



Kristu Jayanti College

AUTONOMOUS Bengaluru

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INTERFACE

DEPARTMENT OF
COMPUTER SCIENCE (UG)

2024-25

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VOL. 1**

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FROM EDITORIAL TEAM

Dear Readers,

Welcome to the 12th issue of Interface, Annual Newsletter from the Department of Computer Science (UG) .

This issue covers all the activities of the department for the academic year 2023- 2024 and the activities of the academic year 24-25 till January 2025. The department witnessed a plethora of activities ranging from organizing 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 of the programmes organized by the department. Due care is made to highlight the essence of each programme. Apart from the details of various activities, the newsletter includes articles contributed by students, faculty members and alumni.

We extend our heartfelt gratitude to all the stakeholders who played a vital role in the release of this issue. We hope , you enjoy reading it and find it engaging.

Editorial Team.

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MESSAGE FROM FATHER PRINCIPLE



Fr. Dr. Augustine George

Principal

The transformative influence of technology on human existence is undeniable, reshaping the fabric of our daily lives and societal structures. The advent of automation, instant information access, revolutionary communication and transportation technologies has propelled us into an era of unprecedented convenience and efficiency. However, this technological surge is not without its challenges, as concerns over privacy, security, and potential job displacement loom large. Within educational institutions, particularly the Computer Science department, there exists a pivotal role in steering technological initiatives. At Kristu Jayanti College, the department stands out for its proactive approach, swiftly embracing emerging technological trends. Notably, its contribution to establishing a robust IT infrastructure has played a crucial role in facilitating seamless academic learning and content delivery, particularly evident during the transition to online and offline learning modes.

The department's commitment to holistic education is reflected in its curriculum, which integrates industry-relevant skills and fosters innovation. Collaborations with industry partners, skill development initiatives, and social responsibility projects further enhance the learning experience for students. The well-established learning management system stands as a testament to the department's forward-thinking approach, serving as a linchpin during the challenging times of remote learning.

As we look toward the future, the ongoing advancements in artificial intelligence, cloud computing, and the Internet of Things hold the promise of even greater possibilities. These technologies are poised to revolutionize sectors such as healthcare, education, and entertainment. The Computer Science department at Kristu Jayanti College, by providing ample avenues for experimentation and innovation, ensures that students are well-prepared to navigate this evolving technological landscape.

In celebrating the release of the 12th edition of the Newsletter - Interface, I extend my heartfelt congratulations to the department. As Kristu Jayanti College completes 25 years of academic excellence, I express my optimism for the department's continued success in fostering a culture of creativity and excellence in technological education. May their endeavors inspire future generations to push the boundaries of innovation and contribute meaningfully to the ever-evolving field of technology.

FROM THE DEAN



Dr. Calistus Jude A.L.

Dean, Faculty of Sciences

I congratulate the students and faculty members of the Department of Computer Science (UG) on their outstanding achievements during this academic year. Our students have excelled in various competitions, hackathons, projects and publications, showcasing their exceptional talent and dedication. The faculty members have made significant contributions to their respective fields, publishing papers in top-tier conferences and journals and many patents being published and granted.

The efforts of the department in organising several events and activities during this academic year, including invited technical talks, workshops, collaborative activities and competitions, is to be appreciated. Such events have provided opportunities to the student community to enhance their skills and knowledge. The alumni meetings were a great opportunity for our former students to share their experiences and motivate the present batch of students.

I am happy that the department has brought out the annual issue of its newsletter 'Interface' to highlight the activities of the department. The contents are informative and comprehensive, featuring the achievements of both students and faculty members, showcasing their talents and contributions to the field of computer science.

The department remains committed to providing the best possible education and training, equipping students with the skills and knowledge they need to excel in their career. The contributions are invaluable, and we look forward to achieving even greater success in the future. Appreciations to all the student and staff editorial team for their hard work and dedication towards bringing out this issue of Interface.

ABOUT THE DEPARTMENT

Prof. Sevuga Pandian A

Head, Department of Computer Science [UG]



The Department of Computer Science (UG) with its proud history of spanning over two decades and stands topmost in the Nation and in the State for the BCA Program it offers. BCA, BCA Analytics ,BCA Cloud Computing, BCA Cyber Security, BCA IoT ,BSc Data Science & BSc AI/ML 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 2100 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 established strong academic alliances with industry leaders, fostering collaborations that provide students with hands-on training, industry-relevant certifications, and exposure to the latest advancements in technology. Academic Alliance with UiPath, SalesForce, Oracle Academy, Microsoft, ICT Academy, ACM-W, NPTEL, AWS Educate, Palo Alto, Honeywell, SAP, Qlik, Celonis, Infosys, MongoDB Academy, NASSCOM Futureskills, IBM SkillsBuild, RedHat Academy, Elena Geo Systems, Edunet Foundation, NIIT Foundation, and IIRS Nodal Center to craft initiatives to address the contemporary skill gap in the novel computing technologies.

The Department newly initiated CS Skill Studio an innovative learning platform to empower students with the cutting-edge tech skills. The Department recently has launched a new initiative aimed at empowering girl students through specialized programs in Women in Data Science, Women in Cyber Security, and Women in Process Mining, fostering their growth and leadership in cutting-edge technology domains. The Department encourages the students for extended learning process such as self-paced learning through various MOOC and NPTEL courses of their interest.

The department supports the Hybrid Learning model by implementing our own in-house customized Learning management 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. 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.

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 & BSc Programmes are 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.

ABOUT THE DEPARTMENT



Dr Kalaiselvi K

Programme Coordinator,
Department of Computer Science [UG]

Hearty congratulations to the students and faculty of the Department of Computer Science (UG) for their stellar accomplishments this academic year. Our students have demonstrated exceptional talent through achievements in competitions, hackathons, projects, and publications. The faculty's impactful contributions, including research in esteemed journals, conference presentations, and groundbreaking patents, are truly commendable. The department's initiatives, such as technical talks, workshops, collaborative events, and alumni interactions, have significantly enriched students' learning and inspiration.

