



# Kristu Jayanti College

**AUTONOMOUS**

**Bengaluru**

Reaccredited 'A' Grade by NAAC | Affiliated to Bengaluru North University

## Department of Computer Science



# Interface

Vol : 8 | Issue : 1 | February 2021







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## KRISTU JAYANTI COLLEGE RANKING AT BEST COLLEGES OF INDIA SURVEY 2020 BEST EMERGING COLLEGE OF THE CENTURY at NATIONAL LEVEL

★ ★ **1<sup>st</sup> Rank COMMERCE** **1<sup>st</sup> Rank SCIENCE** **1<sup>st</sup> Rank ARTS** **2<sup>nd</sup> Rank MSW** ★ ★

BENGALURU CITY RANKING	<b>2<sup>nd</sup> Rank BCA</b>	<b>2<sup>nd</sup> Rank MSW</b>	<b>2<sup>nd</sup> Rank ARTS</b>
	<b>3<sup>rd</sup> Rank COMMERCE</b>	<b>4<sup>th</sup> Rank SCIENCE</b>	<b>5<sup>th</sup> Rank BBA</b>
NATIONAL LEVEL RANKING	<b>4<sup>th</sup> Rank BCA</b>	<b>11<sup>th</sup> Rank MSW</b>	<b>18<sup>th</sup> Rank ARTS</b>
	<b>19<sup>th</sup> Rank COMMERCE</b>	<b>19<sup>th</sup> Rank BBA</b>	<b>25<sup>th</sup> Rank SCIENCE</b>

India Today - MDRA Survey 2020



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## FROM THE EDITORIAL TEAM

Dear Readers,

Welcome to 2021 issue of Interface, the Computer Science Department's Newsletter.

This issue covers all the activities happened in the department in the year 2020. The department witnessed a plethora of activities ranging from organising conferences and exhibitions, going for industrial visits, conducting workshops, social outreach programs to name a few. As the editors, we have tried to bring a glimpse on each of the programmes organised by the department. Due care is made to highlight the essence of each programme. Apart from reports about the various activities, the newsletter includes articles contributed by students, faculty members and alumni.

We would like to thank all the people who contributed in bringing out this issue.

We hope that you will enjoy reading this issue.

Editorial Team.

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## MESSAGE



**Fr. Dr. Augustine George**  
Principal

We all know how badly COVID-19 has impacted our lives, both personal and professional. During this time of sheer uncertainty and constant fear, our willingness to adopt technology has been our lifeline. The year 2020 will be etched in human history not only as a year of human resilience but also as how information technology helped human beings to adapt and go forward during the COVID pandemic period. The contribution of computational technology during this period by providing us with methods and means to carry out our daily lives is mind blowing. Time has proved again that innovation and creativity is the game changer.

The department of Computer Science always strived to impart a holistic education through its curriculum, various industry academia interactive programmes, skill development activities and social responsibility initiatives. We always strived to provide the best platform for each student to hone the intellectual capabilities. Ample avenues are provided to the students to experiment and innovate throughout their academic journey at Kristu Jayanti College.

The Dept. Of Computer Science undertakes curricular and co-curricular initiatives to promote the culture of creativity and innovation among the students and faculty. This newsletter is such a novel initiative which would help the faculty and students of our department to initiate thought provoking ideas and discussions. The fusion and diffusion of ideas happening through this newsletter would definitely enrich and enhance our pursuit of innovative excellence. The newsletter also includes a snapshot of all the important events and initiatives undertaken by the Computer Science Department. The success of this newsletter depends on the extent of your active involvement and contribution to this knowledge sharing process.

I take this opportunity to congratulate and thank all the faculty and students who worked tirelessly to make this endeavour a grand success.



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

The Department of Computer Science (UG) always striving hard towards the goal of providing innovative and quality education with high standard to achieve academic excellence and provides platform for the students to achieve their career goals.

The Department has always strived through its curriculum and various industry academia collaborated activities to bridge the gap between the academic curriculum and industry demands. During this pandemic period, the new challenges were accumulated in great numbers and in taking decision to transit from physical to virtual classroom content delivery was very efficiently handled by designing the Kristu Jayanti Learning Management System (KJCLMS), a web application that enables the teachers to create dynamic courses that extend learning to the students, anytime, anywhere. The examinations were conducted using the Kristu Jayanti Exam LMS, used to conducted the exams in a secured way. Innovative methods of teaching and learning process are adopted to achieve learning abilities through practice, exposure and motivation.

The Society of Data Science (S4DS) forum was created in the department and it aims to make the students understand the extraction of valuable information for use in strategic decision making, product development, trend analysis, and forecasting.

The department always provides a platform for every aspiring student to enhance their skills and to showcase the talents through various platforms for the students of BCA and B.Sc to complete the industry oriented certificate courses in AWS Academy, P-Tech, IBM, Coursera, Palo Alto Network academy and the virtual outreach programme on RS and GIS application provided by IIRS-ISRO.

The National Conference on Computational Intelligence (NCCI 2021) provides a platform to discuss the state-of-the-art developments, key approaches, research line, challenges and unsolved open problems encountered in the fields of Computational Intelligence. The International Virtual Conference on Recent Trends in Materials Science was aimed at disseminating knowledge in the domains of Science and Engineering. It was an opportunity to reflect on what has been happening in the field of Science and Engineering, to share the experiences, perspectives and responses to the challenges faced by the researchers, and to set new directions for the future. The National Conference on Recent Trends in Pure and Applied Mathematics aims to provide a platform for students, research scholars, academicians, industry experts and professionals in the discipline of mathematics. It helps the research scholars to come together and discuss the development and challenges in the field of pure and applied mathematics and their applications in science and technology. The Virtual National Electronics Conference (ViNECON-2020) - Recent Trends and Developments in Electronics and Communication Technologies provides a premier interdisciplinary platform for researchers and educators to present and discuss the most recent innovations, trends, and concerns as well as practical challenges encountered and solutions adopted in the fields of Electronics, Communication and Information Systems.



## FROM THE DEAN



Dr. Calistus Jude AL  
Dean, Sciences

The past months during the pandemic has seen unprecedented challenges in the higher education scenario, especially in the delivery of curriculum. When we look back at the challenges and rejoice in the success, it is heartening to know the department of Computer Science has become stronger as a Jayantian community.

Being a student of computer science is exciting as information and communication technology is being integrated with every aspect of modern life. Our students continue to bring incredible success to the department. The students and faculty members of the department of Computer Science are contributing to the computer revolution by their projects and research in a variety of fields that are impacting the society today. Many faculty members received awards and recognitions and celebrated their achievements. The programmes in the department of Computer Science are consistently ranked as one of the city's and nation's best. And, the department was abuzz with activities and programmes by the student community.

I sincerely hope that this edition of Interface will acquaint the reader with the noble mission of the department of computer science in providing exceptional undergraduate education and the sense of excitement that permeates the department.

## ABOUT THE DEPARTMENT



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

The Department of Computer Science (UG) with its proud history spanning over two decades, stands topmost in the Nation for the BCA programme it offers. Both BCA, BSc (CSMS/CSME), BSc (PMCS/PME) and BSc (MSE) programs are devised to provide an ideal amalgamation of theory with hands on experience for the 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 enhancing their spirit of innovation and academic excellence.

The millennial generation of software developers is the future visionaries of companies and nations. To keep pace with rapid changes in the IT sector the department has an auspicious club Computer Academy with more than 1258 members attempts to confluence between the technology and academics through series of programmes like Guest lectures, Workshops, Seminars, Industrial Visit, Intra and Inter Collegiate fest, Science Exhibition and various communities.

The Department has initiated Academic Alliance with UiPath, Salesforce, Oracle Academy, Microsoft Dynamics Academic, ICT Academy, ACM-W, NPTEL, AWS Educate, Dell EMC, Palo Alto and VMware IT Academy to craft initiatives to address the contemporary skill gap in the novel computing technologies. It helps to ensure the industry, a strong pipeline of graduates to meet its future needs. The department also has a Knowledge Kindle Groups and Common Interest Groups to allow the students to connect communicate and collaborate. The department encourages the students for extended learning process such as self-paced learning through various MOOC and NPTEL courses of their interest.

During this new normal, challenges were accumulated in great numbers but the agility in taking decision to transit from physical to virtual classroom content delivery was very efficiently handled by designing our own in-house customized system called Kristu Jayanti Learning Management System (KJLMS), a web application that enables the teachers to create dynamic courses that extend learning to the students, anytime, anywhere. Irrespective of roles and permissions KJLMS meets all the requirements of the different stake holders. KJC-LMS provides extremely customizable environment for both Teaching and Learning. KJLMS facilitates the blended mode of teaching-learning process of both online and offline classes by organizing and executing the teaching and learning in a creative manner.

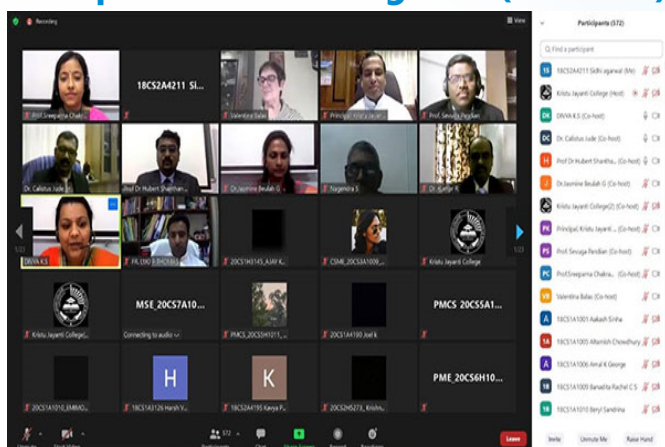
We have developed our own Exam Management System called KJEXAMLMS to conduct our examinations in a highly secured environment. Each student has been given an authenticated credentials to access the system. We have customized the system in such a way that it satisfies the required security features like password protected exam access, block control facility to provide the safe exam environment where students are not to allowed to access any browsers while taking their examinations and browser security feature by enabling full screen pop-up with JavaScript security. Our examination process are automated in our KJEXAMLMS with time bound schedule to answer the questions either in the form of Quiz or File upload option.

The shared values of our department are exemplified in various extension activities like Social Outreach Programme (SOP) and Computer Literacy Programme (CLP) providing the students an opportunity to recognize their social responsibility and contribute to the development of the society. I am proud to say that our BCA programme is one of the best in the Nation due to its diligent adherence to quality in not just academics but also in creating the right impact on corporate sectors and national quality forums.



## CONFERENCE ORGANIZED

### National Conference on Computational Intelligence (NCCI-20)



The fourth National Conference on Computational Intelligence (NCCI 2021) was organized on 11th and 12th January 2021 and it provides a platform to discuss the state-of-the-art developments, key approaches, research line, challenges and unsolved open problems encountered in the fields of Computational Intelligence. ICT Academy is the knowledge and publication partner of the conference and we have also been associated with Society for Data Science and IEEE Student Branch, Bangalore section.

The Chief Guest, Prof. Valentina Emilia Balas, IEEE Senior Member, Department of Automation & Applied Informatics, Director of International Relations, Head of Intelligent Systems Research Centre, "Aurel Vlaicu" University of Arad, Romania delivered her speech on her current research work in Renewable Energies and Passive Greenhouses at Romania and France and highlighted the relevance of Computational Intelligence. The Conference proceedings were also released by the dignitaries.

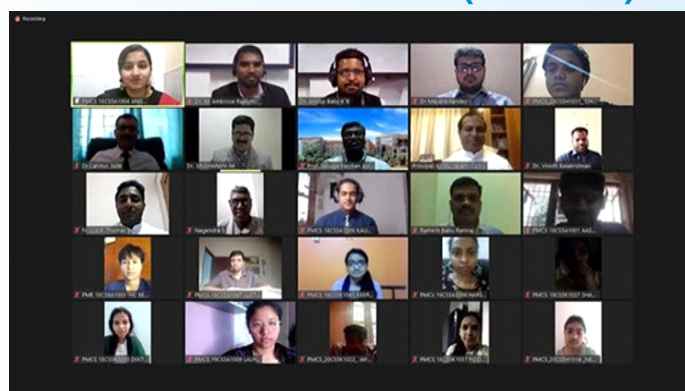
Dr. Neha Sharma, Analytics & Insights, TCS, Pune, India, Founder Secretary, Society for Data Science, Senior & Execom Member, IEEE Pune Section delivered the session on Demystifying Data Science, on the basic concepts used in the technology relating with best suitable real life examples which are essential for understanding technology. She projected a clear understanding of the roles played by modern data scientists and the importance of statistics, data mining, predictive analytics and many other related topics.

Dr. V. Gomathi, Professor & Head, Dept. of Computer Science & Engineering, National Engineering College, Kovilpatti, Tamil Nadu, India delivered the session on Deep Learning Approaches for Smart Health Care and the insights on how these computational techniques can impact a few key areas of medicine and how to build end-to-end systems. The discussion of computer vision focused largely on medical imaging, and described the application of natural language processing to domains such as electronic health record data.

On 12th January 2021, the second day of the conference kick-started with the technical session on Real-Time Use - Cases of Big Data, delivered by Mr. Vijayaraj Veeramani, Cloud Solution Leader - AP, IBM, Singapore. He shared his views on the applications of big data in the real world. The importance of big data lies in how an organization uses the collected data and not in how much data they have been able to collect. The big data solutions are used to gain

benefits from the heaping amounts of data in almost all industry verticals.

