TECH - SAVVY

THE NEWS LETTER

Mar-May, 2016

Department of Computer Science & Engineering

The Department of Computer Science & Engineering was established in the year 2001. It has intake capacity of 120 students. All the laboratories are well established with state of the art equipment. The department has highly qualified and experienced faculty and technical staff. An innovative teaching and learning process is implemented in imparting quality education to the students which includes conduct of workshops, seminars, industrial tours, expert lectures and various extracurricular activities.

PROF. (DR.) B. SRINIVAS VERMA
Principal

To my mind an Educational Institute is not just about four walls with bricks, mortar and concrete, but about building characters, enriching minds and developing confidence towards above motivation. Every effort is pursued to identify the functional gaps between Holy Mary Institute of Technology & Science and the Premier Institutions of the country like IITs and NITs so as to narrow the caps as soon as possible.

PROF. G. CHARLES BABU
HOD-CSE

It gives me immense pleasure to lead the department of Computer Science & Engineering. The aim of the department is to provide high quality education along with training the students with all the new advancements in the computers field. I congratulate the team of faculty members and the students for their brilliant and original efforts. I wish all the students and faculty a great academic career.

From the Editorial Board

India's struggle for independence was actively shaped, influenced and nurtured by Mohandas Karamchand Gandhi. Reverentially worshipped as Mahatma and respectfully adored as 'Father of the Nation' from 1920 to 1947 for a period of nearly three decades. During this momentous period of our history, Gandhi was undoubtedly the undisputed leader of millions of freedom loving Indians. A critical examination of the strategy adopted by him reveals that it was 'Struggle-Truce-Struggle' as coined by Bipan Chandra. In between the phases of struggle-truce-struggle, Gandhi invented the constructive activity programme of eradication of untouchability, promotion of Khadi and village reconstruction to channelize the energies of the multitude of Gandhi had justifiably become an icon of the 20th century to many Indians and non-Indian protagonists and time is not far off, when he is going to be another avatar of God. Anil Seal, a Cambridge historian and an uncharitable critic of Gandhi observes, "Gandhi's own brand of social conservatism, which sought change through personal reformation rather than popular revolution, his project to uplift the Harijans while keeping them within the Hindu straight jacket, the very cause of their degradations, his desire to take India back to its traditional and rural roots, with support from many captains of industry, his commitment to harmony between the Hindus and the Muslims while stressing Hinduism as a distinctive force, and his hopes, through Satyagraha, of curbing the violence which lies just under the fragile crust of order in Indian society, all suggest that Gandhi's contribution has been as ambiguous as India's chequered past and its uncertain future".

Department of Computer Science & Engineering

A Short Note on Software Engineering

Software engineering (**SWE**) is the application of engineering to the development of software in a systematic method.

Typical formal definitions of **software engineering** are:"research, design, develop, and test operating systems-level software, compilers, and network distribution software for medical, industrial, military, communications, aerospace, business, scientific, and general computing applications." "the systematic application of scientific and technological knowledge, methods, and experience to the design, implementation, testing, and documentation of software" "the application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software" "an engineering discipline that is concerned with all aspects of software production" and "the establishment and use of sound engineering principles in order to economically obtain software that is reliable and works efficiently on real machines

Software engineering sees its practitioners as individuals who follow well-defined engineering approaches to problem-solving. These approaches are specified in various software engineering books and research papers, always with the connotations of predictability, precision, mitigated risk and professionalism. This perspective has led to calls for licensing, certification and codified bodies of knowledge as mechanisms for spreading the engineering knowledge and maturing the field One of the core issues in software engineering is that its approaches are not empirical enough because a real-world validation of approaches is usually absent, or very limited and hence software engineering is often misinterpreted as feasible only in a "theoretical environment.