I am delighted to see the release of Interface, which brilliantly showcases the department's remarkable achievements and endeavors. This publication is a testament to the unwavering dedication and excellence of both students and faculty. Congratulations to the editorial team for crafting such an insightful and engaging issue. May the department continue to excel and reach even greater heights in the future

ABOUT THE DEPARTMENT



Dr. Ranjitha M

Programme Coordinator,
Department of Computer Science [UG]

The Computer Science [UG] program has long been a pioneer in technological education, preparing students with the knowledge and skills necessary to succeed in an ever-evolving digital world. This academic year has been particularly inspiring, as students have reached impressive milestones across academics, extracurricular pursuits, and community engagement. Their hard work, along with the guidance of a dedicated faculty, continues to strengthen the legacy of excellence that the program is known for. Strategic collaborations with industry professionals have allowed students to participate in guest lectures and technical boot camps, providing real-world insights and bridging the gap between classroom learning and practical application. With state-of-the-art labs and an ever-evolving curriculum, students are equipped to stay ahead of the curve in their technical endeavors.

As we look to the future, students are encouraged to stay inquisitive, embrace emerging technologies, and approach challenges with a problem-solving mindset. The IT landscape is rapidly changing, and adaptability, combined with a thirst for knowledge, will remain essential for success. The program continues to push the boundaries of what's possible and aims to set new standards in the world of computer science.

Special appreciation goes to the faculty for their relentless commitment and to the students for their enthusiasm and drive. Together, the program will continue to shape the next generation of IT professionals, ready to tackle the challenges of tomorrow.

Let us continue to innovate, collaborate, and excel!

CONFERENCES



International Conference on Computational Intelligence ICCI-2024

The International Conference on Computational Intelligence (ICCI) 2024 featured a series of insightful and thought-provoking sessions, held on February 26 and 27, 2024. The first session, by Dr. Srinivasulu Readdy from the Department of Computer Applications, NIT Trichy, addressed Challenges & Prospective Research areas of AI. The session provided an in-depth look at the evolution of AI, tracing its historical development and significant milestones. Dr. Srinivasulu elaborated on a range of AI techniques, from rule-based systems to advanced machine learning and deep learning approaches, discussing their respective strengths and limitations across various applications.

The second session by Dr. Susheela Devi from IISc-Bengaluru delivered an engaging presentation titled "Magic of Generative AI," exploring the principles, applications, and emerging trends of Generative Artificial Intelligence.

The third session by Dr. Sujit Kumar Chakrabarti from IIIT-Bengaluru, who delivered a presentation titled "Research on Social Impact." He explored the role of research in addressing societal challenges using computational intelligence, highlighting innovative approaches to creating positive social change.



presentation titled "Research on Social Impact." He explored the role of research in addressing societal challenges using computational intelligence, highlighting innovative approaches to creating positive social change.

The fourth session by Dr. Divya Midhun Chakkaravathy from Lincoln University Malaysia as the resource person. She delivered an engaging presentation titled "Ethical Considerations in Data Analytics," where she explored the ethical dimensions of data analytics through principles, frameworks.

The fifth session by Dr. Midhun Chakkaravathy, Associate Professor at Lincoln University Malaysia, delivered a presentation titled "Strategic Integration of AI." Dr. Chakkaravathy showcased his expertise in computer science and multimedia through an engaging discussion on cutting-edge research and practical applications.

The sixth session by Dr. Meenakshi D'Souza, Professor and M.S. Ph.D. Programme Coordinator at IIIT-Bengaluru, on the "Testing of IoT Applications." The session provided an in-depth look at advancements in computational intelligence, with a focus on emerging technologies and

their applications in the industry. Dr. D'Souza's engaging presentation, enriched with practical examples and case studies,

The seventh session by Mr. Rinka Singh, Cyber Security Head at iSprit, Bengaluru, delivering a presentation on "Research Scope in Cyber Security." Mr. Singh captivated the audience with his in-depth exploration of the rapidly evolving cybersecurity landscape, offering meticulously analyzed insights into emerging threats.



FACULTY DEVELOPMENT PROGRAMME

The Faculty Development Programme on "Designing Internet of Things (IoT) Applications"

The Faculty Development Programme (FDP) on "Designing Internet of Things (IoT) Applications" was organized from July 10 to July 14, 2023. A total of 27 faculty members participated in the programme, with 14 from the institution and 13 from other institutions. The programme aimed to provide an in-depth understanding of IoT application design and its future potential, equipping participants with essential knowledge and practical skills. The sessions were conducted by experts from Riyasaa Labs, Nagercoil, Tamil Nadu. Mr. K. Vivekananth, an IoT Engineer, led the sessions from July 10 to July 12, followed by IoT Trainers, Mr. S. Sethuramalingam and Mr. S. Narasimmasubramanian, who took over from July 13 to July 14. Their expertise offered valuable insights into the subject, ensuring participants gained both theoretical and practical exposure to IoT technologies.



Faculty Development Program on Mentoring Projects for Impact

The Department of Computer Science (UG) organized a Faculty Development Program (FDP) on Mentoring Projects for Impact in collaboration with ICT Academy and Toople, held from June 10 to June 12, 2024. The program benefitted 32 participants, including 15 in-house and 17 external faculty members from various Arts & Science and Engineering colleges in Bengaluru. Led by Mr. Ashok Balakrishnan and

Mr. Sairam Vepakoma, renowned facilitators from Tooople, the FDP focused on enhancing mentoring skills through interactive sessions, hands-on training, and engaging discussions. Participants gained insights into effective mentoring techniques, leadership traits, and real-world project applications. The

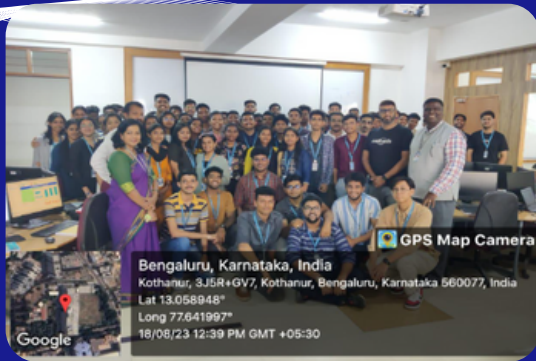
program fostered interdisciplinary collaboration and empowered faculty to guide impactful student projects effectively.



