Dept. of Computer Science

Interface

Vol : 3 | Issue : 1 | February 2016

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Champions all the Way

Galaxia Science Exhibition

Platform to Innovate

From the Principal…

Fr. Josekutty P.D, Principal

"INTERFACE" published by the Department of Computer Science of Kristu Jayanti College is a canvas which portrays all the activities of the department.

Information technology has touched human lives in many myriad ways. Furthermore, it has opened infinite routes of receiving information any time and at any place, allowing us to live a much qualified and informed life. Technology has changed market and workplace environment and the mode of working. In the field of education, technology has contributed substantially to make it more learners centric. Rightly technology is complementing the teaching learning process. Responsible use of information technology is essential as it can be misused in a wide variety of forms. The student community has to be rightly educated on the ethical use of information technology.

I congratulate the Department of Computer Science in bringing out the newsletter and wish that this academic exercise helps them in exploring the technology in its varied facets.

From the Vice-Principal…
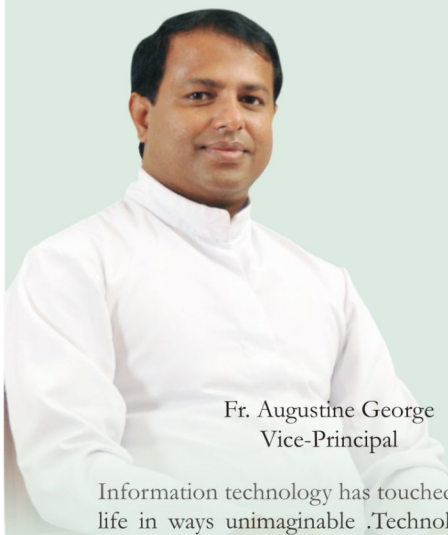
Fr. Augustine George
Vice-Principal

Information technology has touched human life in ways unimaginable .Technology has changed the way in which every human endeavor is pursued. It has changed the way in which commerce is transacted, information is disseminated and how even people interact. Mobile computing is making the world come to one's own palm. The field of education is witnessing changes in leaps and bounds. The information and communication technology has enabled to make a 360 degree turn in the way in which knowledge is disseminated. The receiver of knowledge is more important as there are numerous sources disseminating the same knowledge in diverse ways making it more learners centric.

Human mind is keeping on exploring and innovating and the challenge is to cope up with the change. For the student community this decade is showing more opportunities. Information Technology has taken entrepreneurship to a new level. The very powerful tool of technology is there in the hand of every student and how one enhances his skills and uses the tool decides the future.

But there is a huge gap between the knowledge acquired by the students through formal education system and the industry expectations about the competency of the students. Bridging this gap through continuous 'skilling' requires 'going an extra mile'. Many such 'extra mile' initiatives are already undertaken by our college by organizing guest lectures, national and international conferences based on themes of current relevance, industry visits etc. Through these initiates we get a chance to understand the perspectives and ideas of others. But along with that we also need a platform to discuss our own ideas and to tap in house talent.

The Department of Computer Science always provides a platform for every aspiring student to enhance his skills and to showcase their talents through various platforms. The learning environment is conducive for experimenting and innovating with the knowledge assimilated through curricular and co-curricular activities during their course.

Interface is yet another platform to apply the creativity and showcase the talents of young minds in the diverse fields of communication technology. I would also take this opportunity to congratulate all the faculty and students who have worked tirelessly for the successful publication of this Newsletter. I wish the Department of Computer Science all success in this creative endeavor.

Message

Fr. Lijo P Thomas
Head, Dept. of Computer Science

The department of Computer Science (UG) true to the vision and mission of the college has efficaciously navigated the years of its existence pursuing the quest to empower students with comprehensive understanding, insight, skill and training both at the academic level and in the highly competitive global industrial market. The department believes that education is not an act of accomplishing knowledge but a means of enhancing erudition skills. The scholastic parameters are furthered through partnerships and collaborations with institutions of higher education, which assists both faculty and students to expand their knowledge and skills through exposure to national and global perspectives. The keywords of the department- Persevere and surpass-encourages passionate participation in web-enhanced courses, diffusion of information and helps hone the technical prowess of the students.

Kautilya, the famous ancient scholar, considered knowledge as the foremost distinguishing attribute in a person and wrote that "a king is admired only in his own territory but a knowledgeable scholar commands admiration and respect worldwide." The department of Computer Science organizes regular interactions with professionals from the industry and initiates value added and certificate courses to bridge the gap and enhance their expertise.The co-curricular activities of the department monitored by the Computer Academy, organizes intra collegiate fest -Synchronize, intercollegiate fest-Xactitude and science exhibition-Galaxia. By integrating such pragmatic learning into the academic programme, undergraduates develop a calibre that fosters critical thinking, free inquiry and constructive exchange of ideas.

The relentless effort of talented and dedicated faculty and students, their constant quest for knowledge, their dedication and commitment to their purpose, together with the fervor to achieve the unattainable has undoubtedly made the department play a significant role in the college and has enabled the department to scale new heights, translating the dreams into reality.

About the Department

Prof. Sevuga Pandian A
Co-ordinator, Computer Science (UG)

The Department of Computer Science (UG) has a proud history spanning over one and a half decades since its inception. The spirit of innovation and academic excellence have been defining characteristics of our department over the years. Our programs are geared to provide an ideal blend of theory with a hands-on education for our students. Our students receive a broad education that includes a relevant contemporary industry related curriculum, excellent problem solving and communication skills, and the ability to work in cross-disciplinary teams.

The IT industry is changing rapidly and to keep pace with rapid changes in the IT sector; the Department of Computer Science (UG) has an auspicious club Computer Academy with more than 600 members. Computer Academy strive to confluence between the technology and academics through series of programmes like Guest lectures, Workshops, Seminars, Industrial Visit, Intra, Inter Collegiate fest, Science Exhibition and Technical Community activities.

An intra-collegiate fest "Synchronize" is organized for the first and second year students of computer science by the third year students where they get an opportunity to organize, participate and showcase their potentials. "Xactitude" is National level inter collegiate computer science fest envisaged by the academy where students from other colleges can showcase their intelligence and creativity in myriad facets of information technology. The innovative club of our department initiated "Galaxia" a two day science exhibition in which students from our college and other colleges develop computer science, electronics, statistics and mathematics projects which provide them an opportunity to experiment and innovate along with the curriculum learning.

The Department has an Academic Alliance with EMC^2. This Academic Alliance, one of the industry's first initiatives created to address the cloud and data science skills gap, helps to ensure the industry has a strong pipeline of graduates to meet its future needs. Membership in the Academic Alliance provides free access to "open" curriculum-based education, covering topics such as information storage and management (ISM), virtualization, cloud computing, and Big Data analytics. The Academic Alliance provides faculty with free training and resources to teach information infrastructure technologies.

Department of Computer Science signed a MoU with University of Fraser Valley, [Vancouver, British Columbia, Canada]. This is a huge benefit for BCA students. It's a chance to go abroad and do their one year extended study and get their degree from the UFV.

The shared values of our department are exemplified in various extension activities like Social Outreach Programme (SOP) and Computer Literacy Programme (CLP). Social outreach programmes provides the students an opportunity to recognize their social responsibility to give back and contribute to the development of the society.

