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ishare

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Ishare

Editorial

We would like to wholeheartedly thank our honorable Chairman, Secretary, Executive Director and Principal for their continuous encouragement and constant support for bringing out the magazine. We profoundly thank our Head of the Department for encouraging and motivating us to lead the magazine a successful one right from the beginning. Ishare serves as a platform for updating and enhancing upcoming technologies in Information and Communication. We are grateful to all the contributors to this magazine so far. The magazine has been sent to almost 60 Institutions in and around Tamilnadu. So far we have received feedbacks and appreciations from various Institutions.

We would be very pleased to receive your feedbacks. Please send your feedbacks to ishare@ksrcas.edu

By,

Editorial Board

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The top 10 technology trends predicted to reach adoption in 2018 are:

1. **Deep learning (DL)**. Machine learning (ML) and more specifically DL are already on the cusp of revolution. They are widely adopted in datacenters (Amazon making graphical processing units [GPUs] available for DL, Google running DL on tensor processing units [TPUs], Microsoft using field programmable gate arrays [FPGAs], etc.), and DL is being explored at the edge of the network to reduce the amount of data propagated back to datacenters. Applications such as image, video, and audio recognition are already being deployed for a variety of verticals. DL heavily depends on accelerators and is used for a variety of assistive functions.

2. **Digital currencies**. Bitcoin, Ethereum, and newcomers Litecoin, Dash, and Ripple have become commonly traded currencies. They will continue to become a more widely adopted means of trading. This will trigger improved cyber security because the stakes will be ever higher as their values rise. In addition, digital currencies will continue to enable and be enabled by other technologies, such

as storage, cloud computing, the Internet of Things (IoT), edge computing, and more.

3. **Blockchain**. The use of Bitcoin and the revitalization of peer-to-peer computing have been essential for the adoption of blockchain technology in a broader sense. We predict increased expansion of companies delivering blockchain products and even IT heavyweights entering the market and consolidating the products.

4. **Industrial IoT**. Empowered by DL at the edge, industrial IoT continues to be the most widely adopted use case for edge computing. It is driven by real needs and requirements. We anticipate that it will continue to be adopted with a broader set of technical offerings enabled by DL, as well as other uses of IoT.

5. **Robotics**. Even though robotics research has been performed for many decades, robotics adoption has not flourished. However, the past few years have seen increased market availability of consumer robots, as well as more sophisticated military and industrial robots. We predict that this will trigger wider adoption of robotics in the medical space for care giving and other healthcare uses. Combined with DL and AI, robotics will further advance in 2018. Robotics will also motivate further evolution of ethics.

6. **Assisted transportation**. While the promise of fully autonomous vehicles has slowed down due to numerous obstacles, a limited use of automated assistance has continued to grow, such as parking assistance, video recognition, and alerts for leaving the lane or identifying sudden obstacles. We anticipate that vehicle assistance will develop further as automation and ML/DL are deployed in the automotive industry.

7. **Assisted reality and virtual reality (AR/VR)**. Gaming and AR/VR gadgets have grown in adoption in the past year. We anticipate that this trend will grow with modern user interfaces such as 3D projections and movement detection. This will allow for associating individuals with metadata that can be viewed subject to privacy configurations, which will continue to drive international policies for cyber security and privacy.

8. **Ethics, laws, and policies for privacy, security, and liability**. With the increasing advancement of DL, robotics, technological assistance, and applications of AI, technology has moved beyond society's ability to control it easily. Mandatory guidance has already been deeply analyzed and rolled out in various aspects of design, and it is further being applied to autonomous and intelligent systems and in cyber security. But adoption of ethical

considerations will speed up in many vertical industries and horizontal technologies.

9. **Accelerators and 3D**. With the end of power scaling and Moore's law and the shift to 3D, accelerators are emerging as a way to continue improving hardware performance and energy efficiency and to reduce costs. There are a number of existing technologies (FPGAs and ASICs) and new ones (such as memristor-based DPE) that hold a lot of promise for accelerating application domains (such as matrix multiplication for the use of DL algorithms). We predict wider diversity and broader applicability of accelerators, leading to more widespread use in 2018.