INSTITUTIONAL INTERACTIVE PROGRAMMES

The department conducted a total of 38 academic enrichment activities, which comprising of workshops, skill development training programs, lecture series, and seminars, aimed at fostering knowledge and practical skills among participants. These initiatives reflect the department's commitment to holistic learning and professional development.

Workshop on Process Mining Using Executing Management System (EMS)



The Department of Computer Science conducted a Workshop on Process Mining Using Execution Management System (EMS) from August 16 to 18, 2023, attended by 60 students from V BCA F (Analytics). The sessions were facilitated by Mr. Manjunath Chandrashekar, Lead Partner Manager - Academic Alliance, Celonis. The workshop aimed to provide students with knowledge of Process Mining using Celonis EMS and prepare them for the globally recognized Celonis Rising Star Technical Certification, enhancing their career opportunities in multinational corporations. Participants gained an understanding of Process Mining fundamentals, explored EMS functionalities such as event logs, data pipelines, and data model creation, and applied their knowledge through an advanced case study to develop a Data Model and Analysis Sheet.

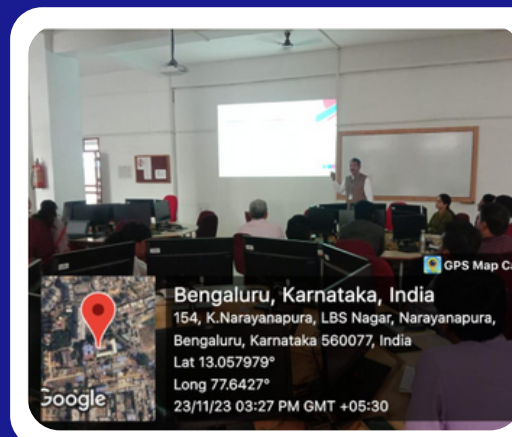
One-Day Workshop on Empowering Your World with IoT



The Department of Computer Science organized a one-day workshop on "Empowering Your World with IoT" on 28th October 2023, led by Dr. L. Selvam, Assistant Professor, SRM Institute of Science and Technology, Tamil Nadu. The workshop introduced students to the fundamentals of IoT technology, including its evolution, sensor functionalities, and microcontroller usage. Participants learned about NodeMCU 8266, Arduino IDE, and embedded C programming for IoT project development. Practical sessions included creating smart light systems using IR sensors, relays, and the Blynk IoT platform, with demonstrations of mobile and web-based controls and Alexa integration.

Workshop on OBE 2.0 Practices

The Department of Computer Science conducted a workshop on "OBE 2.0 Practices" on 23rd November 2023, facilitated by Dr. Sasikumar V R and Ms. Sumalatha A from Kristu Jayanti College, Bengaluru. The session focused on the principles and implementation of Outcome-Based Education (OBE), an educational philosophy emphasizing defined learning outcomes and assessment. Topics covered included curriculum design, developing learning outcomes, assessment methods, implementation challenges, and question paper framing.



Skill Development Training Programmes

Life Skills Education Training



The Department of Computer Science conducted a Life Skills Education Training for the Academic Year 2023-2024 from August 10 to August 14, 2023, attended by I BCA and B.Sc IoT students totaling 748 participants. The sessions were led by Dr. Sasikumar V R, Program Coordinator, and Ms. Sumalatha A, Assistant Professor, both from Kristu Jayanti College, Bengaluru. The program aimed to

enhance students' life skills by focusing on ten core competencies defined by the WHO, including self-awareness, empathy, critical and creative thinking, decision-making, problem-solving, effective communication, interpersonal relationships, coping with stress, and coping with emotions. The workshop featured various activities and inspirational videos that provided practical insights into managing emotions, reducing stress, and fostering positive thinking. Through these exercises, students improved their relationships, learned to handle challenges, and maintained emotional balance, contributing to their overall well-being and personal growth.

Digital Engineering - Skill Development Training Programme

The Department of Computer Science (UG) conducted a Skill Development Training Programme on Digital Engineering on August 25, 2023, for first-semester students from BCA, BCA with Analytics, BCA with Cloud Computing, B.Sc. IoT, and B.Sc. Data Science, totaling 748 participants. The session was led by Mr. Dinesh Kumar Panigrahi, Regional Head, IT-ITeS, Senior Skills Council, NASSCOM, Bengaluru. The program introduced participants to the latest digital technologies and tools in engineering, including digital twins, simulation software, IoT, AI, and machine learning. The resource person engaged students in exploring digital engineering concepts and aligning them with their skills and interests. Digital Engineering was highlighted as a transformative field merging traditional engineering with digital advancements to create smarter and more efficient solutions.



Study in Abroad Opportunities - International Skill Development Training Programme

The Department of Computer Science (UG) conducted an International Skill Development Training Programme on March 6, 2024, for final-year BCA students, with 36 participants. The session, held in collaboration with Bridgewater State University, USA, featured Dr. Uma Shama, Professor of Mathematics and Computer Science.

The interactive session focused on "Study in Abroad Opportunities," providing insights into scholarship options, internship possibilities, fee structures, course credits, and language proficiency requirements. Dr. Shama addressed student queries and shared her expertise on pursuing education abroad, fostering an engaging and informative discussion.

This initiative exemplified the department's commitment to academic excellence and global knowledge exchange and enhancing international collaboration.



Career Counselling



The Department of Computer Science (UG) conducted a Skill Development Training Programme for VI-BCA students on "Career Counselling," led by Dr. Geethu Ann Mathew, Assistant Professor, Department of Management, Kristu Jayanti College, Bengaluru.