SWARM INTELLIGENCE

Ms.K.Kalaiselvi

Swarm intelligence is the discipline in Evolutionary Computation techniques which deals with natural and artificial systems composed of many individuals called Swarm. A swarm is a large number of homogenous, simple agents interacting locally among themselves, and their environment, with no central control to allow a global interesting behavior to emerge. The focus is on the collective behavior of the individuals which is resulted from the local interactions of the individuals with each other and their environment. Some of the recent swarm intelligence systems include the pattern study from Ant colonies, Fish school, Bird Flocks, Animal herds, Bacterial Forage which are designed to find solutions for the optimization problems.

Swarm-based algorithms have recently emerged as a family of nature-inspired, population-based algorithms that are capable of producing low cost, fast, and robust solutions to several complex problems. Swarm Intelligence (SI) can therefore be defined as a relatively new branch of Artificial Intelligence that is used to model the collective behavior of social swarms in nature, such as ant colonies, honey bees, and bird flocks. Although these agents (insects or swarm individuals) are relatively unsophisticated with limited capabilities on their own, they are interacting together with certain behavioral patterns to cooperatively achieve tasks necessary for their survival. The social interactions among swarm individuals can be either direct or indirect. Examples of direct interaction are through visual or audio contact, such as the waggle dance of honey bees. Indirect interaction occurs when one individual changes the environment and the other individuals respond to the new environment, such as the pheromone trails of ants that they deposit on their way to search for food sources. This indirect type of interaction is referred to as stigmergy, which essentially means communication through the environment.

In the past decades, biologists and natural scientists have been studying the behaviours of social insects because of the amazing efficiency of these natural swarm systems. In the late-80s, computer scientists proposed the scientific insights of these natural swarm systems to the field of Artificial Intelligence. In 1989, the expression "Swarm Intelligence" was first introduced by G. Beni and J. Wang in the global optimization framework as a set of algorithms for controlling robotic swarm. In 1991, Ant Colony Optimization (ACO) was introduced by M. Dorigo and colleagues as a novel nature-inspired meta heuristic for the solution of hard combinatorial optimization (CO) problems. In 1995, particle swarm optimization was introduced by J. Kennedy et al. and was first intended for simulating the bird flocking social behavior. By the late-90s, these two most popular swarm intelligence algorithms started to go beyond a pure scientific interest and to enter the realm of real-world applications. In 2005, Artificial Bee

Colony Algorithm was proposed by D. Karabago as a new member of the family of swarm intelligence algorithms.

Since the computational modeling of swarms was proposed, there has been a steady increase in the number of researches reporting the successful application of Swarm Intelligence algorithms in several optimization tasks and research problems. Swarm Intelligence principles have been successfully applied in a variety of problem domains including function optimization problems, finding optimal routes, scheduling, structural optimization, and image and data analysis. Computational modeling of swarms has been further applied to a wide-range of diverse domains, including machine learning, bioinformatics and medical informatics, dynamical systems and operations research.

Swarm Intelligence (SI) Models

Swarm intelligence models are referred to as computational models inspired by natural swarm systems. To date, several swarm intelligence models based on different natural swarm systems have been proposed, and successfully applied in many real-life applications. Some application examples of natural system of SI includes Particle Swarm optimization, Ant colony optimization, Artificial bee colony algorithm, Differential evolution, Artificial immune systems , Bat algorithm ,Glow worm swarm optimization , River formation dynamics and Bacterial Foraging .

Characteristics of a Swarm Intelligence System

It is composed of many individuals; The individuals are all identical (ie Homogeneous); Stigmergy principle is followed : The individuals interact among themselves based on the behavioral rules which exploits only the local information via the local environment. The groups behavior is self organized which depends on the individuals interaction with each other and with the environment. Individuals acts on the basis of rules and performs some collective behavior without any individual controlling the group. Each individual has a stochastic behavior that depends on its local perception of the neighborhood.

These properties enable enhances the design of Swarm Intelligence system which are Scalable, Parallel and Fault Tolerant.

Frame Work of Swarm Intelligence
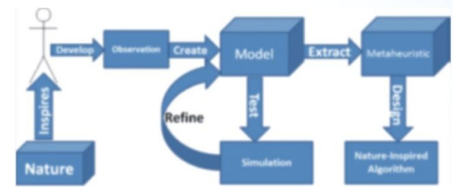
Applications of COTS Components

Dr. N. Gnanasankaran

Introduction - The cost of software development can be significantly reduced by fostering a software component industry. In the past, most softwares were marketed as complete applications; today we are moving toward an economy where it is hoped that components can perform dual purposes and thus be sold as stand-alone entities. When components can be marketed in this manner, they are referred to as "Commercial Off-The-Shelf"(COTS). It's interesting to note that more than 99% of computer instructions come from COTS products (Basili, 2001). It's inevitable that your SW for any activity will involve COTS software. Your project team simply cannot write every component needed to make an effective SW-related decisions and analyses. But, your evaluation of COTS is important so as to minimize risks and maximize benefits within the scope of your projects.Almost without exception, every software-related endeavor will utilize a significant percentage of COTS software components. In this article, the definition of COTS, its virtues, skills needed to use it, integration of COTS components and the drawbacks of COTS SW are detailed.

COTS - Definition According to Brownsword et al,

1. A COTS product is sold, leased, or licensed to the general public and offered by a vendor trying to profit from it;

2. supported and evolved by the vendor, who retains the intellectual property rights; available in multiple, identical copies and used without source code modification

Using Existing Software, including Commercial off-The Shelf Software - In the 1970s and 1980s, software reuse was identified as a key strategy for reducing software costs. This was known as "Japanese software factory" approach- Design (architecting) for reuse. In the 1990s object-oriented software makes integration of separately developed software components more feasible. The software profession has got reusable components, but they don't meet industry criteria for appropriateness for reuse. Design for reuse "the right way" seems too expensive for commercial software developers, just as it was for system developers.

Virtues of Commercial Off-The-Shelf - Costs are lower than custom development, because product development costs are shared over many users. Many others participate in finding bugs and limitations to the product (and the producer may actually fix these bugs).You can incorporate new technology more quickly because you use products containing it without having to learn all about it yourself .Development time and risk are avoided when the COTS product provides all the features you need

Key Skills in Using COTS Software - Different skills are needed for using COTS Software effectively. Most COTS SW packages could be designed/implemented better by your good people .Designing and writing code are more fun for most software engineers than integrating the (suboptimal) packages available off-the-shelf .Integration skills are different than development skills .Problem-resolution is different when you must work around limitations/characteristics of a COTS SW package

Drawbacks of COTS Software - Harmonization of a COTS package with Platform-specific operating system variants and peripheral drivers, Operating system version(s) , Companion COTS SW packages , Feature availability and timing (vaporware) , Bug fixes often only available in later releases , Difficult features dropped in later releases ,Features glut can swell resource requirements ,Long-term support of COTS software – Company survival (escrowing source code) and Evolution of features .

Integration/Composition of COTS Components - When we look at developing software systems using components, it is the work of integrating the components with each other and the rest of the system that is the most important part of the component-based development process. Depending on the component model used and the actual

components that are to be integrated, more or less work will have to be done in order to get all the parts of the system to function correctly together. It is this composition of different parts that make reasoning about quality attributes in a component-based system more complex than in a less modular system. Each component will have its own quality attribute profile, but when interfaced and used together with other components, the resulting composition may show a different quality attribute profile altogether.