### International Virtual Conference on Recent Trends in Materials Science (IVCRTMS)



The international virtual conference was organized on 16/11/2020 and it was aimed at disseminating knowledge in the domains of Science and Engineering. It was an opportunity to reflect on what has been happening in the field of Science and Engineering, to share the experiences, perspectives and responses to the challenges faced by the researchers, and to set new directions for the future.

The chief guest, Dr. Sridharan, Associate Dean-Research, SASTRA Deemed University, Thanjavoor, highlighted the relevance of research in materials science in the current scenario. The Conference proceedings were also released by the dignitaries.

The keynote session-1: Organic Polymer thin-film for solar cell applications by Dr. Ramesh Babu, Associate Professor, Crystal Growth & Thin film Lab, Department of Physics, Bharathidasan University, Tamil Nadu, India, gave an insight to the basics of Organic Polymers and their importance in photovoltaic as well as solar cell applications.

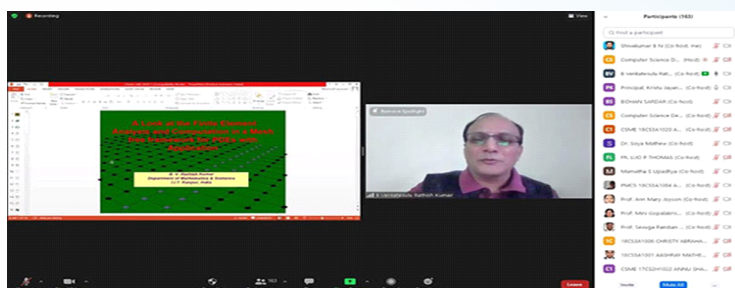
The keynote session-2: Microfluidic platforms in Biological Applications, by Dr. Pushparani Micheal Raj, Scientist-MAX IV Laboratory, Lunds University, Sweden, explained the importance of theoretical and experimental research in the dynamics of microfluidics and their applications in biotechnology and medicine.

The keynote session-3: Optical Tweezers in single molecule Studies, by Dr. V. Immanuel, Researcher, Department of Health Sciences, University Magna Graecia of Catanzaro, Italy, explained the relevance of theoretical and practical aspects of folding and unfolding of protein molecules and gave an overview of the ongoing researches in the field of molecular biophysics and their applications.

The IVCRTMS 2020 served as a platform to discuss the advances in materials science and shared the experiences, perspectives and responses to the challenges faced by the researchers, and to set new directions for the future. The conference provided the participants an opportunity to expand their network and exchange knowledge and ideas among fellow researchers, academicians and technical experts from diverse areas towards the common goal of shaping the future of the society through materials research.



## National Conference - Recent Trends in Pure and Applied Mathematics



The conference was conducted on 13/11/2020 and provided a platform for students, research scholars, academicians, industry experts and professionals in the discipline of mathematics to come together and discuss the development and challenges in the field of pure and applied mathematics and their applications in science and technology.

The keynote session by Prof. B.V. Rathish Kumar Department of Mathematics and Statistics, Indian Institute of Technology Kanpur (IIT Kanpur). He highlighted the relevance of

mathematical modeling and the importance of numerical methods in the current scenario. Sir introduced mesh generation and finite element methods.

The Keynote Session II by Dr. Bidhan Chandra Sardar, Assistant Professor, Department of Mathematics, Indian Institute of Technology Ropar (IIT Ropar). Sir emphasized on how to model and solve a real world problem using ordinary differential equations. The resource person explained about the second order linear ODE and its solution, what is the Malthusian Population Model, what is the drawback of the model and also the Verhulst population model and explained in detail about challenges of modeling and forecasting the spread of Covid-19. Some of the other model which was explained was Wave equation, heat equation, Navier-Stokes equation.

The Keynote Session III resource person was Dr. A. Amutha, Assistant Professor, PG and Research Department of Mathematics, The American College, Madurai, Tamil Nadu. She delivered a session on Dynamic Approach of Slope Number in Graph Theory and explained graphs, networks, minimum domination set, coloring, slope stability analysis and social network analysis. Madam also spoke about the different areas of research in graph theory.

## Virtual National Electronics Conference (ViNECON-2020) - Recent Trends and Developments in Electronics and Communication Technologies (ViNECON 2020)



The Department of Electronics organized a Virtual National Electronics Conference (ViNECON-2020) on 11th November 2020 with a theme Recent trends and developments in electronics and communication technologies. The aim of this conference was to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of Electronics, Communication and Information Systems. It also provided a premier interdisciplinary platform for researchers and educators to present and discuss the most recent innovations, trends, and concerns

as well as practical challenges encountered and solutions adopted in the fields of Electronics, Communication and Information Systems. The conference featured a number of plenary sessions and contributed paper presentation focusing on specific tenets of different trends of electronics and communication technologies.

Dr. Ajay Agarwal, Sr. Principal Scientist, Area Coordinator, Group Head, CSIR-Central Electronics Engineering Research Institute, Pilani was the chief guest and the keynote speaker. Dr. Ajay Agarwal had a technical session on "Electronics for Biomedical Sensors"

Dr. Rana Mukherji Professor, The ICFAI University, Jaipur, India delivered a keynote on Global Transformations through Internet of Things". Dr. K. David, H.H. The Rajah's College, Tamil Nadu, India had a talk on Intelligent Connectivity: The fusion of 5G, AI and IoT" during the keynote session.

## National Conference on Theoretical and Applied Statistics

The National Conference on Theoretical and Applied Statistics was organized on 23<sup>rd</sup> & 24<sup>th</sup>, January 2020. The chief guest and resource person Dr. Vidyadhar Y Mudkavi, The Head & Outstanding Scientist, CSIR Fourth Paradigm Institute (CSIR-4PI), Bangalore. The session emphasized that the speed at which a given scientific discipline advances will depend on how well its researchers collaborate with one another, and with technologists, in areas of Science such as databases, workflow management, visualization, and cloud computing technologies. He also spoke about how increasingly; scientific breakthroughs are powered by advanced computing capabilities that help researchers manipulate and explore massive datasets.

The resource person Dr. Ritwik Chaudhuri, Advisory Research Scientist IBM Research, Bengaluru. Dr. Ritwik gave an insight on the "Gaussian process" which is a stochastic process, such that every finite collection of a collection of random variables has a multivariate normal distribution, i.e. every finite linear combination of them is normally distributed. Kernels model the relationship between Random Variables. They are specified by a set of hyper parameters that capture broad trends in data; these are learnt from the data. Sir also discussed various numerical based on the topic, for example, representation of  $\pi$  (pie) and Lindberg Levy Central limit theorem.



The resource person Prof Gangaboraiah, Professor, KIMS, Bengaluru, explained about how every new medicine that is invented must be thoroughly tested to prove that it is not only an effective treatment for a health problem, but that it is safe for patients and does not have any side effects that are too severe. The session gave an insight on how Odds ratios are used to compare the relative odds of the occurrence of the outcome of interest (e.g. disease, Mortality rates such as maternal or paternal). The odds ratio can also be used to determine

whether a particular exposure is a risk factor for a particular outcome, and to compare the magnitude of various risk factors for that outcome.

The resource person for this session was Prof Acharya U H, Professor & Senior Specialist, SQC & OR Unit, Indian Statistical Institute, Bangalore. Prof Acharya explained the quality improvement process, and the addition of seven basic tools that any professional can use to ease the quality improvement process and can make it proceed more quickly and systematically. They are: Flowcharts, Check sheets, Pareto diagrams, Cause and effect diagrams, Histograms, Scatter diagrams and Control charts. Manufacturers must ensure that these tools are in place and being used to their full advantage as part of their quality system procedures. Flowcharts and check sheets are most valuable in identifying problems, whereas cause and effect diagrams, histograms, scatter diagrams, and control charts are used for problem analysis.

Prof. Latha, Associate Professor, Department of Statistics, Jyothi Nivas College, Bengaluru and Prof. Deepa Acharya, Head, Department of Statistics, Government Science College, Bengaluru. The objective of this session was to give the budding statisticians an opportunity to present their project work in a concise manner and motivate them to further pursue similar works.

The resource person for this session was Dr.Meenakshi Rajeev, Professor (Reserve Bank of India Chair), Centre for Economic Studies and Policy (CESP), Institute for Social and Economic Change (ISEC). Dr.Meenakshi gave an elaborate insight on the topic "Modeling Loan Repayment Behaviour". She shared her experiences and stressed on the analysis of NSSO data using statistical tools. She narrated the flaws that are prevalent in collection of data since no proper orientation is provided to the enumerators. The concept of randomness itself goes violated many a times, thereby affecting various inferences and findings published. She also explained the various project opportunities for students and researchers in ISEC and RBI.

Prof. Parameshwar V.Pandit, Professor & Head, Department of Statistics, Bangalore University, Bengaluru. The resource person introduced new rank tests for testing independence. The new testing procedures are sensitive not only for grade linear correlation, but also for grade correlations of higher order polynomials.

## GALAXIA 2020 & HACKERVERSE (Hackathon)



Galaxia 2020 & Hackerverse was organised on 3/2/2020 & 4/2/2020. It is a design sprint-like event; a popular event among IT aficionados, in which computer programmers and others involved in IT solution development, including graphic designers, interface designers, domain experts, and others collaborate intensively to solve complex real-world problems. Mr. Sridhar Chitraju, Program Director - Hybrid Cloud CoE - Global Technology Services Labs (GTS Labs) IBM India, Bangalore, Mr. Mritunjay Vishwakarma, Community Leader -

Performance Marketing Lead - Developer Marketing, India Software Labs, IBM India were the resource persons.

The resource person Mr. Mritunjay vishwakarma had proceed with the Agenda for the Hackerverse. Resource person also spoke on the CALL FOR CODE event hosted by IBM and encouraged everyone to be a part of it. Furthermore, resource person also introduces the Tech-Enablers from IBM who would be helping the students for the two-day Hackerverse. The Resource Person gave a brief presentation on "Design Thinking" and highlighting the tagline; "Human centered outcomes at speed and scale". He also explained on the various principles involved in designing and stressed on making the customer as the focus in designing or development. After the presentation, resource person revealed the themes for the hackathon- Climate Change, Potable Water and Sanitation, Rural and Agricultural development.

IBM Tech-Enablers helped the students with their ideas and guided them on working with different IBM cloud services. Next day session continued with the project and deployment discussion by various teams held in various clusters. The team from IBM was interacting with the students and suggesting them the right technology and tools that could be possibly made use and to implement it in the project. The IBM Team gave guidance and suggestions to students by providing their ideas and views on how to deploy on IBM Watson Studio and its related cloud services. The IBM team was always available to mentor the students and helps them to build a prototype.



Mr. Sridhar Chitraju (Program Director - Hybrid Cloud CoE - Global Technology Services Labs (GTS Labs), IBM India) was Chief guest for the function and Ms. Neha Sobti (Performance Marketing Lead - Developer Marketing, India Software Labs, IBM India) was the Guest of Honor for the function. Mr. Mritunjay Vishwakarma (Community Leader, IBM) came forward to appreciate the students and motivated them take their innovation and ideas ahead and try implementing on various technologies available. The IBM team was honoured by our college department and in turn felicitated them with a memento for their meritorious conduct and co-operation.

## Xactitude 2020



Xactitude 2020 is the annual Science and Technology festival organized on 03.02.2020. The objective is to provide a platform to hone the technical skills, team work and leadership skills of the students.

Xactitude 2020 was inaugurated by Mr. Amaralingeswara Rao Kaka, Program Director, Digital Analytics, India Software Labs, IBM, India along with Ms. Latha Raj, Director, Center of Excellence (CoE) & Global Technical Eminence Leader IBM Data & AI. The various events were conducted like Calcibot (Soccer

Bot), Binary Beasts (Coding and Debugging), Cyberxec (IT Manager), IT Quizzards (IT Quiz), Netizen Mates (Tech talk), Grafique (Photography), Cyberpunk (Gaming), Electrowatt (Electronics), Algebraniacs (Mathematics), Perceptor (Statistics), Magnetrix (Physics) and Skywalker (Women Who Code).

## FACULTY ARTICLE

### Amazon RDS



**Dr. G. Jasmine Beulah**  
Assistant Professor  
Computer Science(UG)

The Amazon RDS (Relational Database Service) is used to easily create a relational database in the cloud. This cross-platform database service was developed by Amazon and released in the year 2009. It also provides a way to manage the administrative processes like patching the database software, backing up databases and enabling point-in-time recovery. This proprietary tool by Amazon simplifies the process of creation, scaling and the use of the relational database in applications.

An instance is the basic building block of an RDS. It is an isolated database environment running in the cloud. The Amazon RDS manages the database instance by performing backups, handling failover, and maintaining the database software. Amazon RDS provides different instance types that are optimized to fit different relational database use cases.

Some of the database engines supported by the Amazon RDS are Amazon Aurora, Postgre SQL, MySQL, MariaDB, Oracle, Microsoft SQL Server.