The session focused on guiding students to achieve career goals, creating awareness about career options, and helping them identify skills and interests. It facilitated self-exploration, aligning personal goals with professional aspirations to ensure career success and satisfaction. Participants gained insights into industries and job markets and received guidance on education and training for enhanced employability. The program emphasized decision-making support, enabling students to evaluate career paths effectively.

Communication Skill Development Programme



The Department of Computer Science (UG) conducted a Skill Development Training Programme on "Communication Skill" for VI-BCA students, led by Dr. Diana Erudiyathan, Assistant Professor, Department of Management, Kristu Jayanti College, Bengaluru.

The session aimed to build self-confidence, enhance self-esteem, and improve the overall personality of students. It focused on effective communication, which involves the exchange of information, ideas, and feelings between individuals or groups. The program emphasized fostering understanding, building relationships, and achieving goals through clear, concise, and respectful interactions. It also sought to minimize misunderstandings and conflicts while promoting empathy and mutual respect.

Aptitude Training Session

The Department of Computer Science (UG) conducted a Skill Development Training Programme on "Aptitude Training" on 26/03/2024 for VI-BCA students, with 292 participants. The session was led by Dr. Leelavathi R, Assistant Professor, Department of Management, Kristu Jayanti College, Bengaluru and Mr. Bijin Philip, Assistant Professor, Department of Management, Kristu Jayanti College, Bengaluru. The objective of the training was to enhance students' skills to appear in various aptitude tests within limited time constraints. The session focused on helping students critically evaluate real-life situations by analyzing key issues and factors.



Tech Talk on "A Deep Dive into Effective Cybersecurity Practices"

The Department of Computer Science (UG) hosted a guest lecture on 19/08/2023 titled "Tech Talk on A Deep Dive into Effective Cybersecurity Practices," attended by 506 students from various programs. The session, led by Mr. Joseph Sybichen, Global Chief Information Officer at ITkraft Cyber Cell, Bengaluru, aimed to raise awareness about effective cybersecurity practices to protect personal data. Mr. Sybichen explained key concepts of internet, network, and cybersecurity and demonstrated how hackers can access personal information like Aadhaar and PAN details. He also showcased the vulnerabilities in social media apps, highlighting how personal data can be compromised.



Competitive Examination Training Programme

The Department of Computer Science [UG] organized a Preparatory Programme for Competitive Exams on 01/04/2024, attended by 212 VI BCA students. The session was led by Ms. H. A. Bhavithra, Assistant Professor, Department of Mathematics, SRM Institute of Science and Technology. The program aimed to provide students with the necessary knowledge and skills to excel in competitive exams.

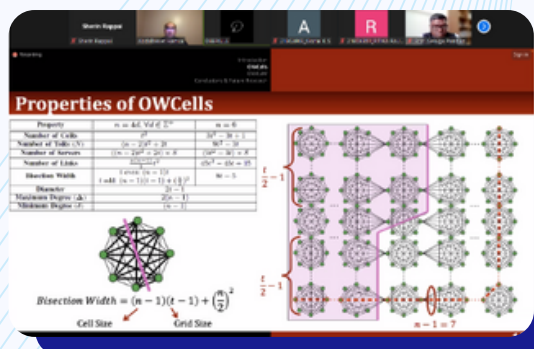
Customer Relationship Management - Guest Lecture

The Department of Computer Science organized a guest lecture on Customer Relationship Management (CRM) on 26/08/2023, attended by 321 final-year BCA students across various sessions. The speaker, Mr. Vinod Krishnan, Principal Consultant at Mercedes Benz Research and Development India, aimed to create awareness about CRM practices in corporate organizations, with a focus on his experience in the field. He started the session with a fascinating analogy to the Chandrayaan-3 mission, highlighting its cost-effectiveness compared to the Hollywood movie "Interstellar," making the students aware of the economic factors behind large-scale projects.



International Lecture Series - International Lecture Series on Optical Wireless Communication in the Design of Data Center Network

The Department of Computer Science [UG], in collaboration with Appalachian State University, North Carolina, USA, organized an International Lecture Series on 27/10/2023 titled "Optical Wireless Communication in the Design of Data Center Networks," attended by 349 V Sem BCA students. The lecture, led by Dr. Abdelbaset Hamza, aimed to promote knowledge exchange between universities from different countries, providing students and faculty with diverse global perspectives on emerging technologies. Dr. Hamza's lecture focused on the integration of optical wireless communication in enhancing the design and performance of data center networks.



International Lecture Series - Program Analysis and Verification with Rewriting Logic and Rascal

The Department of Computer Science [UG], in collaboration with Appalachian State University in North Carolina, USA, organized an International Lecture Series on 22/02/2024 titled "Program Analysis and Verification with Rewriting Logic and Rascal." The session, held via Zoom, was attended by 349 participants. The distinguished speaker for this

session was Mark Hills, Associate Professor in the Department of Computer Science at Appalachian State University. The primary aim of this lecture was to promote international collaboration and provide students with valuable insights into program analysis and verification using Rascal and Rewriting Logic. He discussed the development of the PHP AiR framework for PHP program analysis and the Go AiR framework for Go program analysis, as well as frameworks for languages like Lua, C, C++, Python, Java, Ada, and COBOL.



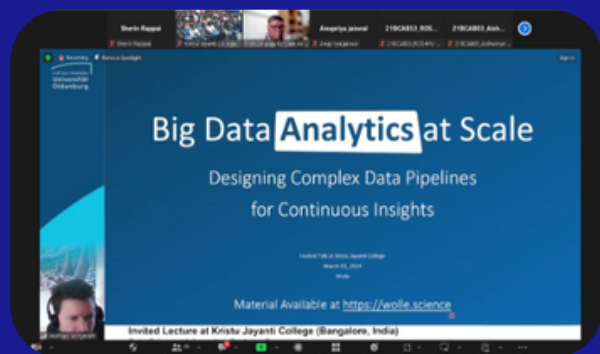
Tech Talk - Embracing Open Source Your Path to Contribution

The Department of Computer Science [UG] organized a guest lecture on 29/02/2024 titled "Tech Talk - Embracing Open Source: Your Path to Contribution." The session, held at 01.40 PM, was attended by 408 students from the IV Sem BCA, across classes A to F. The resource person for the lecture was Mr. Ashit Kumar, Software Development Manager at Amazon, Bengaluru. The objective of the program was to provide students with insights into joining open-source communities, sharing knowledge, and contributing to software development for collective benefit. Mr. Ashit Kumar began by engaging with the students, helping them identify their interests and align them with various open-source projects. He introduced the basics of open source, including version control systems like Git, collaborative platforms like GitHub, and project management tools like issue trackers.



