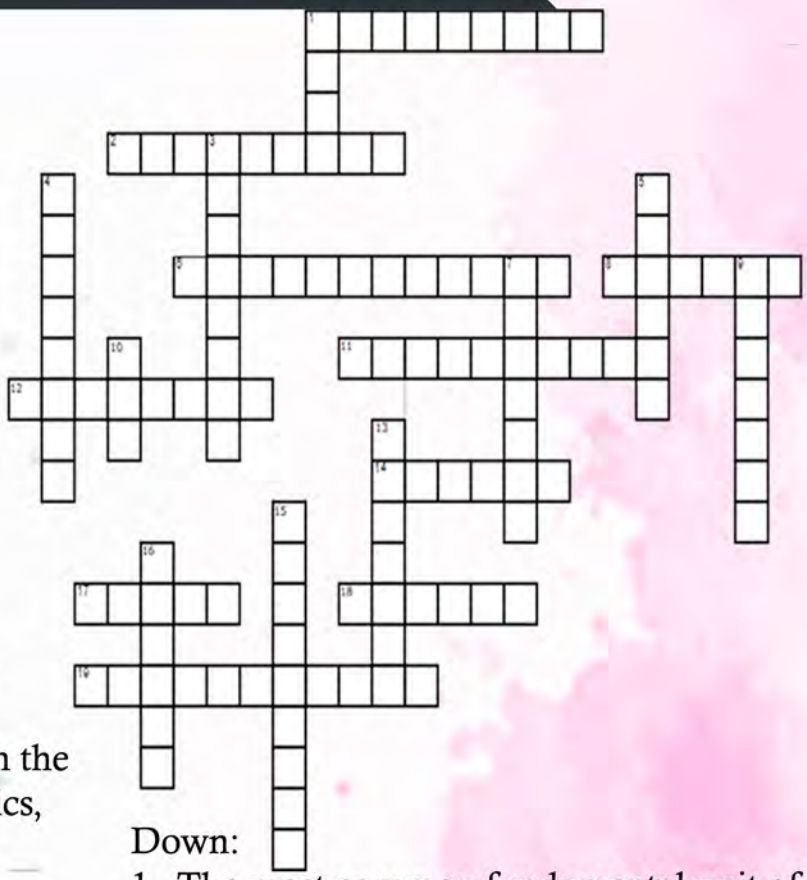


Sanjal R Donthi
1947140
1 MCS

Svetha Venkatraman
1947147
1MCS

Crosswords

Ragul R (3MCS)