When integrating components into a system assembly, it would be useful to be able to predict how the quality attributes for the whole system will be. The predictability of a composed system depends on many variables, not just the components or the component framework. The quality of the extra code needed to integrate the components into a functioning system (the glueware) will also affect the system, and perhaps even more importantly, process and organizational factors will also affect the system.

Conclusions on Using COTS Software - In the future, most software development efforts won't be able to afford not to use off-the-shelf software , Used inappropriately, off-the-shelf software can cost more to use than developing needed software functionality from scratch , Understanding what it takes to use COTS SW effectively is very important, so you can help your enterprise make the right business decisions.

# Upgrading Data Integrity and Data Intrusion in Cloud Computing

Dr. Anthony Vincent. B

The usage of cloud computing has improved rapidly in many sectors. Cloud computing provides many assistances in relations with low cost and ease of access of data. Ensuring the security of cloud computing is a key factor in the cloud computing environment, as users often stockpile sensitive materials with cloud storage benefactors but these benefactors may be entrusted to an initiative towards the "Inter-clouds" or "Cloud-Of-Clouds" has occurred recently.

This article emphasizes on the issues related to the data integrity aspect in cloud computing. As data and information is shared with a third party, cloud computing users want to avoid an entrusted cloud provider. Defending private and important materials, such as credit card details. In addition, the impending for movement from an Inter-clouds to a cloud-of-clouds environment is inspected and investigated recently related to security issues in cloud computing is plotted.
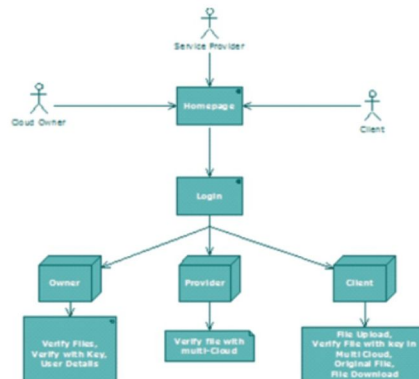
However Cloud service providers like Amazon Web Service, Rackspace, cloud Sigma etc should safeguard the security of their esteemed customers data and should be in authority if any security threats affects their customer's service based on structure or package, as the study goes pay-as-you-go approach for customers where the goal is to take full advantage in limited amount of effort. One way to solve the ease is to introduce IaaS, PaaS, and SaaS Models to protect Data Integrity and Data Intrusion as per the figure 1. In practice, we can tackle the issue with few points like Avoid storing sensitive information in the cloud, Read the user agreement to find out how your cloud service storage works, Be serious about passwords, Encrypt, and Use an encrypted cloud service. As this requests may resolve the huge data sets proficiently to feel the customer data are safe and secured.

SPARK-Lightning Fast Cluster Computing

Mr.Jayasheelan

Spark is an open source big data processing framework built around speed, ease of use, and sophisticated analytics. It was originally developed in 2009 in UC Berkeley's AMPLab, and open sourced in 2010 as an Apache project. Spark has several advantages compared to other big data and MapReduce technologies like Hadoop and Storm.Spark provides a faster and more general data processing platform. Spark lets you run programs up to 100x faster in memory, or 10x faster on disk, than Hadoop. Spark gives us a comprehensive, unified framework to manage big data processing requirements with a variety of data sets that are diverse in nature (text data, graph data etc.) as well as the source of data (batch v. real-time streaming data).Spark enables applications in Hadoop clusters to run up to 100 times faster in memory and 10 times faster even when running on disk.Spark lets you quickly write applications in Java, Scala, or Python. It comes with a built-in set of over 80 high-level operators. In addition to Map and Reduce operations; it supports SQL queries, streaming data, machine learning and graph data processing. Developers can use these capabilities stand-alone or combine them to run in a single data pipeline use case.

Spark Features - Spark takes MapReduce to the next level with less expensive shuffles in the data processing. With capabilities like in-memory data storage and near real-time processing, the performance can be several times faster than other big data technologies.Spark also supports lazy evaluation of big data queries, which helps with optimization of the steps in data processing workflows. It provides a higher level API to improve developer productivity and a consistent architect model for big data solutions.Spark holds intermediate results in memory rather than writing them to disk which is very useful especially when you need

to work on the same dataset multiple times. It's designed to be an execution engine that works both in-memory and on-disk. Spark operators perform external operations when data does not fit in memory. Spark can be used for processing datasets that larger than the aggregate memory in a cluster.Spark will attempt to store as much as data in memory and then will spill to disk. It can store part of a data set in memory and the remaining data on the disk. You have to look at your data and use cases to assess the memory requirements. With this in-memory data storage, Spark comes with performance advantage.

Other Spark features include:Supports more than just Map and Reduce functions, Optimizes arbitrary operator graphs,Lazy evaluation of big data queries which helps with the optimization of the overall data processing workflow,Provides concise and consistent APIs in Scala, Java and Python. Spark is written in Scala Programming Language and runs on Java Virtual Machine

(JVM) environment. It currently supports the following languages for developing applications using Spark: Scala, Java, Python, Clojure and R

Spark Ecosystem - Spark ecosystem and provide additional capabilities in Big Data analytics and Machine Learning areas. These libraries include:

Spark Streaming: Spark Streaming can be used for processing the real-time streaming data. This is based on micro batch style of computing and processing. It uses the DStream which is basically a series of RDDs, to process the real-time data.

Spark SQL: Spark SQL provides the capability to expose the Spark datasets over JDBC API and allow running the SQL like queries on Spark data using traditional BI and visualization tools. Spark SQL allows the users to ETL their data from different formats it's currently in (like JSON, Parquet, a Database), transform it, and expose it for ad-

hoc querying.

Spark MLlib: MLlib is Spark's scalable machine learning library consisting of common learning algorithms and utilities, including classification, regression, clustering, collaborative filtering, dimensionality reduction, as well as underlying optimization primitives.

Spark GraphX: GraphX is the new (alpha) Spark API for graphs and graph-parallel computation. At a high level, GraphX extends the Spark RDD by introducing the Resilient Distributed Property Graph: a directed multi-graph with properties attached to each vertex and edge. To support graph computation, GraphX exposes a set of fundamental operators (e.g., subgraph, joinVertices, and aggregateMessages) as well as an optimized variant of the Pregel API. In addition, GraphX includes a growing collection of graph algorithms and builders to simplify graph analytics tasks.