Tech Talk - Big data Analytics at Scale: Designing Complex data pipelines for continuous Insights

The Department of Computer Science [UG], in collaboration with the University of Oldenburg, Germany, hosted a lecture series on "Big Data Analytics at Scale: Designing Complex Data Pipelines for Continuous Insights" on 01/03/2024 via Zoom, attended by 343 final-year BCA



students. Prof. Dr. Wolfram Wingerath, a Data Science Professor at the University of Oldenburg, highlighted the importance of big data analytics and its role in creating complex data pipelines. The session began with a moment of silence, a welcome by Ms. Anupriya, and an introduction by Professor Sevuga Pandiyan. Prof. Wingerath discussed challenges in processing large data volumes to derive valuable insights.

Basic Concepts of Blockchain - Guest Lecture

The Department of Computer Science [UG] hosted a guest lecture on "Basic Concepts of Blockchain" on 16/03/2024 for 354 VI Sem BCA students. Led by Mr. Melvin Sunny, Software Engineer at Cubematch Technologies, the session covered decentralized networks, cryptographic techniques, consensus mechanisms, and blockchain applications in finance, supply chain, healthcare, and identity verification. It emphasized cryptography's role in data integrity, addressed security challenges, and highlighted career opportunities, encouraging students to develop technical skills for future roles in the blockchain sector.



Guest Lecture - Impact on sustainability -Earth is our future

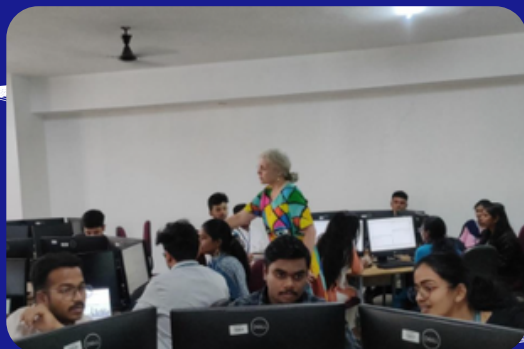
The Department of Computer Science (UG), in collaboration with Celonis, hosted a guest lecture titled "Impact on Sustainability - Earth is Our Future" on 16/05/2024, attended by 64 VI BCA Analytics students. Speakers included Mr. Anirudh Pai, Mr. Darshan WM,



Mr. Siddharth Ravishankar, and Mr. Manjunath Chandrashekar from Celonis. The session focused on practical applications of Celonis in sustainability, starting with Mr. Siddharth's overview of process mining in business problem-solving. Students shared Capstone project experiences, followed

by Mr. Darshan's presentation on sustainability apps like the Shipping Emissions App and Eco Vadis App. Mr. Anirudh introduced the Forensics App for business processes, and Mr. Manjunath addressed placement queries. The session, concluded with a Vote of Thanks by Hemavathi.

ggplot in R - Expert Lecture



The Department of Computer Science [UG], in collaboration with Hochschule Neu-Ulm University of Applied Sciences, Germany, hosted a lecture on "ggplot in R" on 25/03/2024, attended by 40 final-year BCA Analytics students. Dr. Andrea Kohlhase, a Professor for Human-Computer Interaction and Web Development, led the session. The lecture emphasized the importance of data visualization in modern analytics and introduced ggplot in R as a powerful tool for creating customizable visualizations. Through hands-on exercises, students explored techniques such as histograms, line graphs, scatter plots, and bar charts, learning to interpret data trends and relationships effectively.

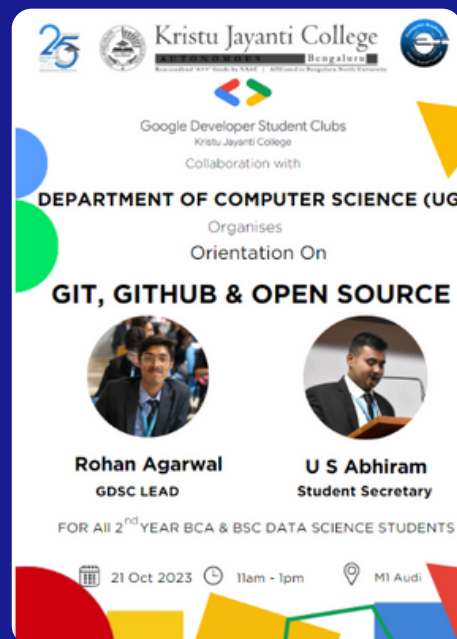
Workshop on "Empowering Your World with IoT"



The Department of Computer Science organized a one-day workshop on "Empowering Your World with IoT" on 28th October 2023, led by Dr. L. Selvam, Assistant Professor, SRM Institute of Science and Technology, Tamil Nadu. The workshop introduced students to the fundamentals of IoT technology, including its evolution, sensor functionalities, and microcontroller usage. Participants learned about NodeMCU 8266, Arduino IDE, and embedded C programming for IoT project development. Practical sessions included creating smart light systems using IR sensors, relays, and the Blynk IoT platform, with demonstrations of mobile and web-based controls and Alexa integration.