10. **Cyber security and AI**. Cyber security is becoming essential to everyday life and business, yet it is increasingly hard to manage. Exploits have become extremely sophisticated and it is hard for IT to keep up. Pure automation no longer suffices and AI is required to enhance data analytics and automated scripts. It is expected that humans will still be in the loop of taking actions; hence, the relationship to ethics. But AI itself is not immune to cyber attacks. We will need to make AI/DL techniques more robust in the presence of adversarial traffic in any application area.

Tree Leaves into Electronic Devices

New method converts tree leaves into electronic devices

The researchers ran a series of standard electrochemical tests on the porous microspheres to quantify their potential for use in electronic devices.

BEIJING: Scientists have discovered a new method to convert dried tree leaves into a porous carbon material that can be used to produce high-tech electronics.

Researchers from Qilu University of Technology in China used a multi-step, yet simple, process to convert phoenix tree leaves into a form

that could be incorporated into electrodes as active materials. The dried leaves were first ground into a powder, then heated to 220 degrees Celsius for 12 hours. This produced a powder composed of tiny carbon microspheres. These microspheres were then treated with a solution of potassium hydroxide and heated by increasing the temperature in a series of jumps from 450 to 800 degrees Celsius.

The chemical treatment corrodes the surface of the carbon microspheres, making them extremely porous. The final product, a black carbon powder, has a very high surface area due to the presence of many tiny pores that have been chemically etched on the surface of the microspheres.

The high surface area gives the final product its extraordinary electrical properties, said Hongfang Ma of Qilu University of Technology, who led the study published in the Journal of Renewable and Sustainable Energy.

The current-voltage curves for these materials indicate that the substance could make an excellent capacitor.

Further tests show that the materials are, in fact, super capacitors, with specific capacitances of 367 Farads/gramme, which are over three times higher than values seen in some graphene supercapacitors, researchers said. A capacitor is a widely used electrical component that

stores energy by holding a charge on two conductors, separated from each other by an insulator.

Super capacitors can typically store 10-100 times as much energy as an ordinary capacitor, and can accept and deliver charges much faster than a typical rechargeable battery.

For these reasons, super capacitive materials hold great promise for a wide variety of energy storage needs, particularly in computer technology and hybrid or electric vehicles.

The super capacitive properties of the porous carbon microspheres made from phoenix tree leaves are higher than those reported for carbon powders derived from other bio- waste materials, researchers said.

The fine scale porous structure seems to be key to this property, since it facilitates contact between electrolyte ions and the surface of the carbon spheres, as well as enhancing ion transfer and diffusion on the carbon surface.

SEARCH ACRONYMS IN SITES

Site	Description / Author / Host
ALLACRONYMS **All Acronyms - Technology Acronyms**	All Acronyms is the most comprehensive and user-friendly dictionary for all Technology acronyms and abbreviations. 3,132,382 Acronyms and Abbreviations, over 212,639 related to technology.
AF Acronym Finder **Acronym Finder**	A searchable database containing common acronyms and abbreviations about all subjects, with a focus on computers, technology, telecommunications, and the military. With more than 1,000,000 human-edited definitions (over 86,000 IT related), Acronym Finder is the world's largest and most comprehensive dictionary of acronyms, abbreviations, and initialisms.
TUCAA	A computer-related acronyms searchable

The Ultimate Computer Acronyms Archive	database. The database is continually updated, meaning that new acronyms are added daily and are immediately visible. TUCAA contains approximately 11,153 acronyms.
 **V.E.R.A - Virtual Entity of Relevant Acronyms**	Have you had a near nervous breakdown reading a computer magazine or manual? Here's the solution. Use either exact or fuzzy searches of the database. There is also a german version, Verzeichnis EDV-Relevanter Akronyme. V.E.R.A. contains approximately 12,010 acronyms and 1,080 URLs up to now. As a rule of thumb, about a hundred acronyms are being added every three months.
 **(SHS) Hacker Acronyms**	(SHS) Hacker Acronym & Abbreviation Knowledgbase (SHS) HAAK is an extremely broad, but detailed list of acronyms and abbreviations in the fields of: Computer & Programming, Desktop Publishing & Video, Electronics, Embedded Systems, E-Mail & Chat Room,