Some of the features of the Amazon RDS are,

1. It is easy to administer the project from conception to deployment using the Amazon RDS as there is no need for infrastructure provisioning or installing and maintaining the database software.
2. Amazon RDS is highly scalable. You can increase the compute and storage resource with only a few mouse clicks or an API call.
3. It is a highly reliable infrastructure as it synchronously replicates the data to a standby instance in a different availability zone.
4. It offers performance on par with the commercial database at 1/10th the cost.
5. It is highly secured as it lets you run database instances in Amazon Virtual Private Cloud.
6. Using Amazon RDS is very cheap as the rates are very low and you get the benefit from the option of On-Demand pricing.
7. It also has support for Multi-availability zone deployment.

Amazon provides an RDS interface to access the RDS service. To work with the RDS service like accessing the data, uploading the data, and running some other programs need an RDS interface.

There are three main interfaces provided such as GUI Console, Command Line Interface, and AWS API.

1. A GUI Console is the simplest interface where users can easily work with the RDS Service.
2. Command Line Interface gives you CLI access where you can execute DB command to work with the service.
3. An AWS API provides an Application Programming Interface to pass information between two systems.

Amazon Aurora is a type of relational database built for the cloud that is compatible with MySQL and PostgreSQL. It is five times faster than the MySQL database and three times faster than the PostgreSQL database. This hybrid database type is a perfect combination of the performance and availability of traditional databases with the simplicity and cost-effectiveness of the open-source database. This database is fully managed by the Amazon RDS so tasks like hardware provisioning, database setup, patching, and backups are automated.

Amazon RDS is a PaaS as it only provides a platform or a set of tools to manage your database instances. AWS is IAAS, but the RDS provided by the AWS is PaaS.

## Alumni Talk



**Ms. Sneha Ramesh**  
(Batch: 2017 - 2020)  
Programmer Trainee  
Cognizant, Bengaluru

"Try to learn something about everything and everything about something". This is a saying which is worthy for all the Jayantians as Light and Prosperity is our motto.

Kristu Jayanti College is the best platform for the students to become successful in their life and career as it provides the best in any of the field you opt for. The support and guidance from the faculty members and the clean environment will make your Jayantian life even more special, disciplined and a memorable one. During the Campus Placements, many students get placed in the best leading Multinational companies and I am one among them. I'm very much blessed to be graduated from one of the finest and most emerging college ever. I feel humbled and grateful for the support and encouragement I received from KJC, which made me sturdy and committed towards my goal in life.

"All our dreams can come true, if we have the best institution to pursue them".

Thank you!

## DEPARTMENT ACTIVITIES

### Guest Lecture

#### Kristu Jayanti Green Recycling System Week - E-Waste Management



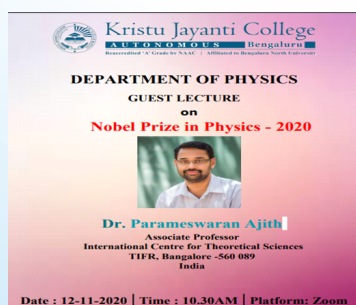
The guest lecture was organized from 17/02/2020 to 19/02/2020 and the Dr. Anthony Vincent, Assistant Professor, Department of Computer Science (UG), explained about E-Waste Management and its uses. Electronic and electrical wastes are dismantled to collect the valuable material such as plastic housing, circuit board for resale or reuse as a spare part in other equipment and non-broken cathode-ray tubes (CRTs) for refurbishing into new electronic and electrical equipment. However, all processing of e-waste is on environmentally unsound management, and many problems have been identified and shared with students.

#### Lecture on Vedic Maths



The lecture was organized on 25/01/2020 and the resource person Dr. Krishna Prasad K., Associate Professor, Department of Computer and Information Sciences, Srinivas University, Mangaluru, explained about the various techniques used in Vedic Mathematics. Vedic Maths is a system of reasoning and mathematical working based on ancient Indian teachings called Veda. It is fast, efficient and easy to learn and use. Vedic mathematics, which simplifies arithmetic and algebraic operations has increasingly found acceptance the world over. The lecture focused on the approach of Vedic Maths to solve various mathematical problems which we come across in our day to day life.

#### Guest Lecture on Nobel Prize in Physics – 2020



The Guest Lecture was delivered by the eminent researcher and astrophysicist, Dr. Parameswaran Ajith, Associate Professor, International Centre for Theoretical Sciences (ICTS), TIFR, Bangalore, India. The speaker gave an insight to the basics of general theory of relativity and its importance and applications in the studies of black holes as well as gravitational waves. This guest lecture served as a platform to discuss the advances in astrophysics and cosmology and shared the experiences and perspectives of the speaker, and gave thought to the current directions for research in the field. It provided the participants an opportunity to acquire knowledge and ideas about black holes and gravitational waves as well as the researches and contributions of the Nobel laureates.



## Workshop

### Oracle Academy

The Virtual Workshop on Getting Started with Java using Alice in Oracle Academy was conducted on 05/11/2020 in ZOOM Platform. The Virtual Workshop began with a brief introduction about Oracle Academy and its members around the globe. The resource person Mr. Jayaprakash Anjarapu, provided a detailed introduction about Alice3 software and its uses. The later part of the session elaborated on how Alice3 uses a drag and drop environment to create computer animations using 3D models. Mr. Jayaprakash created a virtual environment and showed how to assign specific properties to an object in Alice3. Finally, the resource person Mr. Jayaprakash Anjarapu concluded the Workshop with information about the career opportunities available for the software.

### Workshop on Hackathon - Big Blue Hack



The two days workshop on Hackathon - Big Blue Hack was organized on 20/01/2020 & 21/01/2020, Ms. Dipali Chatterjee, Developer Advocacy Leader from IBM was the Chief Guest addressed the gathering and gave a short introduction about Hackathon and Mr. Krishna who belonged to the IBM team, spoke about Neural Nets, Reinforcement learning and gave a demo on the different services offered by IBM Watson Studio. Visual Recognition, Watson Speech-to-Text, Watson Text-to-Speech and Code patterns. The objective of the programme is a design sprint-like event; a popular event among IT aficionados, in which computer programmers and others involved in IT solution development, including graphic designers, interface designers, domain experts, and others collaborate intensively to solve complex real-world problems.

### The Python Workshop: A New, Interactive Approach to Learning Math



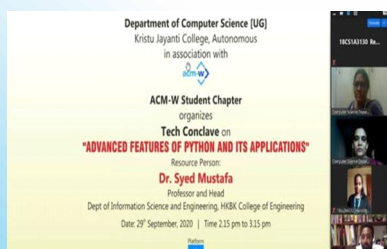
The Department of Mathematics conducted one day workshop on learning Python software for mathematics on 25.01.2020. Prof. Chetan H. N., KLE Degree College, Nagarbhavi, Bengaluru, explained about the features and advantages of the Python. And also he showed the students about installation of the software. Professor explained codes to solve numerical problems, basic math equations, derivatives, integrations. He helped students to code by themselves and to get the outputs in the lab.

## Webinar



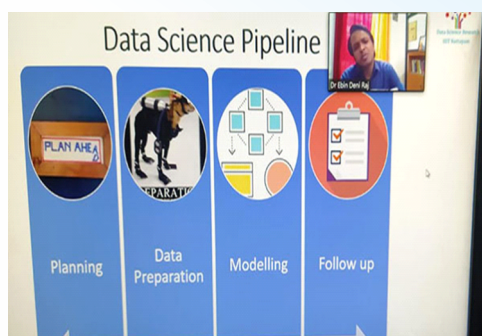
The Department of Statistics organized a webinar on Role of Statistics in Decision Making to commemorate the National Statistics Day on 29/06/2020 and the objective of the programme was to provide emphasis on the prospects of higher studies in Statistics on employability/ entrepreneurship. The resource person, Dr. Rajeswari Kasturi started the talk by explaining the contributions of Prof Mahalanobis P C to the growth and development of India especially from the second five-year planning by closely working with the policy formulations. She then explained the structure and functioning of ISS, SSS, Ministry of Statistics and Programme Implementation, and other departments which use statistical information and analysis for their functioning. The latter part of the session elaborated on the career opportunities for statisticians in government sector.

## ACM-W Student Chapter



The Department of Computer Science in association with ACM-W Student Chapter organized a virtual webinar on Introduction to Advanced Features of Python and its Application. The speaker of the Session Dr. Syed Mustafa started the session with Introduction to Python. He discussed the basic concepts used in the technology relating with the best suitable real life examples which are essential for the understanding of the technology. Professor also discussed about analyzing structured and unstructured data using different tools and techniques, developing an understanding of different types of loops, basic arithmetic operations, arrays, list methods and functions, strings, and many more. The resource person projected a clear understanding of the importance of functions, dictionaries and future problems in the real world. He inspired the audience by his lively interaction on topics such as new trends in applying Python-code, approaches for tuples and list arguments, inbuilt functions, and Features of Python.

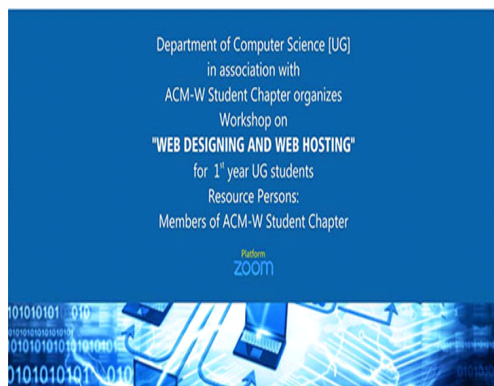
## Webinar Series



The resource person Dr. Meenakshi, Associate Professor and NPTEL instructor, IIIT Bangalore explained on the testing aspects, testing methodologies and testing of web applications. She demonstrated on various examples on client side constraint rule, security violation rules, test value selection and various available tools for testing web applications.

Dr. Ebin Deni Raj, Academics in charge, Data Science Group, IIIT Kottayam focused on What, When, Why, Who, Where (5 W's) of data science. He pointed out the Gartner hype cycle, top women coders, data science pipeline, Drew Conway's Venn diagram on data science and 5 P's of data science. The participants were highlighted on the various funding projects undertaken and how they can contribute to the nation through various projects.

## Workshop on Web designing and Web Hosting



The main objective of the programme is to guide students in creating and hosting effective web pages and also securing knowledge on basics of HTML and CSS and it was conducted on November 27, 2020.

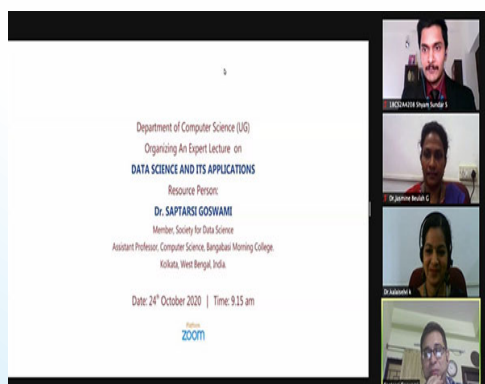
The resource Person Mr. Ibrahim Khan started the session with the Introduction to Web Hosting using Bootstrap. He gave brief knowledge about web hosting using bootstrap. He gave in-depth concepts about how to create a web page, getting a domain name, hosting it and making the web page live both for desktop as well as mobile devices. It was a practical session; participants could create a web page using HTML tags, design it using CSS and finally learnt to host using bootstrap.

## Computer Science Education Week



Computer Science Education Week (CSEdWeek) is an annual program organized on 9-12-2020 to 13-12-2020 dedicated to inspiring students to take interest in computer science. Originally conceived by the Computing in the Core coalition, Code.org® organizes CSEdWeek as a grassroots campaign supported by 350 partners and 100,000 educators worldwide. CSEdWeek is held in recognition of the birthday of computing pioneer Admiral Grace Murray Hopper (December 9, 1906). CSEdWeek was celebrated by Department of Computer Science (UG) in collaboration with ACM-Women and software development cell (TechZone). The CSEdWeek attracted the interest of students and in the above program a total 147 participants, 15 of them being external participants. The student spread knowledge within students about digital world and computer science week

## Society for Data Science (S4DS)



The Expert Lecture on Data Science and its Applications was conducted on 24/10/2020. The key objective is to make the students understand the extraction of valuable information for use in strategic decision making, product development, trend analysis, and forecasting. Dr. Saptarsi Goswami explained the core of Data Science and added on why and what of Data Science. He also gave a Recommendation System as a case study that can be followed by the students. Dr. Goswami explained the practice of analyzing raw data to discover any hidden patterns using data science algorithms. He also explained about the various applications and tools such as machine learning and sophisticated algorithms that are used for cleaning the data. Dr. Goswami also threw light on the types of Machine Models and emphasized that getting the data itself is not good enough but the quality of the data must be known for further analysis.



## Student Chapter on the Society for Data Science (S4DS)

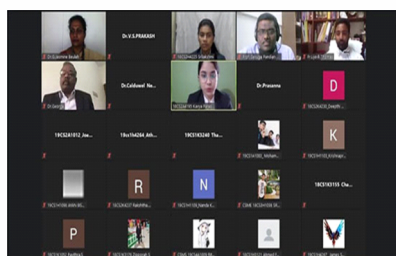


The Objective is to create a forum for the Interchange of ideas on Data Science and to promote and create awareness about the Data Science in the rapidly-changing world, as an area where there is a lot of opportunities for placement and research, in India and worldwide by connecting individuals, corporations, and data scientists.

On 03/10/2020, the Student Chapter on Society for Data Science was inaugurated by Rev. Dr. Augustine George, Principal, Kristu Jayanti College along with Dr. Amol Goje, President, S4DS and he emphasized that the primary objective to create a student chapter was to develop and deliver educational initiatives in the domain of data analytics and data sciences to support the next generation of data scientists.