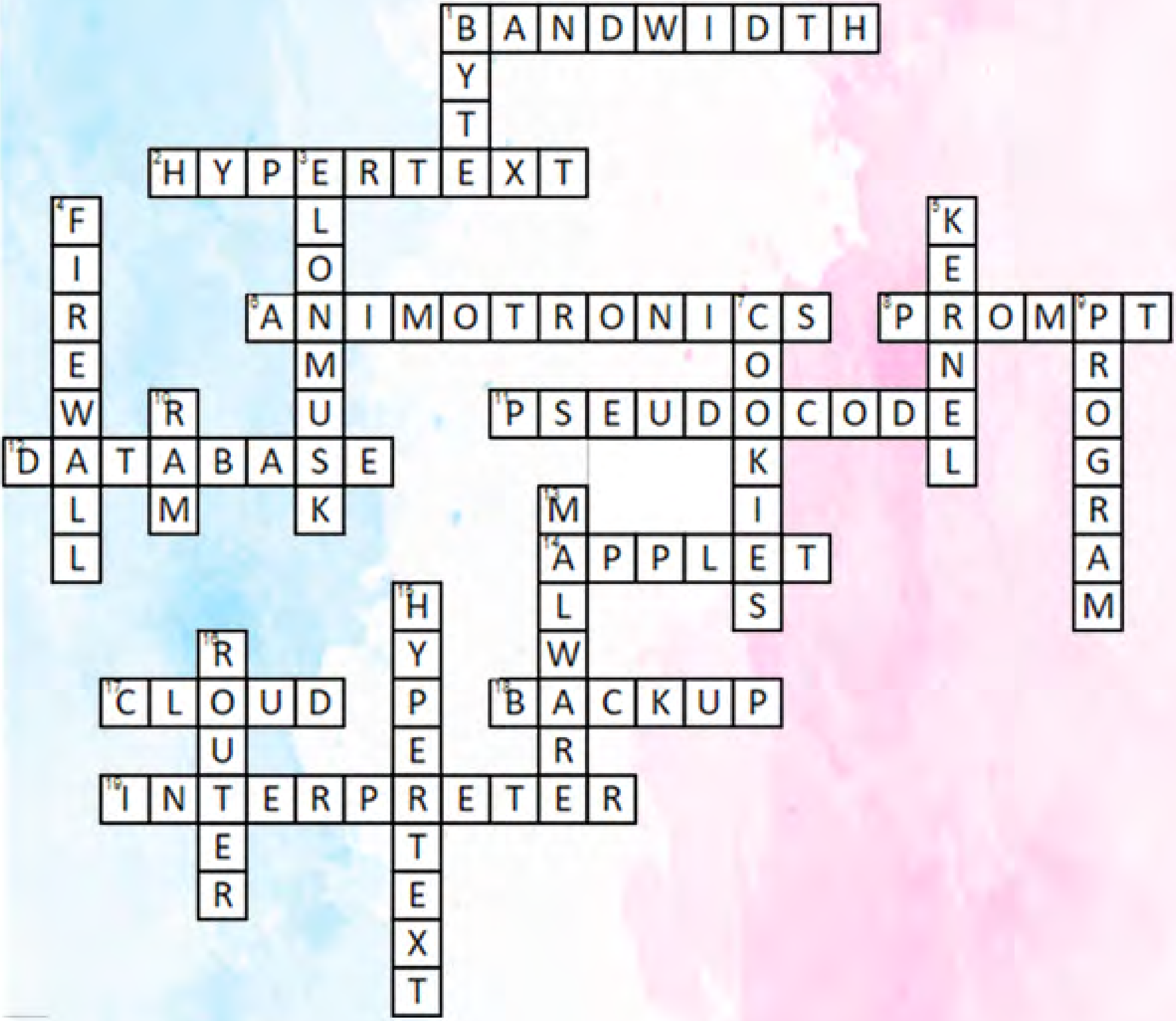


Across:

1. The amount of data that can be sent through a connection at one time.
2. A software system that links topics on the screen to related information and graphics, which are typically accessed by a point-and-click method.
6. The art of breathing life into inanimate objects, brings focus to an era of computing where technology not only functions, but also behaves.
8. When a program displays a message and pauses for the user to type some input to the program.
11. A way of representing an algorithm as a 'universal programming language'.
12. An organized collection of information that is searchable.
14. An operating system that uses pictures to communicate.
17. The word _____ often refers to the Internet, which more precisely means a data-center full of servers connected to the Internet performing a service.
18. The process of making copies of data or data files to use in the event the original data or data files are lost or destroyed.
19. Program that can analyse and execute a program line by line.

Down:

1. The most common fundamental unit of digital data.
3. Founder of The Boring Company and SpaceX.
4. A security system that protects a network.
5. The central module of an operating system.
7. A small files which are stored on a user's computer.
9. A set of instructions that specifies a computation.
10. All program instructions are stored here as they wait to be fetched.
13. Any type of software that is designed to damage your computer or gain unauthorized access to your personal information.
15. A software system that links topics on the screen to related information and graphics, which are typically accessed by a point-and-click method.
16. A _____ is a device that forwards data packets along networks.


1 BANDWIDTH
1 BYTE
2 HYPERTEXT
3 ELOOMUSK
4 FIREWALL
5 KERNEL
6 ANIMOTRONICS
7 COOKIES
8 PROMPT
9 PROGRAM
10 RAM
11 PSEUDOCODE
12 DATABASE
13 MALWARE
14 APPLET
15 HYPERTEXT
16 ROUTER
17 CLOUD
18 BACKUP
19 INTERPRETER

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