	Automated Data Collection, Government & Military, Graphics & Compression, Hacker, Hacking & Cracking, Networking & Telecommunication, Robotics, Smart Phones, and Virtual Reality. One of the greatest searchable Hacker/Phreak/Cracker acronym lists available. Over 10,608 acronym & abbreviation entries; 1,681 with Internet links to additional information websites.
The Acronym Server (previously The Internet Acronym Server)	Yes, this is the Internet Acronym Server you know and love; we've just changed location and changed appearance. We've been collecting acronyms from all over the Internet for the best part of two decades. Now more mobile friendly. The Acronym Server contains approximately 33,666 acronyms.
Hanford Abbreviation & Acronym Directory	The Abbreviation & Acronym Directory is only a partial listing of Hanford Site acronyms and initialisms and is not intended to replace other reference

	materials. It is intended to provide definitions that are not available elsewhere. The Hanford Abbreviation & Acronym Directory contains approximately 14,865 acronyms.
NetLingo	The Largest List Of Text & Chat Acronyms With more than 82 million people texting regularly, it's no wonder you've seen this cryptic looking code! Commonly used wherever people get online -- including IMing, SMSing, cell phones, Blackberries, PDAs, Web sites, games, newsgroup postings, in chat rooms, on blogs -- these abbreviations are used by people to communicate with each other.
 **TechTerms.com Technology Acronyms**	Tech Terms - Tech Acronyms TechTerms is a free online dictionary of computer and Internet terms. The goal of TechTerms is simple — we want to make technical terms easy to understand. Instead of using high-level terminology, TechTerms definitions are written in

	simple everyday language. We also believe that while definitions of computer terms are helpful, simple explanations of terms with examples are even better. Therefore, most definitions on TechTerms.com include real-life examples of how the term is used. Author/Host: Per Christensson, Sharpened Productions
Babel	A Glossary of Computer Oriented Abbreviations and Acronyms. Used to be updated 3 times a year (January /May/September). Newest version found on web was updated in May 2007 (Graciously mirrored by OOCities.org). Author: Irving Kind & Richard Kind, Current Primary Host Unknown (Please contact us if you know where a newer Babel is hosted) / Host: OOCities.
Wikipedia's List of Computing and IT Abbreviations	Wikipedia's edited list with links of computing and IT acronyms and abbreviations. Last Updated: January 10, 2017

	Author/Host: Wikipedia
Wikipedia's List of Information Technology Acronyms	Wikipedia's edited list of initialisms and acronyms in common and current usage by by members of the Information Technology community. The table contains only current, common, non-proprietary acronyms that are specific to Information Technology. Most of these acronyms appear in IT career certification exams. Last Updated: January 10, 2017 Author/Host: Wikipedia
The Unix Acronym List	This is the Unix Acronym List, a collection of explanations of frequently used acronyms in the computer world, especially in the Unix part thereof. Please note that the purpose of this list is to explain what the letters of the acronyms stand for, not to explain the acronyms themselves. The list does not include words with obvious meanings that are not abbreviations, however it does include words that are not abbreviations but whose

	meanings are not obvious. The list is organized into the following sections: ASCII Characters, C Header Files, C Functions and System Calls, Communications Protocols/TCP Services, Directories, Environment Variables, Files, File Formats, File Name Extensions, HTML Tags and Escapes, Internet Top Level Domains, Miscellaneous, Operating Systems, Organizations/Institutions/Companies, Programming Languages, Shell Built-Ins, Unix Commands, Unix Signals, and Unix Special Files. You can also access The Complete List. Last Updated: January 26, 2007 Author/Host: Wolfram Rösler, Homepage of Wolfram Rösler
Tech Pedia's Mega List of Computer Acronyms	Here is probably the biggest list of computer acronyms collected on a single webpage. Refer and enjoy!!! Last Updated: September 15, 2008 Author/Host: Abhinav Kaiser, Tech Pedia