Master the Code Git, Github and Open Source - Seminar

The Kristu Jayanti Google Developer Student Club (GDSC), in collaboration with the Department of Computer Science (UG), organized a seminar on "Master the Code: Git, GitHub, and Open Source" on 21/10/2023. The event targeted second-year BCA and BSc students, with approximately 60 participants in attendance. The resource persons for the session were Mr. U S Abhiram, the Student Secretary of the Department of Computer Science (UG), and Mr. Rohan Agarwal, the GDSC Lead. The seminar aimed to provide a foundational understanding of Git for version control and GitHub for collaborative development, as well as to explore open-source principles and community initiatives like Google Summer of Code (GSOC) and Hacktoberfest. Mr. Abhiram introduced Git as a distributed version control system and explained how it facilitates organized software development by allowing developers to track changes and experiment without affecting the main codebase. He also highlighted GitHub's role in enhancing collaboration among developers. Mr. Agarwal then discussed open-source initiatives, focusing on the importance of Hacktoberfest and GSOC in providing opportunities for practical experience and fostering community engagement.



Cloud Horizon: Navigating the future of Computing - Seminar

The Department of Computer Science (UG), in association with GDSC, hosted a seminar titled "Cloud Horizon: Navigating the Future of Computing" on 31/10/2023 for 120 I BCA Cloud Computing students. The session was led by Mr. Prajwal NH, Co-founder and CPO of Cloud Attack, and aimed to provide valuable insights into the cloud computing industry, explore career opportunities in this domain, and discuss relevant certifications. Mr. Prajwal began by engaging students with current cloud computing trends and emphasized the growing significance of cloud technology in shaping the future. He discussed the

evolution from the pre-cloud era to the post-cloud era, covering essential topics such as the shared responsibility model, security in cloud computing, and the different service models like IaaS, PaaS, and SaaS. Mr. Prajwal also highlighted various career prospects within the cloud computing field and



encouraged students to pursue further knowledge and certifications to enhance their career opportunities. The session included an interactive element with a quiz called "KJC Cloud Champs," hosted on his Cloud Attack app.

Orientation on Sustainable Development Goals

The Department of Computer Science (UG) organized a Student-Led Seminar on Sustainable Development Goals (SDG) for second-year BCA students on January 18, 2024. The seminar, aimed at orienting students about the United Nations SDGs, featured Dr. Jonas Richard A, UNAI Club Coordinator, and Professor Sevuga Pandian, Head of the Department of Computer Science, as the distinguished speakers. The event began with a welcome address by Ms. Sanjukta Chatterjee, a first-year MA English student, followed by Dr. Jonas Richard's introduction to the UN SDG



Academic Impact Hub and its intersectional role in achieving global sustainability goals. Professor Sevuga Pandian delivered the keynote address, The seminar provided an overview of the 17 SDGs, with a group of students presenting actionable steps to work towards their achievement. Dr. Jonas answered questions from the audience, promoting further engagement and awareness of the goals. The program concluded with a vote of thanks delivered by Mr. George Shaiju, a second-year BCA Analytics student.

UiPath Student Community

The Department of Computer Science (UG) hosted the inaugural session of the UiPath Student Community on January 19, 2024, aimed at empowering students with the fundamental knowledge and practical skills required for Robotic Process Automation (RPA) development. The session, led by

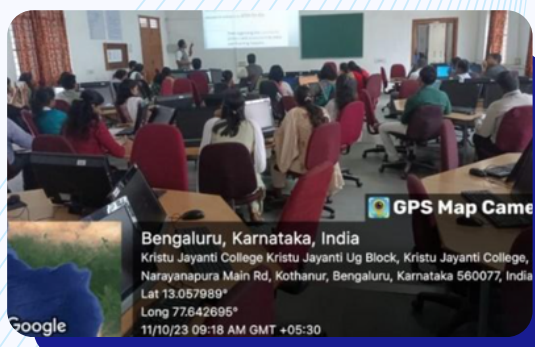
Ms. Divyashree Muddagangiah, Technical Lead at TCS, Bengaluru, was attended by a diverse group of second-year, fourth-year, and sixth-year BCA students across various specializations, including Analytics, Cloud Computing, and Data Science, with a total of 36 beneficiaries. Ms. Divyashree highlighted the significance of RPA in transforming business processes and shared real-world case studies and practical applications of UiPath.



Faculty Workshop - Cybersecurity

The Department of Computer Science (UG) conducted a two-day faculty workshop on cybersecurity on June 11 and 12, 2024, from 9:30 am to 4:30 pm, with 30 participants. The workshop, led by Mr. Joseph Sibychen, Lead Cyber and Cloud Trainings at NIIT Foundation, aimed to address the growing

challenges in cybersecurity. The first day focused on technical skills, exploring cyber threats, vulnerabilities, encryption, ethical hacking, and secure coding, complemented by hands-on training in threat detection and incident response. The second day emphasized fostering a culture of security awareness, educating on threats like phishing, and developing cybersecurity policies.



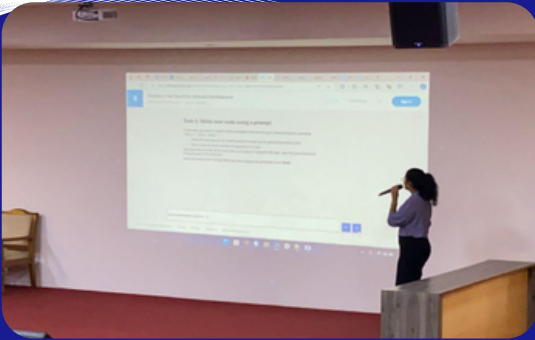
Life Skills Education Training for the Academic Year 2024 -2025

The Department of Computer Science (UG) conducted Life Skills Education Training from 8th to 12th August 2024 for 978 first-semester students across BCA, BCA Cloud Computing, Cyber Security, Data Analytics, IoT, BSc. Data Science, and BSc. AI/ML, facilitated by the faculty of the department. This program



aimed to equip students with critical life skills, including effective communication, problem-solving, emotional intelligence, time management, and financial literacy, through interactive workshops and group activities.

