CS WORLD

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About IEEE (Institute of Electrical and Electronics Engineers)

IEEE, an association dedicated to advancing innovation and technological excellence for the benefit of humanity, is the world's largest technical professional society. It is designed to serve professionals involved in all aspects of the electrical, electronic, and computing fields and related areas of science and technology that underlie modern civilization. IEEE's roots go back to 1884 when electricity began to become a major influence in society. There was one major established electrical industry, the telegraph, which since the 1840s had come to connect the world with a data communications system faster than the speed of transportation. The telephone and electric power and light industries had just gotten underway.

Pattern Recognization

As the recently launched AI Monthly digest shows, significant improvements, breakthroughs and game-changers in machine learning and AI are months or even weeks away, not years. It is, therefore, worth the challenge to summarize and show the most significant AI trends that are likely to unfold in 2019, as machine learning technology becomes one of the most prominent driving forces in both business and society.

Even the fastest and most advanced CPU may not improve the speed of training an AI model. While inferencing, the model needs additional hardware to perform complex mathematical computations to speed up tasks such as object detection and facial recognition.the AI voice assistant. Meanwhile, there are a few surprises like the arrival of Minority Report-style advertising and the rise of sophisticated computer vision.

-Neerukonda Puneeth
(17881A0526)
3rd Year,CSE

About IEEE CS (Computer Society)

IEEE Computer Society is the leading provider of technical information, community services and personalized services to the world's computing and computer science professionals. IEEE Computer Society strives to be essential to the global technical community and computer professionals everywhere and be universally recognized for the contributions of technical professionals in researching, developing, and applying technology to improve global conditions. The Computer Society serves the information and career-development needs of today's computing researchers and professionals with books, conferences, conference publications, magazines, online courses, software development certifications, standards, and technical journals. Known worldwide for its computer-standards activities, the Computer Society promotes an active exchange of ideas and technological innovation among members and technology companies producing today's innovative products and services. Teaching more than 100,000 science and technology professionals, the computer society is the largest of IEEE's 38 societies.

Computer Vision

Computer Vision is an interdisciplinary scientific field. It deals with how actually computers can be made to achieve high level understanding from digital images or vedios.From Engineers perspective, It means automation of the tasks that the human visual system can do.As a scientific discipline, Computer Vision is concerned with the theory behind Artificial Intelligence systems that extract information from images.The image data can take many forms, such as video sequences, views from multiple cameras, or multi dimensional data from a medical scanner.As a technological discipline, Computer Vision seeks to apply its theories and models for the construction of Computer Vision systems.

- M.D.N.AKASH
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3rd Year,CSE

The Bioinformatics Group at C-DAC leverages on the inherent technological expertise to delve into complex biological systems and develop an understanding of underlying processes by providing high throughput solutions and services. The group has a dual capability of expertise in advanced areas of research in computational biology along with understanding of High Performance Computing.The activities of the Bioinformatics Group are aimed towards acquiring in-depth knowledge and understanding the various strata of bio-complexity and hence include an entire spectrum of data analyses and essential research consumables.

- S.SHASHI KUMAR
17881A0544

BIG DATA ANALYTICS

Big data analytics examines large amounts of data to uncover hidden patterns, correlations and other insights. With today's technology, it's possible to analyze your data and get answers from it almost immediately – an effort that's slower and less efficient with more traditional business intelligence solutions. Data analytics technologies and techniques provide a means to analyze data sets and draw conclusions about them to help organizations make informed business decisions. Big data analytics is a form of advanced analytics, which involves complex applications with elements such as predictive model, statistical algorithms and what-if analysis powered by high-performance analytics systems.The importance of big data analyticsDriven by specialized analytics systems and software, as well as high-powered computing systems, big data analytics offers various business benefits, including new revenue opportunities, more effective marketing, better customer service, improved operational efficiency and competitive advantages over rivals.

Big data analytics applications often include data from both internal systems and external sources, such as weather data or demographic data on consumers compiled by third-party information services providers. In addition, streaming analytics applications are becoming common in big data environments as users look to perform real-time-analytics on data fed into Hadoop systems through stream processing engines, such as Spark,Flink and Storm.