WATIR – Web Application Testing Tool

Mr. Ramanathan. G

Watir-WebDriver (Watir is short for Web Application Testing in Ruby) is a Ruby gem which allows you to automate your browser (make it click a button, submit a form, wait for some text to appear before continuing, and so on). With its help, a real user can be simulated, allowing you to automate the full stack testing of your web application. Watir, pronounced water, is an open-source (BSD) family of Ruby libraries for automating web browsers. It allows you to write tests that are easy to read and maintain. It is simple and flexible.Watir-WebDriver syntax is very clean and inspired by similar frameworks in other languages (Watij for Java and Watin for C#). Watir only supports Internet Explorer, while Watir-WebDriver supports Chrome, Firefox and Safari as well. Think of Watir-WebDriver as Watir 2.0, or as Watir (classic) + WebDriver + some additional features. WebDriver was started by Google to allow browser automation tools to get closer to simulating

real user behavior. Even better, all major browser automation frameworks have implemented it. Watir drives browsers the same way people do. It clicks links, fills in forms, and presses buttons. Watir also checks results, such as whether expected text appears on the page.Watir is a family of Ruby libraries but it supports your app no matter what technology it is developed in. Whilst Watir supports only Internet Explorer on Windows, Watir-WebDriver supports Chrome, Firefox, Internet Explorer, Opera and also running in headless mode (HTMLUnit).Like other programming languages, Ruby gives you the power to connect to databases, read data files and spreadsheets, export XML, and structure your code as reusable libraries. Unlike other programming languages, Ruby is concise and often a joy to read.

To get started, first install Watir-web driver with gem install watir-webdriver. Also, make sure you have Firefox installed (we'll be using it for this example). Save the following into a new watir_script.rb file and run it:

require 'watir-webdriver'

browser = Watir::Browser.new :firefox # should open a new Firefox window

browser.goto

'http://nitrowriters.com/form/form.html' # or type the local path to your downloaded copy

browser.text_field(:id => 'my_text_field').set 'Yes!'

browser.textarea(:class => 'element textarea medium').set

browser.radio(:name => 'familiar_rails', :value => '1').click # yes, I'm very familiar

sleep 2 # puts the entire program to sleep for 2 seconds, so you can see the change

browser.radio(:name => 'familiar_rails', :value => '3').click # actually, just a bit...

browser.text_field(:name => 'favorite_1').set

browser.text_field(:id => 'favorite_2').set

browser.checkbox(:index => 1).click

browser.checkbox(:index => 2).click

sleep 2 # puts the entire program to sleep for 2 seconds

browser.checkbox(:index => 1).click

browser.select_list(:id => 'usage').select

browser.select_list(:id => 'usage').select_value '2'

Blue Brain: Reverse Engineering the Human Brain

Mr. G. Prathap

The Blue Brain Project is an attempt to reverse engineer the human brain and recreate it at the cellular level inside a computer simulation. Goals of the project are to gain a complete understanding of the brain and to enable better and faster development of brain disease treatments. The research involves studying slices of living brain tissue using microscopes and patch clamp electrodes. Data is collected about all the many different neuron types. This data is used to build biologically realistic models of neurons and networks of neurons in the cerebral cortex. The simulations are carried out on a Blue Gene supercomputer built by IBM. Hence the name "Blue Brain". The simulation software is based around Michael Hines's NEURON, together with other custom-built components. The largest simulations are of microcircuits containing around 100 cortical columns. Such simulations involve approximately 1 million neurons and 1 billion synapses. This is about the same scale as that of a honey bee brain. It is hoped that a rat brain neocortical simulation (~21 million neurons). A full human brain simulation (86 billion neurons) should be possible.

There are three main steps to building the virtual brain: data acquisition, simulation

Data acquisition:Data acquisition involves taking brain slices, placing them under a microscope, and measuring the shape and electrical activity of individual neurons. This is how the different types of neuron are studied and catalogued. The neurons are typed by morphology (i.e. their shape), electrophysiological behavior, location

within the cortex, and their population density. These observations are translated into mathematical algorithms which describe the form, function, and positioning of neurons. The algorithms are then used to generate biologically-realistic virtual neurons ready for simulation. One of the methods is to take 300 μm-thick sagittal brain slices from the somatosensory cortex (SA1) of juvenile Wistar rats (aged 14 to 16 days). The tissue is stained with biocytin and viewed through a bright field microscope. Neuronal 3D morphologies are then reconstructed using the Neurolucida software package (pictured below, far right) which runs on Windows workstations. Staining leads to a shrinkage of 25% in thickness and 10% in length, so the reconstruction process corrects for this. Slicing also severs 20% to 40% of axonal and dendritic arbors, so these are regrown algorithmically. The electrophysiological behavior of neurons is studied using a 12 patch clamp instrument (pictured below left). This tool was developed for the Blue Brain Project and it forms a foundation of the research. It enables twelve living neurons to be concurrently patched and their electrical activity recorded. The Nomarski microscope enhances the contrast of the unstained samples of living neural tissue. Carbon nanotube-coated electrodes can be used to improve recording. Around 200 different types of ion channel are found in the cell membranes of cortical neurons. Different types of neuron have different mixes of channels - and this contributes to differences in their electrical behavior. The genes for these channels are cloned at the lab, overexpressed in cultured cells, and their electrical behavior recorded. Over 270 genes are known to be associated with voltage-gated ion channels in the rat. The results of this work are publicly available online at Channelpedia.

NEURON:The primary software used by the BBP for neural simulations is a package called

NEURON Michael Hines and the BBP team collaborated to port the package to the massively parallel Blue Gene supercomputer.

Simulation: Simulation speed in 2012 simulations of one cortical column (~10,000 neurons) run at approximately 300 x slower than real time. So one second of simulated time takes about five minutes to complete. The simulations show approximately linear scaling - that is, doubling the size of the neural network doubles the time it takes to simulate. Currently the primary goal is biological validity rather than performance. Once it's understood which factors are biologically important for a given effect it might be possible to trim components that don't contribute in order to improve performance. The simulation time step for the numerical integrations is 0.025 ms and the time step for writing the output to disk is 0.1 ms.

BBP-SDK:The BBP-SDK (Blue Brain Project - Software Development Kit) is a set of software classes (APIs) that allows researchers to utilize and inspect models and simulations. The SDK is a C++ library wrapped in Java and Python. Visualization of results

RTNeuron visualization of a neuron

RTNeuron: RTNeuron is the primary application used by the BBP for visualization of neural simulations. The software was developed internally by the BBP team. It is written in C++ and OpenGL. RTNeuron is ad-hoc software written specifically for neural simulations, i.e. it is not generalizable to other types of simulation. RTNeuron takes the output from Hodgkin-Huxley simulations in NEURON and renders them in 3D. This allows researchers to watch as activation potentials propagate through a neuron and between neurons. The animations can be stopped, started and zoomed, thus letting researchers interact with the model. The visualizations are multi-scale that is they can render individual neurons or a whole cortical column.

Alumini Speak

Kurian George Cheripurathu

I started my life in Kristu Jayanti College in 2012, back then I was a different person from what I used to be now. Classmates, teachers the ambience of the campus and everything

was new and challenging to me. But the 3 year journey in Kristu Jayanti College transformed the way I perceived things hitherto. The life in college was a reciprocal of my expectations and fears. Within a few months, Kristu Jayanti College became my first home. I also realized that it is the best platform to pursue my academics and to showcase my extracurricular talents. Unparalleled care, support and motivation given by the management, faculty and friends

to improve my skills were the sole reason for my success as a student.

Along with the academics the college helped me to explore a lot of spheres beyond my limits. My passion in Photography and Graphic Designing also got improved by the many opportunities which were given by the college. The training and experience I gained from the college helped me to participate in a lot of inter collegiate fests from my 1st year onwards and in turn helped me win many

prizes in State level and National level competitions. Organising fests, events and programmes in the college helped me to improve my leadership and teamwork skills.All these experience and knowledge garnered through these years helped me to become the Student Coordinator for Computer Science Department for the Academic year 2014-15.The inter collegiate fest which was organized during the same year is the best example for the team work of Students, Teachers and Management.