Mr. Abhijith, Digital Transformation Specialist, Bengaluru, explained the role of data scientist as a person who should be able to leverage existing data sources, and create new ones as needed in order to extract meaningful information and actionable insights. These insights can be used to drive business decisions and changes intended to achieve business goals. He also explained the fact that the students must be empowered and they must be made ready for data science careers through hands-on practical workshops,

## Student Research Forum



The research forum on the topic 'The Panel Discussion on Research: How to do it' was organized on 10/11/2020. The objective is to foster research interest in undergraduate students and to inspire them to take up research as a career and to create a network of students to promote and facilitate Interdisciplinary Research.

The resource person Dr. D.I. George Amalarethinam Bursar, Director (MCA) & Associate Professor of Computer Science Jamal Mohamed College (Autonomous) Tiruchirapalli, acted as the moderator, he explained the need of selecting a topic that can be the most challenging part of a research assignment. Since this is the very first step in writing a paper, it is vital that it be done correctly.

Dr. Prasanna Ranjith Christudoss, Faculty & Research Coordinator, University of Technology & Applied Science – Shinas, Sultanate of Oman acted as member and he explained the need to consult the resources chosen and note the information that will be useful in the paper. He asked the students to begin by organizing the information that was collected. Citing or documenting the sources used in the research serves two purposes: it gives proper credit to the authors of the materials used, and it allows those who are reading your work not to duplicate your research and locate the sources that you have listed as references.

Dr. P. Calduwel Newton Assistant Professor, Department of Computer Science, Government Arts & Science College, Tiruchirapalli, acted as the members and he explained the need to do a preliminary search to determine whether there is enough information out there for the investigation and to set the context of the research. With the direction of the research now clear, begin locating material on the topic. The session was highly inspiring for the students.

## Interdisciplinary Research Colloquium



The session of Interdisciplinary Research Colloquium was hosted on "Medical Image Analysis and Visualization" was organized on 06/01/2020. Dr Amlan Chakrabarti, Professor and Director of A.K Choudhary School of IT was the resource person for the day. The session emphasized the need of how Computer Vision, Machine Learning and Deep Learning help the doctors to improve their diagnosis by screening the data. The students were given the introduction of various algorithms used in the process. They were given a brief detail on how Machine learning and Deep Learning methods used in Computer Vision Images. They were also given information on how the data are collected, which are later put into Diamond format for easier analysis. The students were told how to read the images, with more the deformity of the images the higher the disease condition is. For cancer sort of diseases the Multi-modality is used to help the doctors to differentiate the malignant and the benign form of cancers,

which will show the various angles of the image of the same organ from combined scans. The students were told brief information of Computer Aided Diagnosis (CAD) to help radiologists interpret medical images. The session, in a whole, was well informative and interactive.

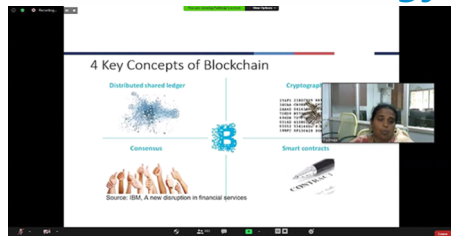
## Expert Lecture Series

### Artificial Intelligence and Deep Learning Revolution



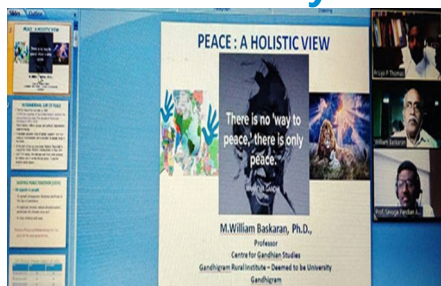
The International Lecture on Artificial Intelligence and Deep Learning Revolution was conducted on 27/01/2020. The resource person Mr. Guy Brown, Head, Department of Computer Science, University of Sheffield, UK delivered a lecture on Artificial intelligence (AI). Particular applications of AI include expert systems, speech recognition and machine vision. This lecture paved a path to understand the difference between Artificial Intelligence & Machine Learning and apply the principles of both in a real-time scenario.

### Blockchain Technology



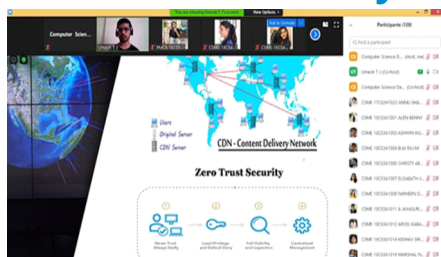
The guest lecture on Block Chain Technology was organized on 26/09/2020. The resource person Ms. R. Sangeetha, Assistant CIT coordinator and Assistant Professor in Computer Science, Lady Doak College, Madurai, explained the brief introduction of Blockchain technology and, she mentioned that, this technology provides potential to upend the way every industry manages its information and data and financial services. Blockchain technology offers new tools for authentication and authorization in the digital world that preclude the need for many centralized administrators.

### International Day of Peace: A Holistic view



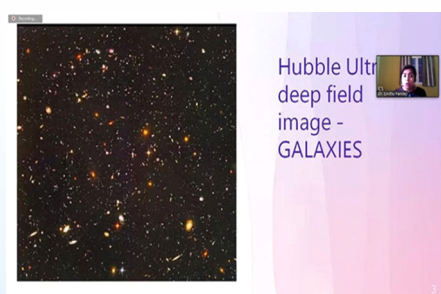
The expert lecture on International Day of Peace was organised on 21/9/2020. The resource person Prof. M. William Baskaran, Centre for Gandhian Studies, Dean, School of Social Sciences, Gandhigram Rural Institute-Deemed to be university, Gandhigram, spoke about the GPI (Global Peace Index) of India, and Economic impact of violence on the global economy: The economic impact of violence improved by 0.2 percent from 2018 to 2019 and about the types of peace and he concluded with since wars begin in the minds of men, it is in the minds of men that the defence of peace must be constructed.

### Internet and Security



The guest lecture on Internet and Security was organized on 19/09/2020. The resource person Dr. Umesh T J, developer Associate, GTLC(IN) SAP LABS INDIA PVT.LTD, spoke about while there is no network that is immune to attacks, a stable and an efficient network security system is essential to protect client data. A good network security system helps business reduce the risk of falling victim of data theft and sabotage. Network security helps protect your workstations from harmful spyware.

### Birth and Death of Stars



The guest lecture on birth and death stars was organized on 19/09/2020. The resource person Dr. Sindhu Pandey, Research Associate Aryabhata Research Institute of Observational Sciences (ARIES), Nainital spoke about the life cycle of the stars and how the star life cycle was determined by mass, nebula, and Supernovae. Dr. Sindhu Pandey spoke about 'Life Cycle of Stars'. A star's life cycle is determined by its mass. A star's mass is determined by the amount of matter that is available in its nebula, the giant cloud of gas and dust from which it was born. ... Over time, the hydrogen gas in the nebula is pulled together by gravity and it begins to spin. The first stage in the birth of a star is called a protostar. As long as there is still inflowing material, the object is a protostar. When the core of a protostar has reached about 10 million K, pressure within is so great that nuclear fusion of hydrogen begins, and a star is born. Stars die because they exhaust their nuclear fuel. Once there is no fuel left, the star collapses and the outer layers explode as a 'supernova'. What's left over after a supernova explosion is a 'neutron star' - the collapsed core of the star - or, if there's sufficient mass, a black hole. The upper layers will expand and eject material that will collect around the dying star to form a Planetary Nebula.

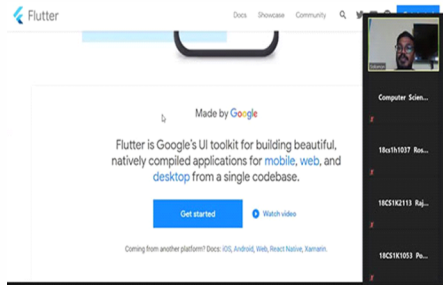


## FIT India 2020



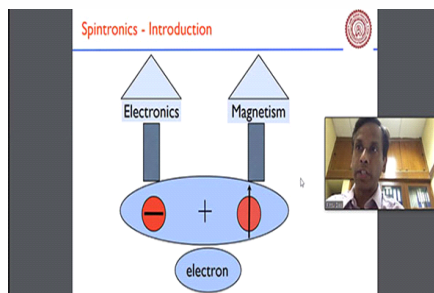
The guest lecture on Lead a Healthy Life to keep hearts beating FIT India 2020 was organized on 29/08/2020. Dr.Divya Jain, Officer Onco Nutritionist, Cytecure Hospital, gave Tips for eating a heart healthy diet, for being more active, to be smoke-free, to help you understand and control your cholesterol levels and to help understand and control your blood pressure. She explained about diet food and to choose foods low in saturated fat, trans fat, and sodium. As part of a healthy diet, eat plenty of fruits and vegetables, fibre-rich whole grains, fish (preferably oily fish-at least twice per week), nuts, legumes and seeds and try eating some meals without meat. Select lower fat dairy products and poultry (skinless).

## FLUTTER (Mobile Management)



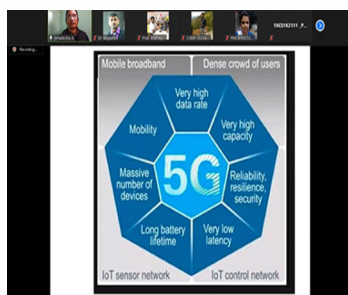
The guest lecture on FLUTTER (Mobile Management) was conducted on 19/09/2020. The resource person Mr. Solomon S, lead developer, LucidPlus IT Solutions gave an insight and explain about the concept of flutter and how it was used to develop applications for Android, iOS, Linux, Mac, Windows, Google, and the web from a single codebase. The resource person explained about its compatibility, high performance and fast development process. The session concluded with an explanation on how to build your own widget and the cost effectiveness of flutter mobile application.

## Spintronics



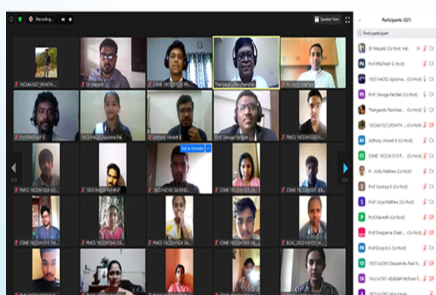
The Expert Lecture on Spintronics in modern data storage technology was organized on 24/10/2020. The resource person Dr Pintu Das, Assistant professor, Department of Physics, IIT Delhi gave the insight Spintronics is a promising technology which aims to solve the major problems existing in today's conventional electronic devices. Realistically, this technology has the ability to combine the main functions of the modern semiconductor microelectronics and magnetic storage devices in single chip. The optical Spintronics for optical data storage is the future because it can use much higher electro-magnetic spectrum frequencies with functions taking advantage of controlling the electrons for use in reading and writing of stored information while maintaining non-volatility and extending the shelf life beyond magnetic hard drives capabilities.

## 5G Technology



The expert lecture on 5G Technology was organized on 17/10/2020. The resource person Dr A. Amali Asha stated that, while 5G is built on the successes of 4G networks, it provides an opportunity for Telcos to move beyond providing connectivity services, to developing rich solutions and services for consumers, industries and infrastructure. And also she mentioned that Technology is critical to India's digital ambition. The constantly evolving need for higher speed, along with plans for smart cities, industrial automation, connected devices, etc., make 5G inevitable.

## Guest Lecture on Relevance of Gandhian Nonviolence in the Third Millennium



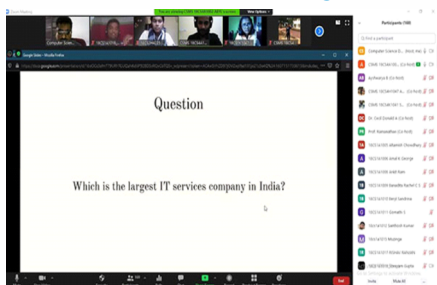
The resource person Dr. T. Ravichandran , Asst. Professor, Centre for Gandhian Studies & Director, Gandhian Constructive Programme Museum, The Gandhigram Rural Institute Deemed to be University,(Ministry of Education, GOI), Gandhigram, spoke about the "principle of non-violence". Non-violence is not a negative virtue, but the positive one of love and compassion. He writes, 'Ahimsa is one of the world's great principles which no power on earth can wipe out. Thousands like myself may die in trying to vindicate the ideal but ahimsa will never die.'

## Vichaarmanthan 2020



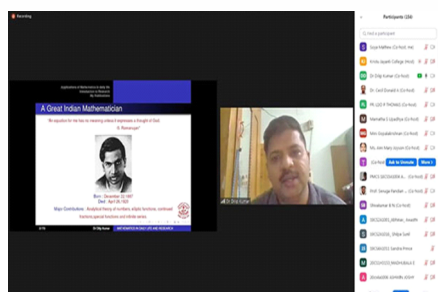
Vichaarmanthan - Development in the field of Aeronautical and Missile Systems was conducted on 14/01/2020. The objective is to provide insights and share experiences on current and past missile/aeronautical projects. Dr. Tessa Thomas, Director General of Aeronautical systems shared her personal experiences right from her induction in 1980's to the latest successful project. The presentation contained missile development stages and future enhancements of AGNI series. She also shared the process of building a missile, the resources and time taken to build one missile.