Instructured and semi-structured data types typically don't fit well in traditional data warehouses that are based on relational databases oriented to structured data sets. Further, data warehouses may not be able to handle the processing demands posed by sets of big data that need to be updated frequently -- or even continually, as in the case of real-time data on stock trading, the online activities of website visitors or the performance of mobile applications.As a result, many of the organizations that collect, process and analyze big data turn to NoSQL databases, as well as Hadoop and its companion tools, including:

1)YARN
2)Map Reduce
3)Spark
4)HBase
5)Hive

The amount of data that's typically involved, and its variety, can cause data management issues in areas including data quality, consistency and governance. Also, data silos can result from the use of different platforms and data stores in a big data architecture. In addition, integrating Hadoop, Spark and other big data tools into a cohesive architecture that meets an organization's big data analytics needs is a challenging proposition for many IT and analytics teams, which have to identify the right mix of technologies and then put the pieces together.

Mallellu Sai Prashanth(17881A0537)
3rd Year CSE A

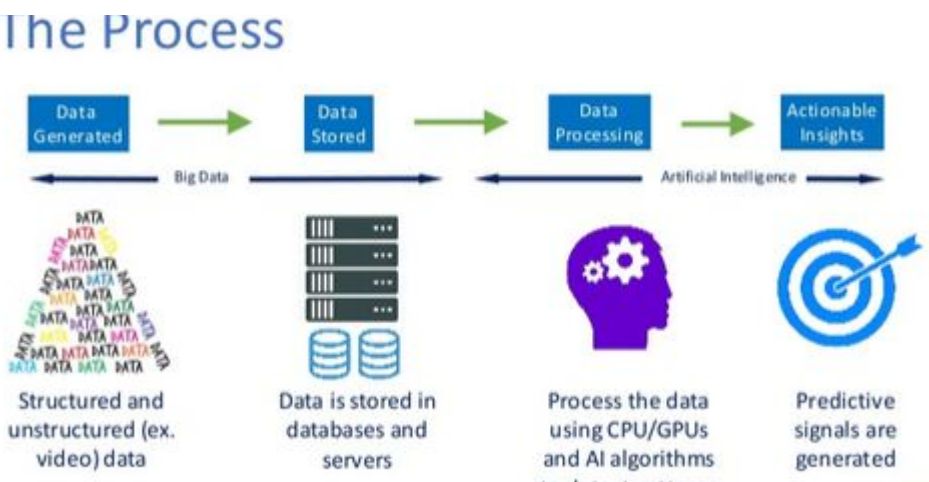
ARTIFICAL INTELLIGENCE

""“Artificial intelligence is growing up fast, as are robots whose facial expressions can elicit empathy and make your mirror neurons quiver.

”AI is an umbrella term for technologies that are inspired by biological systems that give computers human-like abilities related to seeing, reasoning, hearing, and learning. Today, artificial intelligence technology encompasses things like machine learning, natural language processing (NLP), machine reasoning, deep learning, and computer vision. It’s wise to think of this definition as fluid. What is considered AI today, once adopted, will be commonplace, no longer considered AI. So let’s have a look at the AI trends to watch. . It’s predicted that AI will bring a massive shift in how people perceive and interact with technology, with machines performing a greater and greater number of tasks and, in many cases, doing a better job of it than humans.“Many general themes have been thrashed out in the conversation – technological unemployment, autonomous weapons, machine learning systems based on biased data or linked to suppressing dissent, AI systems making moral judgments – but developments and failures will further drive and inform this conversation.

”Conitzer sees interest in AI reaching groups outside of the industry. Lawyers will start to grapple with how laws should deal with autonomous vehicles; economists will study AI-driven technological unemployment; sociologists will study the impact of AI-human relationships. This is the world of the future.It’s not all robot delivery dogs, self-driving cars that let you snooze, or digital assistants that can tell you need to talk about your day. But the best way to predict what people will be talking about in AI in 2019 is to take a look at what happened in 2018 and pay close attention to those end of year reports issued by industry, academia and special interest groups for their expert insights into the year ahead.While some areas continue to steadily grow – machine learning and deep learning – others will creep up on us, suddenly feeling as ubiquitous as the smartphone while steadily becoming capable of increasingly complex behaviours: the AI voice assistant. Meanwhile, there are a few surprises like the arrival of Minority Report-style advertising and the rise of sophisticated computer vision.