My journey in Kristu Jayanti left me with an everlasting memory of personal improvement. I used to be very quiet during my first year because of stage fear, even though I used to work behind the curtains for many things. But later I got trained from teachers and with the support of my friends I got many chances to speak in front of different classes on various occasions, which helped me to improve my language and to improve my confidence level. And finally I was confident enough to speak in front of the whole department and even in front of the whole college by 3rd Year. That was a proud and blessed moment in my life.

Kristu Jayanti is truly a holy temple of learning that helps to build excellence in every student.

Kristu Jayanti is the place from where I started chasing my goals and my dreams.

I am proud to be a Jayantian.

Ms. Shradda Ramdas Bandekar

I made decisions ,some of which I regret and some of which I am proud of. I learnt through my experiences and still feel I am learning. I realized I am not perfect , after all I am human. But one thing that I believe is the institution in which I studied is one of the best and an ideal temple of learning ,the institution which helped me in my holistic development and of course many other students like me. I am proud to say that I am a Jayantian , I am a student of KRISTU JAYANTI COLLEGE , the best gift god has blessed me with.

My second home , my college has taught me a lot and has always opened stream of opportunities before me. Starting with silly things like writing an application letter , waiting in a queue building my patience , teaching me that keeping quiet and listening to classes does no harm till going to an Internet lab and surfing on "How to write testimonials?". All these might be very silly , but thanks to all of it , because it made me what I am today. I still remember the day when I sat in those chairs for my fresher's party; scared, and confused. But since that day a lot has changed. This college has changed me, and made me what I am today: confident, resolute and ambitious. I believed that a lot had to be explored and discovered in here and in my final year, I was chosen as the Cultural Secretary of the college and this post transformed me into a new personality. The colleges made me learn so many different things at a time that words wouldn't be enough to say it all.

This temple makes sure that you pray with full heart, that you put in all your efforts to reach your goal , that you never give up and this temple blesses you with the sweetest fruit for all struggles and hard work. Kristu Jayanti makes you an all rounder, it helps one to learn multitasking, become innovative and teaches a lesson of life that there exist no shortcuts to victory. As Kristu Jayanti is to second home , the teachers are to second parents who mould us into what we are today. Every day you are being tested with new challenges and at the end of the day you know how to overcome them. I learnt it from my personal experiences, be it organizing of an event, an intra or intercollegiate fest, gathering people for work, academic pressure, sports and so on. I am proud that I was a part of almost all ventures conducted by the college be it Counseling , Social Service Centre , Anti-Ragging committee, Civil Service and other value added courses. The college provides you with so much that you that you can't even ask for more because before you seek Kristu Jayanti provide. There are many colleges outside, but I believe one should choose KRISTU JAYANTI because you are not just studying in this institution rather your are " living" in here.

KRISTU JAYANTI has been the best stop of my journey and I will cherish it forever throughout my life and will be longing to pass through it again and again. Soon I will start a new beginning of this beautiful end and before bidding a good bye there's just two words to say THANK YOU.

Ms. Greeshma M P

'We are often caught up in our destination that we forget to look back at our journey'.

It is a moment of pride to pen down for an article of my Institution's newsletter. I have been a part of the Jayantian family during 2011-2014. Kristu Jayanti Collegee offers us the liberty to think, question and learn. It has shown the beacon of light to all those who have been a part of it, showing the right path to prosperity through knowledge and holistic development, just as the motto of the college goes. The teaching faculty has been an enormous source of inspiration and encouragement to each one of us. Our teachers gave us opportunity to think out of the box and study hard what interests us the most.

At present, I am a part of the Banking industry. My institution has molded me with the qualities required for my career and a successful life. Being a part of an environment with people from diverse cultural and regional backgrounds has helped me to broaden my point of view. It was a learning opportunity to trust myself and never to be afraid to try new things. Opportunities to be a part of and organize Fests, Events, NSS, NCC etc., has boosted our self-confidence, helped us realize our talents, inculcated service motive within us, building our self as a responsible citizen. College life offers a lot of memorable moments with our friends, classmates, teachers and institution that we can cherish throughout our life. Never miss an opportunity to be part of any event, because it is a learning ground where we gain experience as well as enjoy to the best. Concluding with a famous quote, "If you don't build your dream, someone else will hire you to build their dreams".

And then my brain began to code

Theres Ann Mathew
VI BCA - C

And then my brain began to code

As a child I had dreamt of, carrying the moon on my shoulders, owning a walki-talky and using it proudly at the kindergarten, walking free-handed to the school and surviving on just chocolates. Even though the weirdest of those dreams still remain dreams, the others have become true within the time-span of two decades....I remember those times when packing up for a journey meant shedding of tears. Times have changed and we now update every happening to the world outside to see. Distances have reduced and we have now learnt to mark the time in micro and nano seconds...

All of these developments have a signboard in common and that is information technology. My admission to Kristu Jaynti for BCA course was by chance and not by choice. I had bigger plans to become an author and set millions of minds on fire. But today I enjoy the result of my fate that has directed me to a better existence amongst tech-minds and super computers. Today I paint my own future, setting the keys on fire. I celebrate the whole thought of carving poems into the central processing system. I love to imagine the whole of the universe being chiseled on a single chip. I have heard the shout of waves in the ocean, on every channel that carried a data stream. Each time I wrote on the shore the name of an innovation, I find that the waves of technology wash them away for a new story to be written...

The survival of the fittest.. Monkeys have become humans ...PCs have given way for ultra-touch palm-tops and we haven't yet stopped thinking-I hope that our innovations might one day end with a finger-top or at the extreme, a nail-top.. Thanks to the supreme power –God almighty, we still have alive emotions, expressions and features.. Thanks to tech-God almighty, we have developed emotions for those mechanical beings ,the robots...With the spirit of IT flowing down my veins and then erupting at the heart of innovation, I understand that I am just a part of the cycle of technology that began innumerable years back and stills rotates to etch new algorithms...Thanks to all that has ever been and to all that would always be...

Educational Technology

Mr.Adwin Roy
II BCA - A

Educational technology is the effective use of technological tools in learning. As a concept, it concerns an array of tools, such as media, machines and networking hardware, as well as considering underlying theoretical perspectives for their effective application

Kristu Jayanti College too has been using educational technology. There was a time when we had to either take photocopy of the notes from the teachers or write it down from our friends, but now we have it all through Moodle Learning Management System. Moodle is a free, open source learning management system wherein educators can create online environment for their students. There was a time when we had to stand in front of the notice board to check our results, but now we can check our results on the 'TCS ion'. TCS ion is a portal which contains the profile of the student. The student can use it to check their results, attendance, time table and other details. Other than the Moodle and the TCS ion we also have the college website and the college application.

It grieves me to say that most of us fail to use the resources, so I encourage all my fellow Jayantians to make the best of the resources we have.