## Quiz Club Activity



"Quiz - Tech Intellect" 05th December, 2020. Preliminary test was conducted to eliminate and select only 6 from the registered participants of Final Year BCA students. The quiz was all about the Modern Technology software and its evolution. The students participated very enthusiastically and made it a huge success.

## National Mathematics Day



The main objective of the National Mathematics Day celebration is to create and encourage mathematical inventiveness in young minds. Mathematics is an important subject which is the heart of many other subjects in Science. National Mathematics Day celebration will help the students to face competitions and to understand how to apply the mathematical concepts.

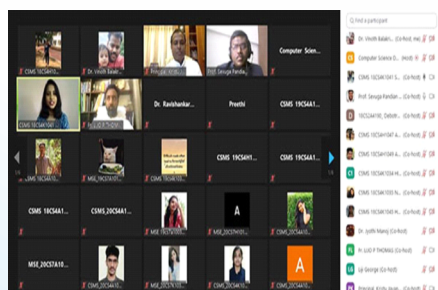
The Department of Mathematics of Kristu Jayanti College celebrated National Mathematics Day on 4th December 2020. Kristu Jayanti College celebrates National Mathematics Day every year by conducting guest lectures, poster presentation, quiz and exhibition.

This year the department celebrated in association with Karnataka State Council for Science and technology and was extended to the entire plus one and plus two students and undergraduate students of our nation.

The First speaker was Dr. Dileep Kumar, Assistant professor, Department of Mathematics, University of Kerala. Dr. Dileep spoke about the applications of Mathematics in various fields like- Applications in day-to-day life, applications of calculus, number theory, differential equations, fourier transforms and astrophysics.

The next speaker was Dr. R.S. Selvaraj, Associate Professor, Department of Mathematics, NIT Warangal. Dr. Selvaraj spoke about ubiquitous mathematics, Gabriel's Horn, applications of linear algebra in robotics, navigation and locomotion. The events organized for the students of plus one and plus two were, quiz and poster presentation and for the undergraduate student's quiz and lecture contests respectively.

## Estimato 2020 Statistics Day

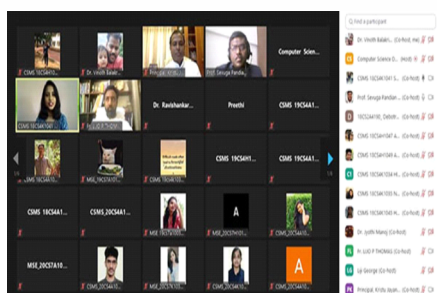


ESTIMATO is a National level Intercollegiate Statistics fest organized by the Department of Statistics, Kristu Jayanti College, Bangalore, on the occasion of World Statistics Day. ESTIMATO 2020 being the first chapter which was held on 28th October witnessed amazing responses from institutes across the country. The inauguration of Estimato was held at 9:30 in the morning, after which the events designed for Estimato were conducted. There were three events: Quiz, Statistical Paradox & Data Challenge.

## Synchronize 2020 IT Fest

SYNCHRONIZE the intra-collegiate fest organized by the final year students of BCA, B.Sc. for their juniors to provide an opportunity to organize, participate and showcase their potentials. SYNCHRONIZE 2K20 was based on the theme of Robotic Process Automation (RPA). The students were grouped into 6 teams named after the RPA providers, namely - UI-Path, Pega, Nintex, Appian, Blue Prism and Jiffy. The fest offered events in all the foundation subjects like Mathematics, Statistics, Electronics





and Physics, so that students could exhibit their skills and be inspired. The 9 events of synchronize 2020 was named based on the robotics technology.

Our students left no stones unturned and participated in a synchronized manner in all the events of the Virtual Intra Collegiate IT fest making the total participation of 1027 students competing for the 9 events. The preliminary rounds were conducted from 15th October to 20th October through AUTO PROCTORING GOOGLE FORMS and 180 students were selected for the final round. The last round of events was conducted through workbench, HackerRank enabled on zoom platform.

The resource person for the Inaugural session was Dr. Anal Acharya, Professor St.Xavier's College, Kolkata, Dr. Acharya emphasized on the participation of various kinds of IT fest to refine the young mind which lean towards technology. He told that Determination, Hard work and Dedication are the three things essential to succeed. He advised the students to learn the basics to excel in their lives and career.

## Industrial Visits

### VISIT TO INFOSYS



The visit was a part of the SPARK event conducted by Infosys for the benefit of students on 04/03/2020. Students were taken inside the campus and the facilities were explained. Post lunch group assembled at AMPHI THEATRE and got a briefing about the infrastructure of Infosys. Later the group went for a campus round.

Students were addressed by the Head of Human Resource, Training & Development team, in auditorium. Students were shown two short documentaries on the history, culture, vision, mission, success story, value and the customer's feedback on Infosys. SPARK session has given an insight to students such as to set goals, never give up and reaffirmed that nothing is impossible. Students got an insight to high standards set by Infosys founder Mr. Narayana Murthy. The speaker addressed the students about the recent technologies and development. The speaker discussed about the projects and explained about the tools used in the Infosys. The response from the students

was awesome and they are all overjoyed by the experience they had. They not only visited the company, they also got an insight to the corporate world through one of the most successful and value driven companies in the world.

### JAWAHARLAL NEHRU PLANETORIUM AND SCIENCE PARK



The students were taken to visit the Jawaharlal Nehru Planetarium and Science Park, Bangalore on 05/02/2020 & 06/02/2020 as part of their Industrial Visit to gain an insight on the usage of computer animations and multimedia for various applications. The students were taken for a forty-minute show on the solar system which started on with the vision of the beautiful night sky as seen from Bangalore and then an introduction to the prominent constellations and the mythological stories associated with them. The planets and their motion around the Sun and the Earth were also highlighted in the show with various researches done on the planets. All the concepts animated using 3D animations and projected on the full dome created an enchanting experience for the students. They also visited the exhibition hall which had a display of colourful posters and 3D models. A few students

also went on to find their weights in various planets using the special weighing machine. They also spent their time in the science park which has over 40 exhibits exploring the DNA strand; looking through an optic tree; whispering to a giant dish, exploring the molecular structure of a crystal, resonant swings, echo tube etc.

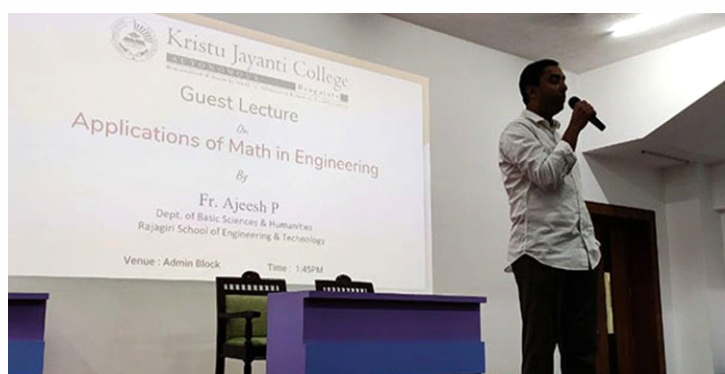
## Visit to Tea and Chocolate Factory, Ooty



The students visited Tea Factory and Chocolate Factory, Ooty on 19/01/2020 as part of their Industrial Visit to gain an insight into the different varieties of tea, how tea is processed and made. The students were taken for a demonstration on the types of machines and the process involved in manufacturing tea. They saw the different machinery that helps to make the tea. Sample tea was given for us to taste; it was quite different than any other tea that we had tasted. The students also visited the chocolate factory which had a display of variety of chocolates.

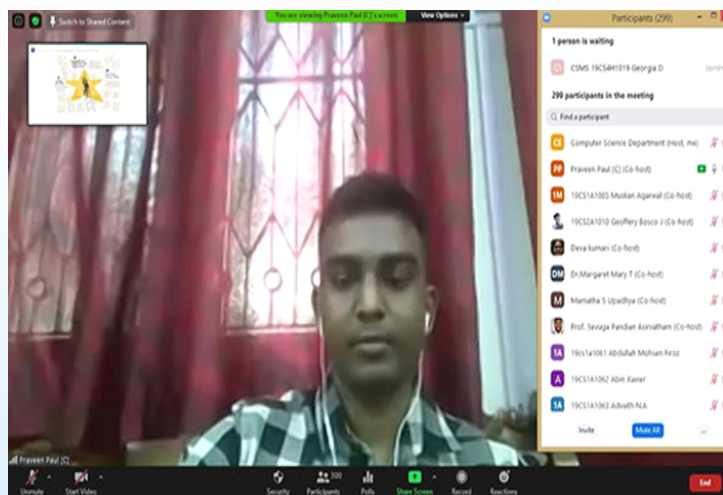
## Alumni Lecture Series

### Applications of Math in Engineering



The guest lecture on "Applications of Math in Engineering" on 21/01/2020. The Resource person, Fr. Ajeesh, Department of Basic Sciences & Humanities, Rajagiri School of Engineering & Technology, Kerala. was a prominent alumnus of Kristu Jayanti College. He focused on students to understand and the resource person urged the students to understand the basics and motivated them by highlighting the importance of mathematics in the field of engineering. He conveyed the message that Maths is the heart of Engineering which plays an important role in each and every stream of Engineering. Father explained about the application of numerical analysis, combinatorics, logic analysis, and algebra in various engineering streams.

## Importance of Learning and Career Growth Opportunities



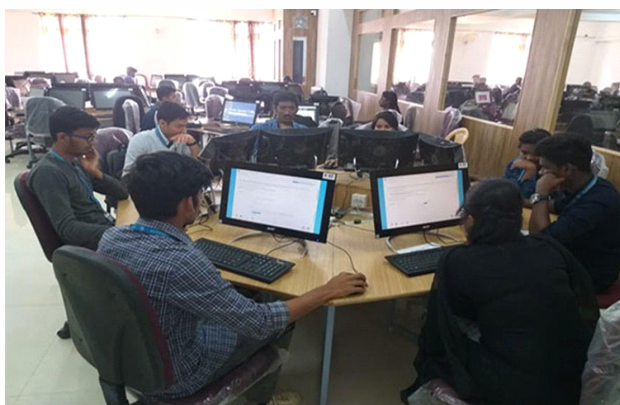
The alumni lecture series on Importance of Learning and career growth opportunities was organized on 29/08/2020. Mr.Praveen, Global People Service Advisor, Nutanix, Bengaluru, spoke about seizing the learning opportunity and setting the groundwork and he also showed the learning path towards success with different key points. He explained how various benefits of career development Reduces attrition of employees, Provides equal opportunity employment, Improves the use of the employees, Improves the quality of the work life of employees, Improves the organization itself and also increases the skills of the employees.

## STUDENT DEVELOPMENT PROGRAMME

### Microsoft CPMA Training

Microsoft had carried out training on cross platform mobile application for IV semester students from 27/01/2020 to 03/02/2020 for which the students took up the exam on 24 Feb 2020 and gained certification for the same. The resource person Mr. Nikhil Kuriakose, Subject Matter Expert, ATS Solutions, Bengaluru, started with a brief introduction on cross platform application

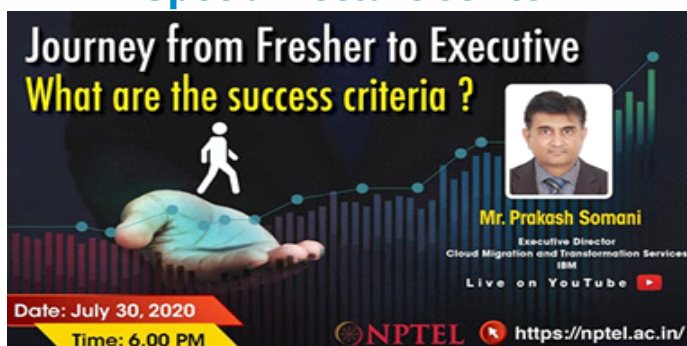




development. Since all the IT jobs now require app. Development for all purposes, they require employees with the knowledge of app development. Briefed about the Google and Microsoft certification courses.

The resource person gave introduction about HTML, CSS, JavaScript. Students were taught to develop web-based app using Apache Cordova. Students developed simple scripts for adding randomly generated numbers using Javascript, creating Facebook login page. The training for the certification programme was very useful for student. The resource person from ATS Learning solution for Microsoft explained the concepts and gave the hands-on session very well that helped students for the certification. It was a good learning session for students. Students were able to gain Knowledge on CPMA and also get certification for the same.

## NPTEL Special Lecture series



A webinar on NPTEL Special Lecture series by the expert - Journey from Fresher to Executive - What are the success criteria was organised on 30/07/2020. The objective is to initiate self-reliance among the students, to make them understand and value the transition period from a student to an executive level.



A webinar on NPTEL Special Lecture series by the expert - What you need to know about Goal setting was organised on 01/09/2020. The resource person Mr. Sajjad Ahmed - Director - HR Capgemini, discussed that goal setting is vital because it helps students to decide and focus on what's really important. He emphasized that effective goal setting allows measuring

## FACULTY DEVELOPMENT PROGRAMMES



The department of Physics organized a Virtual FDP on Remarkable Structural, Magnetic and Microwave Adsorption Properties of Rare Earth-Doped Mn-Cu Ferrites & In-situ characterization of Materials at Elevated Temperatures was conducted on 04/05/2020.