The AI Index 2018 Annual Report provides data-driven insights into progress in artificial intelligence research and application over the past year, giving us a valuable source from which we can predict trends for the year ahead. Published by the Human-Centered AI Initiative at Stanford University in December 2018, the report gathers information from activity across research and industry, including the jobs market, as well as public interest in AI as measured by sentiment in media coverage.As the recently launched AI Monthly digest shows, significant improvements, breakthroughs and game-changers in machine learning and AI are months or even weeks away, not years. It is, therefore, worth the challenge to summarize and show the most significant AI trends that are likely to unfold in 2019, as machine learning technology becomes one of the most prominent driving forces in both business and society. AI heavily relies on specialized processors that complement the CPU. Even the fastest and most advanced CPU may not improve the speed of training an AI model. While inferencing, the model needs additional hardware to perform complex mathematical computations to speed up tasks such as object detection and facial recognition.



Nanam Vaishanvi(17881A0556)
3rd Year CSE A

IMAGE FORGERY DETECTION

Nowadays in this developing digital world it became very easy to manipulate any image as you like by using various apps. This manipulation can be done for fun but also to erase some evidences of a crime. There are even such images which are very hard to rectify whether that image is manipulated or not. These images are prime sources of fake news and are often used in malevolent ways such as for mob incitement. Before action can be taken on basis of a questionable image, we must verify its authenticity. Many techniques have been suggested to detect such type of forgery with the original image, but the problem is not being solved. Therefore, constructing a scientific and automatic way for evaluating image authenticity is an important task. In spite of having outstanding performance, all the image forensics schemes developed so far have not provided verifiable information about source of tampering.

Forgery detection techniques divided into two major categories: active and passive methods. Active method requires some prior information of an image hence such methods are not useful while handling images from unknown sources. This is biggest drawback of active method digital watermarking is one of them. Passive method does not require any prior information of digital image. The method works purely by analyzing binary information of digital image without any external information. Copy-move forgery belongs to this method.When they are obtained. We can detect the Image is tampered, if special information cannot be extracted from that obtained image. Watermarking is such a method of active tampering detection, as a security structure is embedded into the image, but most present imaging devices do not contain any watermarking or signature module and that are similar to the application of active protection. This structure is used for integrity evaluation in the sense that if any discrepancy is found with the structure then the image is tampered and an inverse analysis over the structure is done to locate tampered Regions of the image.

Dharmarajula Ajay(18881A05K8)
2nd Year CSE D

Upcoming Events

11th International Conference on Soft Computing and Pattern Recognition (SoCPaR 2019)(www.mirlabs.net/SoCPaR19)

SoCPaR 2019 is organized to bring together worldwide leading researchers and practitioners interested in advancing the state of the art in Soft Computing and Pattern Recognition,The themes for this conference are thus focused on "Innovating and Inspiring Soft Computing and Intelligent Pattern Recognition".

The conference is expected to provide an opportunity for the researchers to meet and discuss the latest solutions, scientific results and methods in solving intriguing problems in the fields of soft Computing and Pattern Recognition. The General Chairs, along with the entire team cordially invite you to submit your latest research results and to take part in the upcoming conference, to be held during December 13-15, 2019 in Hyderabad, India.

11th World Congress on Nature and Biologically Inspired Computing (NaBIC 2019)(www.mirlabs.net/nabic19)

.The 11th World Congress on Nature and Biologically Inspired Computing (NaBIC 2019) to be held in Hyderabad, India during December 13-15, 2019. NaBIC 2019 is organized to provide a forum for researchers, engineers, and students from all over the world, to discuss the state-of-the-art in machine intelligence, and address various issues on building up human friendly machines by learning from nature. The conference theme is “Nurturing Intelligent Computing Towards Advancement of Machine Intelligence”.