Workshop
Hardware, Virtualization, Cloud and IT Security

A two day workshop on Hardware, Virtualization, Cloud and IT Security was organized for I Semester BCA and B.Sc. students by Mr.R.Janarthanan, Microsoft IT Certification Professional ,ITE Learning Solutions, Salem, Tamil Nadu.on 3rd and 4th September 2015.The workshop was an informative session wherein the basic components of hardware and networking were demonstrated and then the components were exhibited to the students to have a look and feel of it with a greater understanding of each. These lessons on components of computer hardware became more interesting with every component held at hand. There was a live installation process of windows 7 which benefitted the students with the basic knowledge on booting the system and a demonstration on the assembling of the CPU with all its components. The process of detecting virus and deletion of them using the task manager was demonstrated. The memory management in various operating systems, the various kinds of CPU and RAM was explained in detail. The students did learn to install a new operating system and to assemble the CPU.The workshop enlightened the students about the hardware components of a computer. He shared his view on how the students should prepare themselves for the current IT job market. He also stressed on the importance of time management. Overall the session was very informative and useful. The workshop ended with an open session where students clarified on various aspects of computer hardware and networking

Session on 3D Animation

A session on 3d animation was for organized on 31 October 2015 as part of the NSDC animation program. The resource person was Mr.Godanda, Animation Instructor, ANTS consulting initiated this course. It is offered by MES (Media Entertainment & Skills Council) sector of NSDC (National Skill Development Corporation). The objective of the course is to enable the participant to understand and apply the concept of artwork prepared by animation artists to produce a sequence of 3D images using animation software (Macromedia Flash). The course is aimed to train the participant on graphics and animation software and apply principles of design, animation and film-making to create animation sequences.

Guest Lectures

Importance of Kernel Coding and its Opportunities

On 21st February 2015, a session on the Importance of Kernel Coding and its Opportunities was organized for fourth and sixth semester BCA/B.Sc students at amphitheatre. The session was handled by Mr.Souma Kumar Paul, Junior Software Engineer, Development Operations, Altisource Business Pvt. Ltd. The technical

talk focused on the importance of Kernel coding and how to begin coding the kernel. He also gave a brief overview on the opportunities in the IT sector with specific reference to kernel coding. The session was interactive and was an eye opener to the fields of kernel computing

Session on Networking

On 7th March 2015, a session on Networking was organized by Livewire, Bangalore for II and IV semester BCA and BSc students .Mr.Jagannath, Mr.Ahamad and Ms.Renuka ,the resource personnel spoke on data communication and networking. The session concentrated on networking concepts and practical demonstration of LAN and other network setup. Resource person covered topics like IP configuration, System setup, DNS setup, and Ethernet configuration. It also shed light on job opportunities in the field of data communication and analytics. It helped the students to get an idea about how data communications is implemented in the industry.

Life in Corporate and Corporate Culture

On 27st June 2015, a session on "Life in Corporate & its Culture" was organized for final year BCA and B.Sc students .The resource person was Mr. Manzoor M, Service Delivery Coordinator, Unisys, and Bangalore. He gave an introduction about himself and his career, the way he was brought up and entered the corporate world. Session threw light into the work culture in companies, how to face interviews, the importance of body language and how to work in teams. Everyone got inspired on his determination, perseverance and hard work. He also spoke on, how to make oneself flexible when he/she joins a corporate company. He also conducted a few activities to the students which made the talk more interesting.

Introduction to Moodle

An introduction to the Learning Management System- MOODLE was given to the first year BCA and B.Sc students on 27th June 2015.The session was handled by Mr.Sevuga Pandian, Corodinator of UG Computer Science program. Prof Pandian explained what is Moodle, how to register with Moodle, the list of activities that can be carried with Moodle. He briefly explained how already Moodle is used in the conduct of some of the courses in the college. The lecture notes can be provided to the students through Moodle .The students can download the resource materials and it also enabled them to access it anywhere anytime on any device. Various assignments can be given through Moodle and students could submit it online through Moodle. They could also open a discussion or seek clarifications on the topic through Moodle. The class tests were conducted using Moodle and it offers multiple advanced grading methods, all of which ease grading while promoting consistency and transparency. The key features of Moodle were all done using a live demonstration.

Thoughts from my final year

On 4th July 2015, a session on "Thoughts from my final year" was organized for final year BCA and B.Sc students. Mr. Allan Paulson, Alumni, Kristu Jayanti College was the resource person. He gave an introduction about himself and his career. It was an interactive session .He asked the students about their plans for their final year. He made them think if joining PG is worth and also

explained "Why the college life is expensive?". He also spoke about the importance of language (English) in their career.. Finally gave a few information on how to take up a TOEFL and "GRE". He displayed some sample questions and interacted with students. He motivated the students on how to crack the test.

Virtualization, Cloud and IT Security

On 19th September 2015, a session on Virtualization, Cloud and IT Security was organized for second and final year BCA and B.Sc students. Mr. Mohan Jaganath, Technology Solution Consultant, HP Global Soft, Bangalore. Mr. Mohan Jagganath, Technology Solution Consultant, HP Global Soft, Bangalore, the resource person spoke on Virtualization and how it divides the resources of a computer into multiple execution environments, such as hardware and software partitioning, time-sharing, partial or complete machine simulation, emulation, quality of service, and many others which made the talk more interesting. The session gave a lot of information about the recent technologies in cloud storage. , Students started to interact with the speaker during the session and got benefited.

Synchronize 2015

Computer Academy, the auspicious club of Computer Science department, organized Synchronize 2k15 an intra-collegiate IT fest in order to provide a platform for students to showcase their potentials, develop leadership qualities and team work on 1st of September 2015.. The fest was organized for the first and second year students of Computer Science by the third year students where they get an opportunity to organize, participate and showcase their intelligence and creativity in myriad facets of information technology. The fest was well organized under the able guidance of Faculty Coordinators Mr.Ramanathan G and Ms. Sandhya Soman and the leadership of student coordinators Mr. Akhil M S and Ms.Rohini .

The first and second year students were equally divided into four groups and the groups were named after the code names of Windows NT family namely Centro, Longhorn, Blackcomb, Quebec. Students competed in 15 events in the fields of Computer Science, Electronics Mathematics and Statistics. The events of the fest were Web Designing, Photoshop War, Coding and Debugging, Movie Making, Treasure Hunt, Gaming, Stat Event, Math Event, Electronic event, Lecture Contest, IT Quiz, IT Manager, Pick and Speak, Best Tech Team and Product Launch. The preliminary rounds for all the events and finals of few events were held from 20th August 2015 to 29th August 2015 from 3.30 PM to 5.30 PM in various venues. The finals of IT Quiz, Lecture Contest, IT Manager, Pick and Speak, Coding and Debugging, Product Launch etc. were held on1st September 2015.Various committees were formed for the effective conduct of the fest. All the above events were well planned, organized and executed by the respective staff and student coordinators.