	(Blog) - The Matrix of Technology
IIRG **The Hackers Acronym Chart**	The Hackers Acronym Chart * Version Twelve [03/31/2000] * Created for The Hacking Community by The International Information Retrieval Guild. "In no way do we feel this chart is totally complete, but we feel its a good start for the novice or lazy hacker to quickly look up acronyms." Last Updated: March 31, 2000 Author/Host: Mercenary, (IIRG) The International Information Retrieval Guild
Phrack Magazine Metal Shop Private's Acronyms	Telecommunication and Phreaking Acronyms from Phrack Magazine Volume Two, Issue 20 Last Updated: December 10, 1988 Author/Host: Various / Phrack Inc. / Taran King (Editor), Phrack Magazine

SMARTWATCH THAT TRACKS EVERY MOVE

Future smartwatches will be able to better analyse and understand our activities by automatically discovering when we engage in some new type of activity.

LONDON: Scientists have created a new algorithm that enables smartwatches to not only record your exercise session but also detect when you are brushing your teeth or cooking, an advance that will provide a richer and more accurate picture of your daily life.

Current smart watches can recognize a limited number of particular activities, including yoga and running, but these are programmed in advance. The new method, developed by researchers from University of Sussex in the UK, enables the technology to discover activities as they happen, not just simply when exercising, but also when brushing your teeth or cutting vegetables.

Traditional models "cluster" together bursts of activity to estimate what a person has been doing, and for how long, researchers said. For example, a series of continuous steps may be clustered into a walk. Where they falter is that they do not account for pauses or interruptions in the activity, and, so, a walk interrupted with two short stops would be clustered into three separate walks.

The new algorithm tracks ongoing activity, paying close attention to transitioning, as well as the activity itself. In the example above, it assumes that the walk will continue following the short pauses, and therefore holds the data while it waits. "Current activity-recognition systems usually fail because they are limited to recognising a predefined set of activities, whereas of course human activities are not limited and change with time," said Hristijan Gjoreski of the University of Sussex.
"Here we present a new machine-learning approach that detects new human activities as they happen in real time, and which outperforms competing approaches," Gjoreski said.

"This new method for activity discovery paints a far richer, more accurate, picture of daily human life," said Daniel Roggen of University of Sussex.

"As well as for fitness and lifestyle trackers, this can be used in health care scenarios and in fields such as consumer behaviour research," he added.

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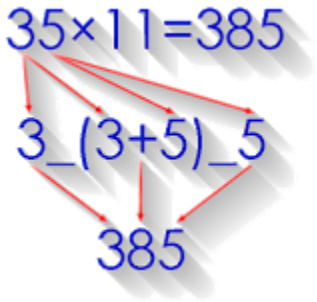

18. Math Tricks

Antoni

20. IBPS PO, RRB, Clerk, SSC CGL & Bank Exams

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17. Current Affairs & Daily General Knowledge Quiz

Testbook

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TalkEnglish

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34. #1 Vocab App: Editorial, Quiz, Grammar, Dictionary

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35. enguru: Spoken English App

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36. GK & Current Affairs 2017, GK Tricks, SSC, IBPS

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39. Online Mock Test Series App

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40. महानोकरी - मराठी नोकरी संदर्भ

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42. Translate English to Hindi Dictionary Offline

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41. GK in Hindi - सामान्य ज्ञान

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72. Gradeup School: NCERT Solutions, CBSE Class 8,9,10

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96. SSC MTS/CHSL/CGL/Constable/Stenographer Adda 2017

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Laptops like the XPS 13 and Lenovo's Yoga 910 have beautiful edge-to-edge screens, a feature that may be included in more laptops next year. Also, 4K screens and HDR (high-dynamic range) technology will make games and movies look stunning. HDR results in more vivid images, and TVs, cameras and monitors supporting the technology are already available. Netflix is also doubling down on HDR. An HDR standards battle is brewing with DolbyVision and HBR3, but GPU makers are supporting both standards. AMD expects DolbyVision to ultimately win.