A Short Note On Artificial Intelligence

The modern definition of artificial intelligence (or AI) is "the study and design of intelligent agents" where an intelligent agent is a system that perceives its environment and takes actions which maximizes its chances of success. John McCarthy, who coined the term in 1956, defines it as "the science and engineering of making intelligent machines." The term artificial intelligence is also used to describe a property of machines or programs: the intelligence that the system demonstrates. AI research uses tools and insights from many fields, including computer science, psychology, philosophy, neuroscience, cognitive science, linguistics, operations research, economics, control theory, probability, optimization and logic. AI research also overlaps with tasks such as robotics, control systems, scheduling, data mining, logistics, speech recognition, facial recognition and many others. Computational intelligence Computational intelligence involves iterative development or learning (e.g., parameter tuning in connectionist systems). Learning is based on empirical data and is associated with non-symbolic AI, scruffy AI and soft computing. Subjects in computational intelligence as defined by IEEE. Fuzzy systems: techniques for reasoning under uncertainty, have been widely used in modern industrial and consumer product control systems; capable of working with concepts such as 'hot', 'cold', 'warm' and 'boiling'. Evolutionary computation: applies biologically inspired concepts such as populations, mutation and survival of the fittest to generate increasingly better solutions to the problem. These methods most notably divide into evolutionary algorithms (e.g., genetic algorithms) and swarm intelligence (e.g., ant algorithms). With hybrid intelligent systems, attempts are made to combine these two groups. Expert inference rules can be generated through neural network from statistical learning such as in ACT-R or CLARION.Thus, systems integration is seen as promising and perhaps necessary for true AI, especially the integration of symbolic and connectionist models.

App. Of 2014

JibJab is a digital entertainment studio based in Venice, California. Founded in 1999 by Evan and Gregg Spiridellis, it first achieved widespread attention during the 2004 US presidential election when their video of George W. Bush and John Kerry singing "This Land Is Your Land" became a viral hit. The company creates, produces and distributes original content. It has three main sections on the website: eCards; "Everyday Fun Sendables" such as funny videos; and "Originals", including "This Land", "Time for Some Campaignin'", and "Big Box Mart". JibJab has also produced commercials and shorts for clients such as Sony, Noggin, and Disney. For the 2004 presidential election, JibJab created a Flash movie entitled *This Land*, which featured George W. Bush and John Kerry singing a parody of Woody Guthrie's song "This Land Is Your Land". This animation was an instant success, and the site was listed number one on *Alexa'*s "Movers and Shakers" list. The video was so popular, it was viewed on every continent (including Antarctica) as well as the International Space Station.The traffic surge forced JibJab's server to be shut down after one day, and the clip was placed on AtomFilms, where it got more than 1 million hits in 24 hours. After being linked to on thousands of websites, the song was featured several times in the printed media and on television, including *NBC Nightly News*, *Fox News* and *ABC World News Tonight*. On July 26, 2004, the creators appeared on *The Tonight Show* with Jay Leno. In December 2004 the brothers were named People of the Year by Peter Jennings. The Richmond Organization, a music publisher that owns the copyright to Guthrie's tune through its Ludlow Music Unit, threatened legal action. JibJab responded with a lawsuit in a California federal court, claiming the song was protected under a fair use exemption for parodies. JibJab and Ludlow Music reached a settlement after JibJab's attorneys unearthed evidence that the song had passed into the public domain in 1973. The terms of the settlement allowed for the continued distribution of *This Land*.[5] Jim Meskimen voiced almost all the characters.

Cloud Magic App.

Newton is an email management application for iOS, Android, Chrome OS and macOS developed by CloudMagic, Inc. The application is known for its searching capabilities, cross-platform abilities and user interface. It has been referred to as an email client better than Gmail's native app. As from September 15, 2016, CloudMagic has been renamed to Newton Mail with premium services.

cloudMagic provides support for Gmail, Hotmail, Yahoo! Mail, Outlook.com, iCloud, Google Apps, Microsoft Exchange, Office 365, Mail.com, GMX, AOL and IMAP accounts. The application currently runs on all iOS devices running iOS 8 and above, and Android devices running Android 4.0 and above. CloudMagic was one of the first apps on Chrome OS when Google decided to bring Android apps to Chromebook.