The resource person Dr. Sakthipandi, Associate Professor & Associate Dean, Sethu Institute of Technology explained about the structural and magnetic properties of novel materials which can lead to the development of advanced devices and applications such as sensors and high density memory

## Research insights on Internet of Things (IoT)

The three days FDP on Research insights on Internet of Things (IoT) was conducted on 15th, 16th & 18th May 2020.

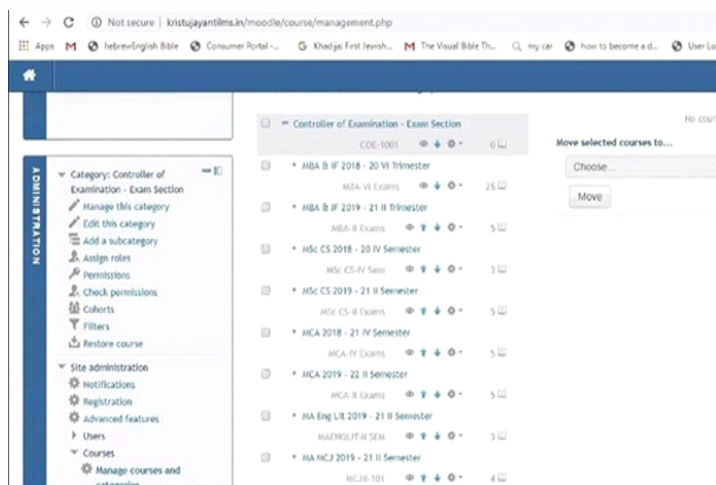
The resource person Dr. Cecil Donald, Assistant Professor, Department of Computer Science (UG) started his session on IoT Framework and its main aim of IoT is to unify everything in the world including things, people, place and process under a common infrastructure to provide information and control of the state of objects around us.

The resource person Dr. Dalwin Vinoth Kumar, Assistant Professor, Department of Computer Science (UG) started his session on IoT Network and he explained about the important key technologies for the internet of things Communication Protocols. ZigBee is similar to Bluetooth and is majorly used in industrial settings. It has some significant advantages in complex systems offering low-power operation, high security, robustness and high and is well positioned to take advantage of wireless control and sensor networks in IoT applications.

## Fuzzy Logic

The department of Mathematics organized the FDP on Fuzzy logic on 09/05/2020. The resource person Dr. Mamatha S Upadhya, Assistant Professor, Department of Mathematics, explained about the Fuzzy sets, operations on sets, various membership functions and applications. The fuzzy logic has been used in numerous applications such as facial pattern recognition, air conditioners, washing machines, vacuum cleaners, etc.

## Creating an Inclusive Teaching Learning Experience in LMS (Moodle)



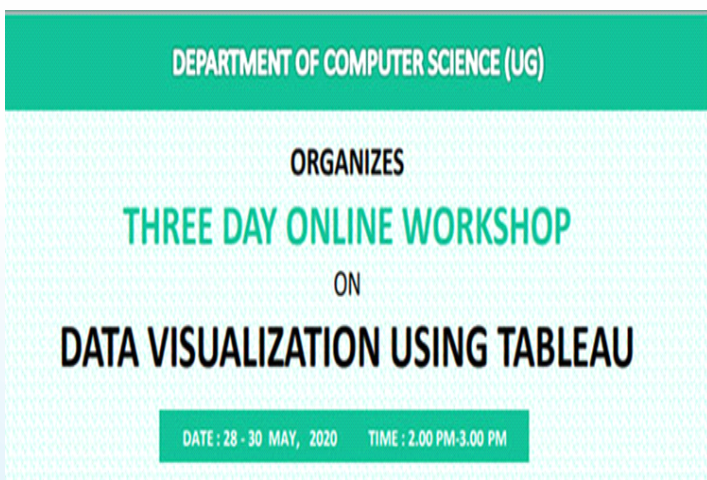
The webinar on Creating an Inclusive Teaching Learning Experience in LMS (Moodle) was organized on 19/05/2020 to 21/05/2020. The objective is to adopt a more holistic approach and provide an alternate method to traditional classroom learning, which helps the educators continue teaching even during pandemic times.

Dr. Binu Thomas, Associate professor, Marian College, Kuttikkanam, Kerala discussed that the COVID-19 scare may paralyze the world, but education should not take a backseat. This is because there are so many options available today, ranging from online tutoring to MOOCs where students are given access to their own LMS portal which carries details about daily class work, assignments, assessment record, syllabus, worksheets, and course media along with online virtual classroom functionality. The workshop gave an insight on LMS and various services provided by MOOC.

The in-house resource person Prof. Sevuga Pandian. A, Coordinator, Department of Computer Science, explained in detail on content development, content delivery, conducting examination, and internal evaluation of the students.

Finally he concluded that through LMS, teachers may create and integrate course materials, articulate learning goals, align content and assessments, track studying progress, and create customized test for students. LMS allows the communication of learning objectives, and organize learning timelines.

## Workshop on Data Visualization using Tableau



The three-day workshop on data visualization using Tableau was organized from 28th May 2020 to 30th May 2020.

The resource person Dr. Vinothina, Assistant Professor, Department of Computer Science (PG) initiated the first day of the workshop with an introduction to data visualization and Tableau. Significant features of tableau, different products of tableau, and comparison of tableau products were discussed at the beginning of the session. She had thrown light on installation guidelines, license types, tableau terminologies and tableau workspace with a demo.

The resource person Prof. B. Ayshwarya, Assistant Professor, Department of Computer Science (UG) of the day shared her knowledge practically on types of connectivity in Tableau with the data source, various types of filters such as quick filter, table filter, wild card filter and data source filter with sample superstore data source.

Dynamically controlling data visualization, creating parameter, creating calculated fields, creating dashboard, creating story and publishing the workbooks were demonstrated for COVID-19 confirmed cases dataset. Blending different data sources, joining multiple data sources and viewing the data using different types of charts and maps were also highlighted practically in tableau with multiple data sources.



## RESEARCH COLLOQUIUM

**Research Colloquium on**  
**Traverse from Crawling to Running**  
**15<sup>th</sup> – 18<sup>th</sup> May, 2020 | 3.00 p.m. – 5.00 p.m.**

**Resource persons**

**Dr. Mayank Pandey**  
Assistant Professor,  
Department of Electronics,  
Kristu Jayanti College, Bangalore

**Dr. Seyed M. Buhari**  
Associate Professor,  
Department of Information Technology,  
Faculty of Computing and Information  
Technology, King Abdulaziz University,  
Jeddah - Saudi Arabia

Registration Fee : Rs 250  
<https://forms.gle/shf3AnBFMLNKynM2A>

**Payment details:**  
Account name : Bodhi Niketan Trust.  
Account No : 0231053000007007  
IFSC Code : SIBL0000486  
The South Indian Bank Ltd, Kothanur Branch, Bengaluru.

\* The sessions will be handled through zoom platform.  
\* e-Certificates will be provided to all the participants who attend the programme on all the days of FDP.

Contact: Dr. Jyothi Manoj 9480090226 / 7022566867  
Email: jyothimanoj@kristujayanti.com

The Research Colloquium on Traverse from Crawling to Running was organized from 15/05/2020 to 18/05/2020. The resource person Dr. Seyed Mohamed Buhari, Associate Professor, Department of Information Technology, Faculty of Computing and Information Technology, King Abdulaziz University, Jeddah, Saudi Arabia, discussed on the preparation of project proposals and patents the steps involved in the research development framework: grants and patents, grant proposal - academic writing vs grant writing, know the funding agency, general writing tips and strategies, process of grant writing parts of the proposal, developing a staffing plan and proposal budget finalizing and submitting the grant proposal, what is a patent, US patents, steps in the US patent process, the USPTO website and patent database, patent examples: design,

and utility, do's and don'ts in the patent and the requirement of "new", elements of a patent document, international patents, finding patents: USPTO, google patents, ESPACENET, other patent resources on the web were discussed.

The resource person Dr. Mayank Pandey, Assistant Professor, Department of Electronics discussed the various relevant concepts like - scientific methods of research, different type of scientific research, advantages and disadvantages of different types of research methods, valid and invalid research, steps for research publications, need of publication, research communication and different types, publication statistics and different types of publications, IMRaD structure, preparation of manuscript, how and where to publish (different mode of publication), finding suitable journal, routes to open access publication and process, ethics for publications, impact factor, h-index and i-10 index, how to get citation and importance, how to track your research and access of research article.

## DESCRIPTIVE STATISTICS

The department of Statistics organized a virtual FDP on Descriptive Statistics on 14.05.2020. The resource person Prof. Liji George, Assistant Professor, Department of Statistics, explains about the techniques related to Data Collection, Representation (Visualization), Analysis and Summarization (Interpretation). Statistics help us to make sense of the information collected and thus to develop a better understanding of our world. In Descriptive statistics we study sample data to gain knowledge about the patterns in data. The resource person explained the various concepts using suitable examples.

## MICROSOFT DYNAMICS 365 PICTURE

The two Day Online FDP on Microsoft Dynamics 365 Picture was conducted on 04.05.2020 & 05.05.2020. The resource person Dr. Anthony Vincent, Assistant Professor, Department of Computer Science(UG) shared his knowledge on Microsoft Dynamics 365 which is a cloud-based business applications platform that combines components of customer relationship management (CRM) and enterprise resource planning (ERP), along with productivity applications and artificial intelligence tools. IT can be used by Educators, Students, Parents too.

## ONLINE ALUMNI INTERACTION

**Kristu Jayanti College**  
Bengaluru  
Recognized & Guided by NAAC | Affiliated to Bangalore North University

DEPARTMENT OF COMPUTER SCIENCE (UG)

ORGANIZES  
**ONLINE ALUMNI INTERACTION**  
OR  
**POST COVID-19 SCENARIO AROUND THE GLOBE**

DATE: 30th MAY 2020  
TIME: 11:00AM TO 12:00PM IST

**BISHOP MICHAEL MORRISSEY**  
WESTERN AUSTRALIAN CATHOLIC EDUCATION BOARD MEMBER  
ROMAN CATHOLIC BISHOP OF GERALDTON

The Department of Computer Science had organized an online alumni interaction on 30th May 2020, on the topic "Post Covid Scenario around the World" through WebEx platform. 121 alumni members of computer science department from India and abroad participated in the program. Bishop Michael Morrissey, Western Australian Catholic Education Board Member, Roman Catholic Bishop of Geraldton, was the resource person.

His excellency Bishop Michael Morrissey said, the world remade by COVID-19 offers a view of how businesses and society may develop over the next three to five years as the world navigates the potential long-term implications of the global pandemic. Bishop also mentioned, no one can say with certainty what the course of the virus will be, much less the impact the pandemic will have on people and societies. Let's wish and pray the crisis will end, and life will return to normal.

## DEPARTMENT ACHIEVEMENTS

### Coursera for Campus

Coursera's massive open online course (MOOC) education platform offers courses, specializations, degrees, professional and master track courses. It is a platform where anyone, anywhere can learn and earn credentials from the world's top universities and education providers.

Kristu Jayanti College has partnered with Coursera with Access to more than 2,000 courses and Specializations to help students in terms of Free guided projects to gain job-relevant skills with hands-on learning experiences that employers are looking for.

Every course on Coursera is taught by top instructors from the world's best universities and educational institutions. Courses include recorded video lectures, auto-graded and peer-reviewed assignments, and community discussion forums.

### Faculty Research Publications [2019-2020]

Ms. Ayshwarya: Application of Weighted Product Method for Determining Home Renovation Assistance In Pringsewu District, International Journal of Recent Technology and Engineering (IJRTE), ISSN: 2277-3878, Volume X (Scopus)

Ms.Ayshwarya: Using Shell Programs in Educational and Methodological Support for Learning Foreign Language, International Journal of Applied Exercise Physiology, Volume 8, ISSN:2322-3537 (Indexed in Web of Science)

Ms.Ayshwarya: To the use of English words when learning programming, Information Systems and Technologies, International Journal of Applied Exercise Physiology, Volume 8, ISSN:2322-3537. (Indexed in Web of Science)

Ms.Ayshwarya: Professional forms of Employment in the Russian Federation: Problems and Challenges, International Journal of Applied Exercise Physiology, Volume 8, ISSN:2322-3537. (Indexed in Web of Science)

Ms. Ayshwarya: Integration of the Educational and Didactic Systems in the Training of Future Teachers, International Journal of Applied Exercise Physiology, Volume 8, ISSN:2322-3537 (Indexed in Web of Science)

Ms. Ayshwarya: Green World: Green Internet of Things(G-IOT) covering technologies for smart environment and as a scientific enabler of green development, International Journal of Research and Analytical Reviews (IJRAR), Volume 6, Issue 2, March 2019.(UGC-Care)

Mr.Prathap G: Transformation of Emotional mining in the health care system: A study, International Journal of Research and Analytical Reviews, ISSN 2349-5138 Volume 6 Issue 2, June 2019 (UGC-Care)

Ms.Ayshwarya: Aqua Bill Store Mineral Water Sales Application Program, International Journal of Recent technology and engineering, ISSN:2277-3878, July 2019. (Scopus)

Ms.Ayshwarya: Design analysis of Web-Based Employee information System in Office of Technical implementation Unit of Education Department, International Journal of Recent technology and engineering, ISSN:2277-3878, July 2019 (Scopus)

Prof.Mini Gopalakrishnan: Generator graphs for cyclic groups, AIP Conference Proceedings, ISSN 020119, June 2019.