Use of Generative AI for Software Development - Guest Lecture



The Department of Computer Science (UG), in collaboration with IBM, conducted a guest lecture titled "Use of Generative AI for Software Development" on 19th August 2024, attended by 215 students from 2nd and 3rd-year BCA and BSc programs. The session, inaugurated by Dr. Kalaiselvi and presided over by Dr. Sevuga Pandian, featured speakers Mr. Manjunath Chandrashekhar, Student Developer Ecosystem Program Manager, and Ms. Pujitha G, Senior Application Developer at IBM. They highlighted the transformative role of Generative AI in software development, emphasized the necessity of reskilling in the evolving job market, and introduced IBM initiatives like the SkillsBuild program and Watson X, and a live demonstration of IBM's LLM.

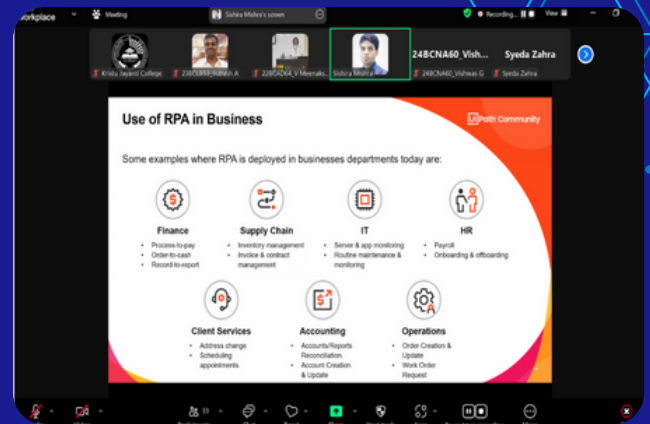
Cyber Smart 2024



The Department hosted "Cyber Smart 2024" on 20th August 2024, attended by 162 students from various B.Sc. and BCA programs, including Forensic Science, Biotechnology, and Data Science. The event was inaugurated by distinguished guests Smt. Malashree M V IRS, Assistant Commissioner, and Mr. Sreenath Gopinath, Co-founder of Techbyheart, who shared their insights on the growing importance of cybersecurity in today's digital world. The program included a detailed session by cybersecurity professionals, who conducted live demonstrations on various cyber threats, including DDOS attacks, phishing, Man-in-the-Middle (MITM) attacks, mobile hacking, Pegasus spyware, and SMS-based remote exploitation.

Expert Session - Automation Explorer

The Department of Computer Science (UG) organized an expert session titled "Automation Explorer!" on 21st & 26th August 2024, attended by students of BCA and Data Science programs. The session was led by Mr. Sishira Mishra, Lead Automation Architect at HP, who focused on automation technologies, particularly UiPath's role in transforming industries. Mr. Mishra introduced students to the fundamentals of automation, highlighting UiPath's capabilities in streamlining processes and improving efficiency. Through real-world examples and case studies, he demonstrated how automation tools are applied in diverse sectors.



ACM-W IGNITE: Empowering Women in Tech



The Department of Computer Science (UG), in collaboration with the ACM Student Women Chapter, hosted ACM-W Ignite: Empowering Women in Tech on 25th September 2024, to inspire first-year female students from BCA, B.Sc AI/ML, and Data Science programs to explore tech careers. As part of

ACM's global initiative to support women in computing, the event featured lectures by student resource persons Devika Chandran, Sophy Jose, and Sona Sara Shibu, focusing on overcoming challenges, career growth, and diversity in tech. It emphasized building technical and interpersonal skills, confidence, leadership, and resilience while fostering an inclusive community and mentorship network for women in tech.

Soft Skills Training Session on 6 Thinking Hats



On 7th October 2024, the Centre for Soft Skills & Aptitude Training (CSSAT) at Kristu Jayanti College organized a Soft Skills Training Session on the "6 Thinking Hats" for first-year BCA and Analytics students. The session, led by Mr. Vinod Joseph George from the Department of Professional Management Studies, aimed to introduce the Six Thinking Hats technique developed by Edward de Bono, which fosters structured thinking and problem-solving. The session explored the roles of each of the six hats: White Hat (data and facts), Red Hat (emotions), Black Hat (critical judgment), Yellow Hat (optimism), Green Hat (creativity), and Blue Hat (process management).

Soft Skills Training Session on Get! Set! Target!



On 7th October 2024, the Centre for Soft Skills & Aptitude Training (CSSAT) at Kristu Jayanti College hosted a Soft Skills Training Session titled "Get! Set! Target!" for third-year BCA students across various specializations. The session, conducted by Dr. Geethu Anna Mathew from the Department of Management, aimed to help students establish clear, measurable goals, prepare necessary resources, and develop effective plans to achieve those goals. The "Get, Set, Target" approach focused on gathering resources (Get), organizing and planning (Set), and executing the plan with focus and adaptability (Target). Dr. Mathew emphasized the importance of strategic planning, discipline, and continuous improvement.

Alumni Meet

On October 26, 2024, the Department of Computer Science UG hosted an Alumni Meet aiming to reconnect with former students, celebrate their achievements, and strengthen the community bond. The event began with a welcoming address by Dr. Sasikumar V.R., the Programme Coordinator of Computer Application, who emphasized the alumni's crucial role in the institution's growth. Mr. Sevuga Pandian, Head of the Department, provided updates on the college's progress and future plans, expressing gratitude for alumni contributions.



Seminar on Innovation to Incubation



The Department of Computer Science (UG) organized a seminar titled "Innovation to Incubation" on 26/10/2024, benefiting 559 students. The session, led by Dr. Ravindran D and Mr. Ramanathan G from Kristu Jayanti College, aimed to cultivate entrepreneurial skills and create awareness of the Institution's Innovation Council (IIC) and Incubation Center (KJIC).

Seminar on Problem Solving and Ideation

The Department of Computer Science (UG) conducted a seminar on "Problem Solving and Ideation" on 26/10/2024, benefiting 426 students. Led by Dr. Muruganathan A, Director of Kristu Jayanti Incubation Centre, the session highlighted the role of the incubation center and Institution's Innovation Council (IIC) in fostering student innovation and entrepreneurship. It celebrated achievements such as NASA project submissions, participation in the Smart India Hackathon, and successful alumni startups.