In March 2014, CloudMagic announced Cards, a feature that connects popular services like Evernote, Pocket, Trello, Todoist, Asana, Microsoft OneNote, Salesforce.com, Zendesk and integrates them with the app. Cards make it easier for users to complete their workflow without leaving their email. CloudMagic was one of the first apps to support Android Wear when it was announced in Google I/O, June 2014.

Technical corner

SKRWT is a very specific tool and one of the only available apps that can correct lens distortion and shift perspective. It's an amazing app that finally corrects a problem that's been plaguing smartphone photography since pretty much forever. With a simple interface anyone can pick up, we'd recommend the app for both casual smartphone shooters and serious photographers alike.—Kevin Lee SKRWT – the missing link in high-end smartphone photography – is the most powerful keystone- and lens-correction tool out there and has been selected for the App Store's "Best Apps 2014". Discover never-before-seen editing features and enhance your smartphone photography with just a few taps. All hail symmetry! CORRECT LENS DISTORTION Converging lines have always been a given in smartphone photography due to the fixed focal length of today's mobile phones – but not anymore. You can now correct horizontal and vertical perspective distortion with just one swipe. It's really that simple! ALL-PURPOSE LENS CORRECTION SKRWT's Sixth Lense Filter is a real game changer: Shots taken with adapters, DSLRs or with a GoPro now get their very own all-inclusive distortion-correction – drone enthusiasts welcome! 4-POINTS IMAGE TRANSFORMATION 4PNTS is a new approach to working with perspective that's basically more on the manipulation side of things.

Logic Puzzles

1. Draw the missing figure in the above sequence?
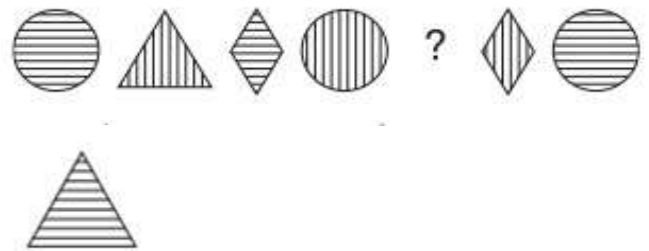
Sol.
The sequence progresses circle, triangle, diamond with alternate horizontal/vertical lines.

2. Draw the missing figure in the above sequence?

Sol.

At each stage lines are added to a new corner working anticlockwise and a new line is added to corners already containing a line.

Vision

To produce technically competent and qualified professionals with cutting edge of research and innovative technology for the benefit of student community in particular and society in large.

Mission

M1:   To be a centre of excellence in Technical and Higher Education

M2:   To be a centre of excellence in Research

M3:   To be a centre of excellence in Support Services

Program Educational Objective

PEO 1:

To prepare the students for entry into successful employment as software engineers in industry, service, consulting and/or government organizations or for advanced study at leading graduate schools in engineering, business, management or other technical or non-technical fields.

PEO 2:

To encourage teamwork skills among the students to design and implement complex software systems, particularly the ability to work with people from other fields in integrated engineering teams and develop the leadership skills for maximizing the performance of those teams.

PEO 3:

To offer a curriculum that encourages students to become broadly educated engineers and to equip with the attitudes and skills to foster learning themselves for life long, an ability to communicate effectively with various audiences and function as responsible member of the global society.

POs AND PSOs of Department

PROGRAMME OUTCOMES

(a) An ability to apply knowledge of mathematics, science and engineering.

(b) An ability to design and conduct experiments, as well as to analyze and interpret data.

(c) An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health & safety, manufacturability and sustainability.

(d) An ability to function on multidisciplinary teams.

(e) An ability to identify, formulates and solve engineering problems.

(f) An understanding of professional and ethical responsibility.

(g) An ability to communicate effectively.

(h) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context.

(i) A recognition of the need for and an ability to engage in life-long learning.

(j) A knowledge of contemporary issues.