OUR GALLERY

Upcoming Events

IEEE DAY CELEBRATIONS AT VARDHAMAN COLLEGE OF ENGINEERING

IEEE Day: Celebrating the first time in history when engineers worldwide and IEEE members gathered to share their technical ideas in 1884.IEEE Day's theme is: "Leveraging Technology for a Better Tomorrow". While the world benefits from what's new, IEEE focuses on what's next. The celebration of IEEE Day on 1 October 2019 is the 10th year celebrating this historic event!.The IEEE Day team is made up of IEEE volunteers and staff. Together, they work to assure that this year's celebration will be even bigger and more impressive than the last editions. The principle task of the IEEE Day team is to initiate, motivate, and coordinate events and efforts to celebrate this day worldwide.

VOLUME 2, ISSUE 2

OUR SB ACTIVITIES

IEEE Computer Society Vardhaman Chapter has a comprehensive and vibrant schedule of events which are being hosted this academic year. This chapter is targeting the most happening tech in the computer science world and is hosting workshops on these cutting edge technologies.

The chapter has so far hosted hands on workshops on "Cyber-Security" and "Cloud Computting \", with many more to come this year.

Two-day Workshop
HANDS ON WITH PYTHON

The aim of the workshop was to teach the basics of Python language .Obtain a strong understanding on fundamentals of programming .Python is an interpreted, high-level, general-purpose programming language.The workshop was attended by 30 Faculty from department of Computer Society in Vardhaman College of Engineering.

-01st August 2019-02nd Aug 2019

Programming Quiz Contest

The aim of the Contest was to Getting aware Competition around world and organized a contest on topics like C,PYTHON,DATA STRUCTURES ,HTML, CSS, Basic JAVA SCRIPT and It was a complete hands-on session so as to make students to learn in a completely different fashion opposite to regular learning .The Competition was attended by 40 students from department Of C.S.E. in Vardhaman College of Engineering.

- 19th August 2019

Programming Contest On C

The aim of the Contest was to Getting aware Competition around world and organized a contest on topics like C,PYTHON,DATA STRUCTURES , and It was a complete hands-on session so as to make students to learn in a completely different fashion opposite to regular learning .The Competition was attended by 70 students from department Of C.S.E. in Vardhaman College of Engineering.

- 23rd August 2019

COMMITTEE

- **Dr. K. Mallikharjuna Babu- Director & CEO, VCE**
- **Dr. S. Sai Satyanarayana Reddy - Principal,VCE**
- **Dr. M.A.Jabbar - IEEE Student Branch Advisor-VCE SB**
- **Dr.Rajanikanth Aluvalu-, HOD,CSE**
- **Sri Pravan Paturi-Chair**
- **V. Niharika-Vice Chair**
- **Md. Burhanuddin Shaikh-Secretary**
- **M. Sai Prashanth-Treasurer**
- **N. Vaishnavi-Joint Treasurer**
- **M. D. N. Akash-Event Coordinator**
- **S. Shashi Kumar-Chief Editor**
- **N. Puneeth-Webmaster and Editor**

Red Hat Orientation

IEEE Computer Society Vardhaman Student Chapter organized an orientation for Students of Computer Science And Engineering . The main motto is to make students get a basic idea about Learning new technologies and "RED-HAT "academy was a open source platform,to evolve in the field of domains like Linux,Deveops,Python,Communication Skills.. We came up with some fun events to cheer them up and get them involved. We inserted our main ideas in between the events with a properly planned schedule and were able to make them know about Course. All the members finally requested the students to make use of all the facilities and get accustomed to the college and get involved in the student chapters.300 students attended the program from department of C.S.E.

- 27th August 2019

Technical Paper Presenation

The aim of the Contest was to Getting aware Competition around world and organized a contest on topics like AI,ML,DATA SCIENCE,Computer Vision ,Chat Bots and It was a complete hands-on session so as to make students to learn in a completely different fashion opposite to regular learning .The Competition was attended by 20 students from department Of C.S.E. in Vardhaman College of Engineering.

- 31st August 2019