Dr.Ranjitha M, Segmentation of Ultrasound Abdominal Images to Extract Region of Interest, International Journal of Recent technology and engineering, ISSN:2277-3878, July 2019 (Scopus)

Dr.Dalvin Vinoth Kumar: Parent Selection of IPV6 Enabled routing protocol for Lower Power Lossy Network, International Journal of Recent Technology and Engineering, ISSN :2277-3878, July 2019 (Scopus)

Dr.V.Prakash: Analytical comparison and implementation of different inverter topologies for three-phase on-line uninterruptible power supply, International Journal of Ambient Energy, ISSN: 0143-0750 (Print) 2162-8246, November 2019. (Taylor & Francis)

Dr.V. Prakash: Design and Implementation Of Simple Boost PWM Controlled T-Source Inverter For Solar PV Application, International Journal of Scientific & Technology Research, Volume 8, Issue 11, ISSN 2277-8616, November 2019, (Scopus & Elsevier)

Dr.Margaret Mary & Ms. Sangamithra, Intelligent predicting learning disabilities in school going children using fuzzy logic K mean clustering in machine learning, International Journal of Technology and Engineering, Issue 4 Volume, ISSN:2277 3878, November 2019. (Scopus& Elsevier)

Ms.Gopika S & Dr.K.Kalaiselvi: An effective feature set in quality estimation of natural scene statistics images, International Journal of innovative technology and exploring engineering, December 2019 (Scopus)

Dr.Margaret Mary. T, Mr.G Ramanathan, Ms.A. Sangamithra & Ms.Soumya K: Design and enactment of heart attach deduction using IoT measuring device IOP: Journal of Physics, Conference Series, ISSN: 1742-6588, January 2020. (Scopus Indexed)

Dr. Mamatha S Upadhy: Nonlinear thermal convection on unsteady thin film flow with variable properties, IOP: Journal of Physics, Conference Series, ISSN: 1742-6596, January 2020. (Scopus Indexed)

Dr. Mamatha S Upadhy & Dr.Soya Mathew: Implementation of Fuzzy Logic in Estimating Yield of a Vegetable Crop, IOP: Journal of Physics, Conference Series, ISSN: 1742-6596, January 2020. (Scopus Indexed)

Dr. Mamatha S Upadhy & Dr.Vinothina V: Fuzzy Logic Based Approach for Possibility of Road Accidents, IOP: Journal of Physics, Conference Series, ISSN: 1742-6596, January 2020. (Scopus Indexed)

Dr.Ranjitha: Artificial Intelligence Algorithms and Techniques in the computation of Player - Adaptive Games, IOP: Journal of Physics, Conference Series, ISSN: 1742-6596, January 2020. (Scopus Indexed)

Ms. Dhanamalar: Disease Inference from Health-Related Questions using Sparse Neural Network and LSTM, International Journal of Innovative Technology and Exploring Engineering (IJITEE), ISSN: 2278-3075, Volume-9 Issue-4, February 2020 (Scopus Indexed)



Ms. Divya K, Ms. Deva Kumari A, Ms. Soumya K & Ms. Sreeparna Chakrabarti: Secure and Multi Copy Dynamic Information Possession in Cloud System, International Journal of Recent Technology and engineering, ISSN: 2277-3878 (Online), Volume-8 Issue-5, January 2020. (Scopus)

Dr. B J Hubert Shanthan, Dr.A Cecil Donald, Dr.A Dalvin Vinoth Kumar & Dr.R Stephen: Priority Intensed Meta Task Scheduling Algorithm for Multi Cloud Environment, IOP: Journal of Physics, Conference Series, ISSN: 1742-6596, January 2020 (Scopus)

Dr.Sandhya Soman: An exploratory analysis on challenges prevailing in small and medium IT firms IOP: Journal of Physics, Conference Series, ISSN: 1742-6596, January 2020. (Scopus)

Dr. Anita C: Enhancing Excellence in Higher Education through Outcome Based Education, Studies in Indian Place Names, Vol-40-Issue-35, ISSN: 2394-3114, February-2020 (UGC - Care Indexed)

Dr. Vinothina, Prof. Prathap G: EVaClassifier Using Linear SVM Machine Learning Algorithm, ISSN: 2194-5357, ISBN:978-981-15-1084-7, February, 2020. (Scopus Indexed Springer, Singapore)

Dr. V.S. Prakash: Genetically Optimized Gain Ration Feed Forward Neural Network Algorithm for Review Opinion Classification, International Journal of Psychological Rehabilitation, Vol 24, ISSN: 1475 - 7192, February 2020 (Scopus)

Prof. Mary N Peter: Advanced Traffic Management System using A Fuzzy Logic Controller to Differentiate Parking Vehicle and Moving Vehicle, International Journal of Innovative Technology and Exploring Engineering, ISSN: 2278-3075, Volume-9 Issue-5, March 2020. (Sopus)

Prof. Mary N Peter: Traffic Management for Smart cities using Traffic Density and Swarm Algorithm to inform diversion route, International Journal of Engineering and Advanced Technology, ISSN: 2249-8958, Volume-9 Issue-3, February 2020 (Scopus)

Prof. Mary N Peter: Avoiding Traffic using Intelligent Transportation System by Count and Density Algorithm, Test engineering and Management, ISSN: 0193-4120, March-April, 2020 (Scopus)

Dr Mamatha S Upadhy: Magnetohydrnamic nonlinear thermal convection nanofluid flow over radiated porous rotating disk with internal heating, Journal of Thermal Analysis and Calorimetry An International Forum for Thermal Studies, ISSN : 15882926, April 2020 (Springer)

Dr Mamatha S Upadhy: Mass transfer analysis of two-phase flow in a suspension of microorganisms Archives of Thermodynamics, ISSN: 1231-0956, 2083-6023, April 2020 (Scopus)

Prof. Liji Sebastian: Curve Estimation Methods for Forecasting Infant Mortality Rates in Tamil Nadu, Test engineering and Management, ISSN: 0193-4120 Volume 83, March-April, 2020. (Scopus)

Mr. Gopika S: Implementation of a Novel Blind Quality Evaluation Algorithm for Natural Scene Statistics Images, International Journal of Advanced Science and Technology, Vol. 29, No. 6, (2020), (Scopus)

Ms. B.Ayshwarya: Forecasting through Motif Discovered by Particle Swarm Optimization Algorithm, International Journal of Future Generation Communication and Networking, Vol. 13, No. 3, 2020. (Scopus)

Dr. Prakash VS & Ms. Devakumari: Proficient Cluster Based Privacy Conservancy Data Perturbation Strategy in Multi-Partitioned Datasets, International Journal of Advanced Science and Technology, Vol. 29, No.11, ISSN: 2005 - 4238, 2020. (Scopus)

Dr. Mamatha S Upadhy: Arrhenius Activation and Zero Mass Flux Conditions on Nonlinear Convective Jeffrey Fluid over an Electrically Conducting and Radiated Sheet, ISSN 1319-8025, June 10, 2020 (Scopus Indexed, Springer Berlin Heidelberg)

Ms.Gopika S: Unsupervised Blind Quality Estimation Of NSS Images And Repair Of Low Quality Images , International Journal of Advanced Science and Technology , Vol. 29, No. 9s, (2020) . (Elsevier H index 4, Scopus Indexed)

Dr.KalaiSelvi & Ms. Gopika S: Secured Authentication For Passwords Using Hash Code, International Journal of Advanced Science and Technology, Vol. 29, No. 9s (2020). (Elsevier)

Dr. MiniGopalakrishnan: Fuzzy Structure of Generator Graphs, International Journal of Advanced Science and Technology, Vol. 29, No. 10S, (2020). (Scopus Indexed)

Dr. Aswin Herbert Sathish: The Role of Massive Open Online Courses (MOOCs) s in Reforming Higher Education, International Journal of Advanced Science and Technology, Vol. 29, No. 7, (2020). (Scopus indexed)

Prof.Mary N Peter: Smart City Traffic Management Using Division Evolution Time Propagation Approach, International Journal of Advanced Science and Technology, ISSN:2005-4238, Vol. 29, No. 9s, June 2020. (Scopus Indexed)

Dr.G.Jasmine Beulah & Ms.B. Manimekala: Performance Evaluation Of Routing In Enhanced Zone Based Clustering Protocol In Wireless Sensor Networks, Journal of Critical Reviews, ISSN- 2394-5125, Vol 7, Issue 3, July 2020. (Scopus)

Dr.G.Jasmine Beulah: Cloud Computing Framework for Clustered Zone Based Wireless Sensor Network, DogoRangsang Research Journal, Vol-10 Issue-07 No. 2 July 2020 (UGC Care)

Vinoth Kumar A & Dr. Stephen R: Time and Cost Aware Meta Task Scheduling Algorithm for Multi Cloud Environment, International Journal of Future Generation Communication and Networking, ISSN: 2233-7857, Vol. 13, No. 3, July 2020 (UGC Care)

Ms.B. Manimekala: Determining the Shortest Path using ANT Colony Optimization (ACO) Algorithm in VANET, DogoRangsang Research Journal, Vol 10, Issue 07, No. 2, ISSN: 2347-7180, July 2020. (UGC Care)

Ms. B. Manimekala: The Road Side Unit Detection to Secure the Routing in VANets Based on an Effective DHKC, DogoRangsang Research Journal, Vol 10, Issue 07, No. 8, ISSN: 2347-7180, July 2020 (UGC Care)

Ms. Sreeparnachakrabarti, Ms.Divya K.S& Ms.Soumya K: Multi Purpose Smart Card For College Students, International Journal Of Creative Research Thoughts (IJCRT), ISSN:2320-2882, Vol : 8 Issue:7, July 2020. (UGC Care)

Dr. Mayank Pandey: A brief review on super capacitor energy storage devices and utilization of natural carbon resources as their electrode materials, Fuel Journal (Elsevier Publisher), Vol 282, 118796, July 2020.

Dr. Mamatha S Upadhya: Thermal convective conditions on MHD radiated flow with suspended hybrid nanoparticles, Microsystem Technologies, Springer Berlin Heidelberg, August 2020. (Scopus)

Ms. Sreeparna Chakrabarti: Quantum Key Distribution: A Safer Alternate To Asymmetric, International Journal of Advanced Trends in Computer Science and Engineering (IJATCSE), ISSN (ONLINE) : 2278 – 3091, June, 2020 (Scopus indexed)

Dr. Amjad Hasan Khan: A Study on Corrosion Inhibition by Lactobacillus Lactis Derived Surfactant on Thiobacillus Sp., Journal of Critical Reviews, ISSN: 2394-5125, Vol7, Issue 13, 2020. (Scopus)

Dr.NaveethBabu, Dr.V.S.Prakash & Dr.R.Stephen: Enhanced Privacy Conservation Applicability for the Distributed data in Multi Partitioned Data Collection Environment, Journal of Xi'an, Shiyou University, ISSN: 1673:064X, October, 2020. (Scopus)

Ms. B. Manimekala, Ms. K.S. Divya, Ms.K. Soumya & Ms. SreeparnaChakrabarti: Attacks in Vehicular Adhoc Networks (VANets) - Perspectives, Issues & Illustrations in Network Layer Attacks, Journal of Maharaja Sayajirao University of Baroda, ISSN: 0025-0422 (Print), October, 2020. (UGC Care)

Ms. Soumya K, Dr. Mary Margaret, Mr. Ramanathan G: Effective and Intelligent Implementation for Children with learning Disabilities Using Android Technology, Journal of Maharaja Sayajirao University of Baroda, ISSN: 0025-0422 (Print), October, 2020. (UGC Care)

Ms.Dhanamalar: A Study on Deep Learning on Health Care System, Journal of Maharaja Sayajirao University of Baroda, ISSN: 0025-0422 (Print), October, 2020 (UGC Care)

Prof.Sevugapandian, Ms..Ayshwarya, Ms.Dhanamalar & Ms. Ramanathan.G : Measuring the Success of Moodle at KristuJayanti College – Bangalore, KristuJayanti College of Computational Sciences, Volume 1, Issue 1, November 2020

## Awards Received

1. Mr. G. Pratap received the Vedant Educator Academy Award 2020
2. Dr. Antony Vincent received the "Innovative Engineering" - on Occasion of Innovation and Knowledge Excellence Global Award - Sphert.Org (Delhi)
3. Dr. Jasmine Beulah, received an Outstanding Mentor Award 2020 by Cape Skill Development Forum of by and for you trust, Kanyakumari District.
4. Dr. Anthony Vincent B, received Outstanding Trainer Award by CorpAcademia ITechnovations, Bengaluru on 26/01/2020
5. Dr.Anthony Vincent B, received an award for Microsoft Training, Thai Training on 14/08/2020

## Patent Publication Details

1. Dr. C. Naveeth Babu published the Indian Government patent titled Internet of Things Based Industrial Product Monitoring System.
2. Dr. C. Naveeth Babu published the Australian Government patent titled System for Pit Hole Detection and Filling for Road Based On Artificial Intelligence
3. Mr. G. Pratap published the Indian Government Patent titled Artificial Intelligence vision based home intruder detection and alarming the house or corporate people.
4. Ms. Mary Jacob, Dr. K. Kalaiselvi, Dr. Jasmine Beulah G, Mr. Aswin herbert Satish, Ms. Gopika S & Mr. Amjad Hassan Khan MK published Indian Government Patent titled SUAV Women Security: Automatic Women Security Using Street Light And Auto Run Unmanned Aerial Vehicle Using IoT -Based Technology.