The inaugural function took place at 9:15 AM on 1st September 2015, in the Main Auditorium. Chief Guest of the day, Mr. Mani KS, Senior Delivery Manager, Cognizant Technology Solutions spoke on the emerging technologies in IT Industry for the aspiring young budding students. He also stressed on the importance of their communication, attitude and creative thinking in today's industry. The inaugural session was followed by the finals of various events which were held in the Main Auditorium, Mini Auditorium II and computer labs. The valedictory function took place at 4 PM in the Main Auditorium. Rev.Fr. Josekutty P D, Principal, Kristu Jayanti College addressed the gathering and appreciated all the staff and students behind the success of Synchronize 2K15. He motivated the students to innovate, inspire and ignite all the Jayantians by their creative works.The star of Synchronize 2K15 was won by Mr.Akshay Raj student of III BSc (CSME). The group Blackcomb under the guidance of the faculty Mr.Pratap G and Ms.M.Danamalar bagged overall championship in Synchronize 2K15.

Social Outreach Program

The main objective of this Social Outreach Programme (SOP) was to expose the students to the marginalized and down trodden of the society and to develop a concern for them. It also sensitizes the students about the realities of the society and to develop people oriented attitudes and concern for others.

The students of III BCA (A, B, C sections) and III BSC (CSMS/CSME) visited Thrithwa Ashram (Birds of the Air) on 3rd, 4th, 7th and 9th September 2015 respectively as part of the SOP.The students of each class were accompanied by two faculty members. The

students were in the ashram from 2 to 4 PM on these days interacting with the inmates. The inmates of Thrithwa Ashram are women who are differently abled and are taking daily medications. These inmates are brought here from streets, railway stations, and some rehabilitation centres. Some were also physically challenged. All the inmates lived like a family and the volunteers took very good care of them. The students made a donation of food items, toiletries to the ashram. The students also entertained them by few cultural programs and also conducted several games for the inmates. The inmates actively participated with the students in all the activities. Most of them were very talented and exhibited their talent to the students. Most of the students interacted with the inmates without any hesitation. The students could inculcate the habit of helping the needy and having respect and concern for the marginalized.

The social outreach program had always helped the students to count the blessings of their life and to be empathetic towards the less fortunate of the society. Every student had a new experience of life where they could meet people who were entirely different from those whom they met every day.

Vimochana

Department of Computer Science celebrated Independence Day – "Vimochana" to commemorate the sacrifice of every individual freedom fighter who fought for the independence of India. Celebrations started by invoking the God's presence followed by a patriotic dance performance. Prof. Sevuga Pandian , Coordinator ,Computer Science Department addressed the gathering on the importance of upholding the Indian cultural heritage and inspired the students by reminding the quotes of great personalities. Students pledged to protect the sovereignty and integrity of India and also to uphold the universal brotherhood. Vimochana not only instilled a spirit of patriotism but also encouraged students to be a better citizen of the country.

Industrial Visit

On 21st of August 2015, the students of first year CSME & CSMS we visited CDAC (Centre for Development of Advanced Computing), Bangalore. There were totally 39 students accompanied by the faculty members Dr.N. Gnanasankaran and Mrs. Suni Ajaykumar made the visit.

The visit commenced with a presentation by Dr.Soundarrajan of CDAC on Information and data security. Password security, various types of threats and hacking issues available through the internet and what are the problems encountered through online fake websites, various threats available through phishing and skimming were detailed in the presentation.. He also explained about the

primitive measures that could be taken to protect and ensure security through passwords and other technology available through various online applications. The students visited the data center of CDAC and could view "PARAM PADMA" – the super computer developed and maintained by CDAC. He also explained the functionality and the hardware components and the architectural design of the super computer and how it serves Indian Government by implementing its usage in various important applications like weather forecasting, database maintenance of banking and various social departments, military network monitoring and secured storage of confidential databases of Indian army. The students had a good interaction with Dr.Soundarrajan by triggering more questions .The visit was an experiential learning opportunity for the students .

Computer Literacy Program

Computer literacy program is a Social Outreach Program where the students of Computer Science Department visit the nearby Government schools and teach the basics of computing concepts to the school children. They conduct theory and practical sessions for the school children. This year 18 students of the department visited three different schools on 20th February 2015 and 21st February 2015 and conducted the program. The students visited Government Higher primary school, Kyalasanahalli Bangalore, Government Higher Primary School, Kothanur, Bangalore and Government Lower Primary School, K.Narayanapura, Bangalore. The students took class for the lower primary and higher primary government school students and taught the basic knowledge about computers. There was a practical demonstration session where the Windows operating system, Data storage and moving file transfer procedure, Paint, MS-word, MS-power point were explained. The head of the institution gave the feedback about the conduct of the program and they were happy and satisfied by the way program was organized and executed. They also felt that these types of programs will help the young children to learn computers and will kindle in their minds a love for information technology related areas.

Overall Championship

Technovation - National Level IT Fest, St. Claret College, Bangalore

Cognizance, Krupanadhi College, Bangalore

Exuberance, Bangalore City College, Bangalore

Enthios ,Jyoti Nivas College, Bangalore

Convergence , National Level Mathematics Fest ,Christ University, Bangalore

Computantra , National Level IT Fest ,Presidency College, Bangalore

Technovation , National Level IT Fest , St. Claret College, Bangalore

Runners Up

Sygma , SDM College of Buisness Management, Mangalore

Interface , National Level IT Fest,Christ University, Bangalore

Jayantians won laurels in

Circuit , National Level Electronics Fest, Christ University, Bangalore

First place in Saviskara - Working and Static Model Exhibition at Jain University

Trigger - Inter Collegiate Science Fest-Statistics Dept. MES College, Malleshwaram

Technical Community

Technical Community is one among the various activities conducted under the aegis of this club to foster the innate talents and abilities of students in co-curricular areas. Each student is required to be part of one technical community. Two faculty members are assigned to supervise the activities of each community. Student coordinators plan and organize the proceedings.Technical community is a platform where students come together in their area of interest to share their ideas, knowledge and to explore new horizons in their respective area. Students enrolled in the various technical communities to explore wider horizons of knowledge.The communities are Coding and debugging to develop logical thinking and programming ability, Web designingto develop various skills and disciplines in the creation and maintenance of websites, IT Manager to improve aptitude, stress management and interview skills, to develop a professional approach suited to the role of an IT Manager. IT Quizto update knowledge of current technology in the IT domain,Lecture/Presentation to plan, organize and deliver technical presentations effectively. Mathematicssto sharpen mathematical and logical thinking ability by solving various problems and puzzles,Statisticsto develop inferential techniques using statistical methods, Electronicsto apply knowledge of design and construction of electronic circuits to solve practical problems.and Event managementto develop organizing and leadership skills.Regular meetings of the technical communities were organized and students explored their area of interest adopting peer to peer learning skills.

Innovative Club

The innovative club aims to foster innovation in the young minds of the students by providing them opportunity to do projects as diverse as robotics and animated games pertaining to the fields of Mathematics, Statistics, Electronics and Computer Science. Galaxia is the Intra College Science Project Exhibition which offers the passionate a stage to display what they find fascinating.

Academic Alliance with EMC^2

Academic Alliance with EMC2, is an initiative of the department to ensure that the industry has a strong pipeline of graduates to meet its future needs. The Academic Alliance program offers unique 'Open' curriculum-based education on technology topics such as cloud computing, big data analytics, and information storage and management. The 'open' curriculum focuses on technology concepts and principles applicable to any vendor environment, enabling students to develop highly marketable knowledge and skills required in today's evolving IT industry.

Industry Mentorship Programme

Industry Mentorship Programme connects experienced industry professionals with current students for one-to-one guidance to share insights and increase student employability in their future. This programme aims at empowering the students to connect with industry and focus on their professional goals.

Academic Collaboration with University of Fraser Valley, Canada

Academic Collaboration with University of Fraser Valley, Canada where the BCA students of Kristu Jayanti College gets an opportunity to complete their three year BCA course in Kristu Jauanti College and continue the fourth year in University of Fraser Valley. On completion the students can get the BCA degree awarded by the Bangalore University and BCA (IT) degree awarded by the University of Fraser Valley. The students also get three years work permit in Canada.

XACTITUDE
Xactitude promotion

A promotion of the fest was organized on 5th February in the college quadrangle immediately after the inauguration of the fest. The aim of promotion was to showcase the theme and objective of the fest to the entire college. The promotion consisted of a robot which revealed the logo and a robot
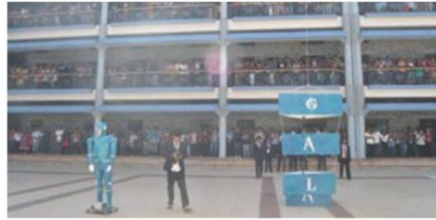
which could respond to commands and answer queries. .The promotion was very highly appreciated by the entire audience and gave the students an opportunity to showcase their technical talent in front of the entire Jayantians.

Xactitude

The Department of Computer Science of Kristu Jayanti College organized XACTITUDE 2K15 a two day inter collegiate IT fest and an IT Exhibition GALAXIA 2K15 in order to provide a platform for students to showcase their potentials, develop leadership qualities and team work on 5th and 6th February, 2015.The fest was well organized under the able guidance of Faculty Coordinators Mr.Prathap G and Ms. Vani Chakraborty and the leadership of student coordinators Mr.Kurian George and Ms.Alexis Steffi Joseph. There were 50 colleges participating in the fest out of which 13 colleges were from the other states across the country. A total of 452 students from various colleges participated in the events. There were 15 events which were well planned, organized and conducted as part of the fest.

The inaugural function took place at 9:15 am on 5th February, 2015, in the Saint Kuriokose Elias Chavara Auditorium. The chief guest for the event was Mr. Sridhar Nagabhushana, senior IT manager of TE Connectivity. The chief guest, Mr Sridhar Nagabhushana shared the current happenings in the IT

world. He encouraged the students to be a 'SMAC'- Social, Mobility, Analytics, and Cloud, to earn a good job. He also highlighted the need to possess two main aspects- Technical (Professionalism) and Soft Skills (Communication, Attitude and Behavioral aspects). Rev.Fr. Augustine George, Vice Principal, KristuJayanti College, stated about the 3 C's that comprise the extra mile of IT, which is 'Conduct, Communicate and Converge' in his address. Rev.Fr. Josekutty P D, the Principal of KristuJayanti College, launched the E-Newsletter, 'Interface' by stating that it was a result of collective teamwork and this initiative has reduced the distance of connectivity between different colleges. The inaugural session was followed by the various on stage and off stage events.

The valedictory function took place on 6th February 2015 at 3.15 PM in the Saint Kuriokose Elias Chavara Auditorium. The chief guest for the function was Ms.SuparnaRao, Digital Marketing Analyst, Boston Technology Corporation. She spoke on the importance of moving ahead with the

technology and how these fest and other activities could contribute to the overall development of the students. She also highlighted the importance of cultivating the habit of reading, writing and communicating effectively. Rev.Fr. Josekutty P D, Principal of the college appreciated the effort of the staff and students in making Xactitude and Galaxia 2K15 a grand success. The prize distribution ceremony followed the chief guest's address where the certificates, trophies and cash prizes were given away for the prize winners of the 15 events of Xactitude and Galaxia 2K15.

The award for the Star of Xactitude 2K15 was won by Mr.Vinod, student of Vijaya College, Bangalore. St.Aloysius College, Mangalore bagged overall championship and Presidency College, Bangalore won the runners up of Xactitude 2K15.This technical extravaganza impressed scores of spectators who were awed by the originality and futuristic vision of the Jayantians.

GALAXIA -2015

The 2K15 version of Galaxia had 180 exhibits, surpassing the previous year's 80. The drawing card of Galaxia 2K15 featured exhibits ranging from Holographic Illusions, Mech Lift, Automatic Garage opener, Automatic Wheel Chair that works on pressure sensors to Stress Meter and Interactive games. The exhibits unfurled under different departments like Mathematics, Computer Science, Electronics, Statistics and interactive games. Dozens of other schools and colleges were quite impressed with the explosion of Jayantian talents.

Research Coloquim

To foster the research culture among the faculty members,the Department of Computer Science(PG) is organizing a research colloquium every semester. Four presentations were done by the faculty members of the department.Ms.Anitha D'Souza, presented ontology based information retrieval in semantic web, Ms.Sandhya Soman presented managing multidimensional big data through cloud ,Mr.Anthony Vincent and Mr.H.Rajesh made a presentation on managing expanding HCI-Human Computer Interface in a computational eco system: A living style in a monitored reliant world in a digital crowd. The research colloquium was conducted on 13th April 2015

Faculty Publications

Sl.No.	Name	Title	Publisher Details
1	Dr.Gnanasankaran	"A Computer Package for Molecular Dynamics computations-An example for the usage of COTS Components	International Journal of Multidisciplinary Sciences,September,2015
2	Dr.Gnanasankaran	"A Computer Package for Molecular Dynamics computations-An example for the usage of COTS Components	International Journal of Multidisciplinary Sciences,September,2015
3	Ms.Dhanamalar M, Ms.Ayshwarya B	"Case study on mining big data"	IJRCM,August ,2015
4	Ms.Anitha D'Souza	Efficient information retrieval through ontology in semantic web- Web based approach	Adarsh Journal of Information technology, ISSN:2320-0340, Volume 2 Issue 1.April, 2015
5	Ms.Kalaiselvi K	Implementation issues and analysis of cryptographic algorithms based on different security parameters.	IJCA ISBN 973-93-80886-99-3 April, 2015
6	Ms.SandhyaSoman	Managing multi-dimensional big data through cloud	Optima journal ISSN 2320 4834, April, 2015
7	Ms.Kalaiselvi	A Study on crptyanalyticattacts and defence measures on RSA using Evolutionary computation	Optima Journal ISSN 2320 4834, March, 2015
8	Mr.Rajesh H, Dr.Anthony Vincent	CEP in Big Data Analytics: A real time Model for the savvy organization	Global Workspace 2020 ISBN 819273373-4, February, 2015
9	Mr.Rajesh H, Dr.Anthony Vincent	Envisioning Big data in SNS: A Conceptual Network Analysis in Social Media Platform	Global Workspace 2020 ISBN 819273373-4, February, 2015
10	Mr.Rajesh H, Dr.Anthony Vincent	A Compact Structure in big data analytics to Substantiate the threats in computer security"	IJIRCCE, Volume 3 ,Special Issue 7, October 2015

Bangalore University Rank Holders

Ms. Greeshma M P
2014 BCA - 1st Rank

Ms. Shradda Ramdas Bandekar
2015 B.Sc. 7th Rank

Ms. Deepa
2015 BCA - 10th Rank

Photo Gallery

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