## Ph.D Awarded

- Dr. Hubert Shanthan B J, had awarded Ph.D degree, Bharathidasan University, Tiruchirappalli, Feb 2020.
- Dr. Mamatha S Upadhy, had awarded Ph.D degree, Bharathidasan University, Tiruchirappalli, Feb 2020.

## Faculty: Resource Persons

- Dr.Anthony Vincent, acted as a resource person M Agile Training Solutions on 8/01/2020; delivered a speech on Motivation in Krupa Nilaya School, Sandur, Ballari District, held on 01/02/2020; panel member - Post of Contractual Teachers Kendriya Vidyalaya, Jalahalli West, Bangalore, held on 09/03/2020; National Level FDP on Microsoft Dynamics 365 held on 04/05/2020 & 05/05/2020; Research insights of Cloud Development Model for Justice organized by Basheer Ahmed Sayeed College for Women, Chennai held on 16/05/2020; National level Webinar on Cloud Computing Instances on resource maximization, Hindustan College of Arts & Science, Coimbatore, Chennai held on 05/06/2020; International Webinar on Microsoft Teams- Migration, Configuration & Installation, Thai Union & European Countries held on 14/08/2020
- Mr. .Sevugapandian Asirvatham acted as a resource person in the Second International Conference on Advanced trends in communication & Technology organized by Vivekanandha College of Arts and Science For women, Tiruchengode, Namakkal District on 25/01/2020
- Dr.Mamatha S Upadhy, acted as a resource person, Guest lecture & Hands on Session on Application of CPM and PERT in Aviation Management organized by Faharan School of Management, Bangalore held on 28/01/2020.
- Dr.V.S.Prakash, acted a resource person, Seminar on Cloud Computing organized by Seminar, Shree Venkateshware Hi-Tech Polytechnic college, Erode held on 11/03/2020.



Dr.Margaret Mary, as a resource person, Seminar on Internet Of Things and its research Perspectives, organized by the Department of Computer Applications, Dayananda Sagar Institutions, Bangalore held on 20/04/2020

Dr. Mamatha Upadhyaya, acted as a resource person Virtual inhouse FDP on Fuzzy Logic held on 8/05/2020

Dr. A. Cecil Donald, acted as a resource person, Research Insights on Cloud Computing", Sathyabama Institute of Science and Technology, Chennai in association with Computer Society of India and Muscat College, held on 11/05/2020

Prof.Liji George, acted as a resource person Virtual inhouse FDP on Descriptive Statistics held on 14/05/2020

Dr. A. Cecil Donald, Dr. Dalvin Vinoth Kumar & Dr. Anthony Vincent B acted as a resource person, Virtual inhouse FDP on IoT Frameworks held on 15/05/2020

Prof.Sevugapandian Asirvatham as a resource person, three days Workshop on "Creating an Inclusive Teaching Learning Experience in LMS(Moodle)" held from 19/05/2020 to 21/05/2020

Dr. A. Cecil Donald, Dr. B.J.Hubert Shanthan & Dr. Dalvin Vinoth Kumar acted as resource person in the Two Days Webinar on Computing Paradigms organized by ACM Chapter & Don Bosco College (Co-Ed), Yelagiri Hills on 21/05/2020 & 22/05/2020.

Dr.Vinothina V & Prof.Ayshwarya.B, as a resource person Online Workshop Data Visualization using Tableau, held from 28/05/2020 to 30/05/2020.

Prof. Mary Jacob & Dr.Kalaiselvi, as a resource person National Live Webinar on World of IoT- An Insight organised by Department of Computer Science and Engineering, Einstein College of Engineering, Tirunelveli, held on 29/5/2020

Dr. A. Dalvin Vinoth Kumar, as a resource person Webinar on IoT Application Development for COVID 19 Pandemic, Bishop Heber College Trichy, held on 29/05/2020; Webinar on Insight on Real Time IoT Applications organized by Holy Cross College, Tiruchy held on 14/08/2020

Prof. Sevugapandian Asirvatham, Ms. Anita. C, Prof.Ayshwarya.B, Dr.Vinothina.V Prof.M. Dhanamalar, as a NET/SET Trainer - Paper II held from 01/07/2020 to 03/07/2020

Prof.Anita C, as a resource person Orientation on Document process, Orientation Program,Bharath Matha First Grade college, Mysore held on 14/07/2020

Shivakumar B. N, as a resource person in the webinar on Mathematica- The only place where Maths is easy. Department of BCA, KLE Society's Degree College, Nagarabhavi, held on 29/07/2020

Dr. Mayank Pandey, resource person Webinar on Materials and Instrumentation for energy conversion and storage" Webinar, Jain (Deemed To Be University), Bangalore, held on 04/09/2020

## Book Publications

Mr. Pratap. G, Ms. K. ArunaDevi & Ms.A. Deva Kumari published a book titled Mobile Application Development using Android Studio, Coimbatore Institute of Information Technology (CiiT), ISBN: 978-93-89105-46-9, July 2020 (First Edition)

Ms. B. Manimekala, published a book titled an Efficient Data Transfer in Wireless Sensor Networks using AODV Protocol, Lambert Publication ISBN: 978-81-94664-37-6 September 2020 (First Edition)

Dr. Anthony Vincent B, published books in six different languages: Datenintegrität und Datenschutz beim Cloud Computing [German Language], Integridade e Privacidade dos Dados do Cloud Computing [Portuguese Language], Integrità dei dati e privacy del cloud computing [Italian Language], Gegevensintegriteit en privacy van Cloud Computing [Dutch Language], Integralność danych i ochrona prywatności w ramach cloud computing [Polish Language] & Целостность данных и конфиденциальность облачных вычислений [Russian Language]

## Students Achievements (2020 – 2021)

Overall Winners in the TECHBITZ 2K20, organized by Maharani Lakshmi Ammani College for Women, Bengaluru on 20/02/2020

Overall Winners in the Techops Crypto 2020, St.Josephs Evening College, Bengaluru.

## Certificate courses

40 students completed the Certificate Course on Microsoft – Mobile app development organised between 27/01/2020 and 3/02/2020.

80 students completed the Certificate Course on Digital Literacy – ICT Academy organised between 12/02/2020 and 10/03/2020.

64 students completed the Certificate Course on Python organised between 15/06/2020 and 07/07/2020

30 students completed the Certificate Course on Learn Data Science in R organised between 15/06/2020 and 07/07/2020

30 students completed the Certificate Course on Mobile App Development organised between 15/06/2020 and 07/07/2020

## Online Certificate Course: Students

Students have completed more than 138 courses provided by the following providers: Coursera, SkillRary, Google Analytics Academy, Udemy, UiPath Academy, Google, Microsoft Technology Associate, Certoport, IBM Developer Network, SoloLearn, Eduonix, InsideSherpa, NPTEL, TCS iON Learning Digital Hub, Mathworks Training Services, AWS Educate, Steptathon, Udacity, Datacamp, Yousician, CISCO Networking Academy, Automation Anywhere University, GTec, Cognitive Class, Cybrary.

## SOCIAL OUTREACH PROGRAMMES



As part of Social Outreach Programme during the COVID pandemic time, the students of the department distributed masks & sanitizers among the essential workers, shopkeepers, delivery executives, security personnel and other people plying on the road without wearing one. The sanitizer bottles were distributed in Bangalore City Police check posts set up across the city to restrict movement in order to reduce the spread of novel coronavirus. Apart from these, essentials were also distributed among the needy whenever the need was noticed.

## HIGHLIGHTS

### KRISTU JAYANTI JOURNAL OF COMPUTATIONAL SCIENCES



Kristu Jayanti Journal of Computational Sciences is a bi-annual, Peer-Reviewed international journal that publishes, High quality original, Theoretical, Practical Advances and Comprehensive survey articles in all areas of Computing Science and Mathematics, with Interfaces to Electronics, Physics, Statistics and Engineering. It intends to disseminate results and research with a strong empirical component and aims to bridge the major gap between research and practice by promoting industry-relevant research. The first issue of the journal was published on 3rd November 2020.





# Kristu Jayanti College

AUTONOMOUS

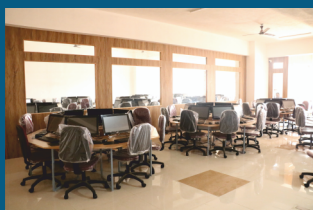
Bengaluru

Reaccredited 'A' Grade by NAAC | Affiliated to Bangalore North University

## Pursuing Higher Education at Kristu Jayanti College the most preferred educational destination in Bangalore

- Managed by CMI Fathers
- Autonomous College under Bangalore North University
- Reaccredited with 'A' Grade by NAAC
- Recipient of Heroes of Bengaluru in Education Award 2018
- Asia's Education Award 2019 by International Brand Consulting Corporation, USA
- ACBSP Internationally Accredited
- 8000+ Students
- Rated as
  - 4<sup>th</sup> Best BCA College in India
  - 11<sup>th</sup> Best MSW College in India
  - 18<sup>th</sup> Best Arts College in India
  - 19<sup>th</sup> Best BBA College in India
  - 19<sup>th</sup> Best Commerce College in India
  - 25<sup>th</sup> Best Science College in India.

India Today - MDRA survey 2020



### STATE-OF-THE-ART INFRASTRUCTURE

- Wi-fi connectivity and smart class rooms
- Cutting edge laboratories
- Cafeteria catering to ethnic tastes
- Three Libraries with over 62500 books and over 310 journals, 11 online data base including 48800 plus e-journals
- Separate Hostel for Boys and Girls
- Gymnasium and Sports Facilities to meet fitness
- Campus Management Solution monitors the student performance

### OTHER FEATURES

- Global student community
- Exposure to partner universities in France, Germany, US, Canada & Japan
- Curriculum with industry relevant components
- Campus placement offered by over 80 corporate recruiters
- Interaction with Global and Indian Visionaries
- Social outreach and sensitization programmes
- Kristu Jayanti Learning Management System (KJLMS) for blended learning
- Co-curricular and extra curricular clubs and associations for student support
- Training in Sports, Theatre, Dance, Music (Eastern & Western)



### TOP RECRUITERS







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**Bengaluru**

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An Institution managed by CMI Fathers

**BEST EMERGING COLLEGE OF THE  
CENTURY at NATIONAL LEVEL**



India Today - MDRA survey 2020

## Kristu Jayanti School of Management

**MBA**

(International Finance, HR, Finance, Marketing,  
Business Intelligence & Analytics)

## Kristu Jayanti College of Law

**B.A., LL.B. | B.B.A., LL.B. | B.Com., LL.B.**  
(5 year Integrated Programme)

## Kristu Jayanti College (Arts, Commerce & Science)

### FACULTY OF HUMANITIES

**MSW** Master of Social Work  
**M.Sc.** Psychology  
**M.Sc.** Counselling Psychology  
**MA** English Literature  
**MA** Kannada  
**MA** Journalism & Mass Communication  
**BA** Journalism, Psychology, Computer Science  
**BA** Journalism, Political Science, English Literature  
**BA** Journalism, Psychology, English Literature  
**BA** History, Economics, Political Science  
**BA** History, Tourism, Journalism  
**BA** Journalism, Economics, English Literature  
**BA** Economics, Political Science, Sociology  
**BA** English (Honours)  
**BA** Psychology (Honours)  
**BA** Performing Arts, Psychology, English Literature  
**BA** Visual Communication  
**Research Centre - Psychology**

### FACULTY OF COMMERCE & MANAGEMENT

**M.Com.** Master of Commerce  
**M.Com.** Financial Analysis (FA)  
**MA** Economics  
**BBA** Bachelor of Business Administration  
**BBA** Business Analytics  
**BBA** Aviation Management  
**B.Com.** Bachelor of Commerce  
**B.Com.** ACCA Integrated  
**B.Com.** Integrated with CMA  
**B.Com.** Professional  
**B.Com.** Tourism  
**B.Com.** Business Analytics  
**B.Com.** Honours  
**B.Com.** Logistics & Supply Chain Management  
**1 Year PG Diploma for Working Executives**  
(Marketing Management | H R Management  
Business Administration)  
**Research Centre - Commerce, Management**

### FACULTY OF SCIENCES

**MCA** Master of Computer Applications  
**M.Sc.** Computer Science  
**M.Sc.** Biotechnology  
**M.Sc.** Microbiology  
**M.Sc.** Biochemistry  
**BCA** Bachelor of Computer Applications  
**BCA** Analytics  
**B.Sc.** Computer Science, Mathematics, Electronics  
**B.Sc.** Computer Science, Mathematics, Statistics  
**B.Sc.** Physics, Mathematics, Computer Science  
**B.Sc.** Physics, Mathematics, Electronics  
**B.Sc.** Mathematics, Statistics, Economics  
**B.Sc.** Biotechnology, Biochemistry, Genetics  
**B.Sc.** Botany, Biotechnology, Biochemistry  
**B.Sc.** Microbiology, Biochemistry, Genetics  
**B.Sc. (Honors)** Forensic Science  
**Research Centre - Biotechnology**

**Apply  
online**

**[www.kristujayanti.edu.in](http://www.kristujayanti.edu.in)**

Visit our college website for information on counselling / interview schedule

**Kristu Jayanti College, (Autonomous)**

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