EXPERIMENTAL LEARNING PROGRAMMES



Industrial visit to Qlik Technologies - Bengaluru

The Department of Computer Science (UG) organized an industrial visit for the V-BCA (F) class on 6th November 2023 to Qlik Technologies, located at The Millenia, Tower "A," Murphy Road, Ulsoor, Bangalore. A total of 59 students participated, accompanied by faculty members Dr. N. Karthikeyan and Dr. K. Kalaiselvi. The visit aimed to provide students with real-world insights into data warehouse automation and integration. At Qlik Technologies, students learned about Qlik Data Integration, which streamlines the entire data warehouse lifecycle, enabling real-time data ingestion, change data capture, and seamless data movement across various platforms and enterprise sources like mainframes and SAP.

The visit emphasized practical applications of classroom concepts and introduced students to advanced technologies and industry standards, including quality control measures and safety protocols. Feedback highlighted the high quality of information shared, excellent engagement and interactivity, and its applicability to students' future studies and career prospects.

Industrial Visit to U R Rao Satellite Centre (URSC), Bengaluru

The Department of Computer Science (UG) organized an industrial visit to the Indian Space Research Organisation (ISRO), U R Rao Satellite Centre (URSC) on 31st January 2024, 01/02/2024 and 2/2/2024 for 3000 students from the VI-BCA, guided by faculties. The visit was aligned with the Artificial Intelligence Course and provided students with a detailed look into the applications of AI in space technology, such as satellite image analysis, autonomous spacecraft navigation, and mission optimization.



Industrial visit to Akshaya Patra



The Department of Computer Science (UG) organized an industrial visit to the Akshaya Patra Foundation in Rajajinagar, Bengaluru, on 29/10/2024, for 199 first-year BCA students across IoT, Analytics. Led by five faculty members, the visit provided a hands-on

understanding of automation in large-scale operations, particularly in meal production and distribution.

Field Visit to FPO, Hosekote, Bengaluru

The Department of Computer Science has embarked on a groundbreaking initiative by adopting an agricultural field in Hoskote, Bengaluru, to provide IoT-based solutions for farmers. This project aims to revolutionize



traditional farming by leveraging technology to detect and diagnose leaf diseases at an early stage, ensuring better crop health and improved yield. As part of this initiative, a field visit was conducted to analyze crop conditions and identify prevalent diseases. By integrating IoT sensors and smart analytics, this endeavor seeks to empower farmers with real-time insights, fostering sustainable and technology-driven agriculture.

INTER OR INTRA COLLEGIATE FESTS



Login 2k23

The Department of Computer Science (UG) hosted "Login 2k23," a coding event for first yearson August 14, 2023, to enhance first-year students' coding skills and foster connections with seniors. With 162 participants from various BCA



specializations, the event provided a platform for students of all experience levels. It featured a preliminary round on August 12 via an online MCQ test, followed by the finals in the M2 lab, where qualified participants solved coding challenges in Python, Java, or C. Guided by the HOD, faculty, and coordinators, the event successfully showcased the enthusiasm and talent of Kristu Jayanti College's coding community.

Ideathon (Internal Hackathon)

The Department of Computer Science [UG] organized an internal hackathon, Ideathon, on 13/09/2023, with 96 students from BCA, BSc Data Science, and BSc IoT participating. The event aimed to prepare students for the Smart India Hackathon 2023 by providing a platform to showcase



their entrepreneurial and problem-solving skills. Students selected a problem statement from the Smart India Hackathon website and submitted their ideas, which were then shortlisted for presentation. The final event featured 16 teams presenting their solutions to a panel of judges, including experts from the SODA Foundation and Kristu Jayanti Incubation Centre.

Synchronize 2023 - Intra College IT Fest



The Department of Computer Science (UG) organized Synchronize 2023, an intra-collegiate IT fest, on 30/09/2023, with 360 students from various BCA classes participating. The fest, themed around Cyber Security, provided a platform for students to demonstrate

leadership, communication skills, and innovative thinking. The event included multiple competitions such as Agora, Mathalyze, Graphosnark, Netzknoten, IT Manager, Keystroke, Codefi, and ByteQuest, with several rounds leading to final winners. The fest was inaugurated by Dr. Fr. Augustine George, Principal, Kristu Jayanti College, and Mr. Enoch Manohar, the Chief Guest, who spoke about entrepreneurship and innovation. The closing ceremony, presided over by Fr. Emmanuel P J, announced the winners and marked the successful conclusion of the fest.

Nexus - Hackathon



The Department of Computer Science (UG) organized the Nexus Orientation event on 06/01/2024 at M1 Auditorium, Kristu Jayanti College, with 76 students from various departments, including Computer Science, Management, Physical Science, and Humanities. The event aimed to introduce the Solution Challenge and

provide orientation on the UNSDG goals. Rohan Agarwal, the lead of KJ GDSC 2023, shared insights into the goals, focusing on 3D Discovery, Design, and Development. He used the example of a blind man using a smart stick to demonstrate innovative solutions. Prof. Sevagu Pandian, the HOD of the Computer Science Department, praised KJ GDSC's efforts and encouraged participation, deeming the event a success.

Xactitude 2023-24 - Inter College IT Fest



The Department of Computer Science (UG) organized "Xactitude," an inter-collegiate IT fest on 05/03/2024, centered around the theme "Cyber Security," with the participation of 80 students from 12 colleges across India and 500 beneficiaries from various programs. The event was inaugurated by Chief Guest Mr. Rakesh Goel, Sr. Director at Capgemini, a seasoned IT expert with over 28 years of experience, followed by a presidential address from the Vice Principal, Fr. Lijo P Thomas. Guided by the Head of the Department, Prof. Sevuga Pandian A, and coordinated by faculty members Prof. Ramanathan G and Prof. Sumalatha A, along with student secretaries Mr. U S Abhiram and Ms. Shambhavi Vijay, the day featured creative and engaging cyber security-themed events. The valedictory session, graced by Fr. Jais V Thomas, Financial Administrator, concluded with the distribution of certificates and mementos to winners.

Datathon 2024



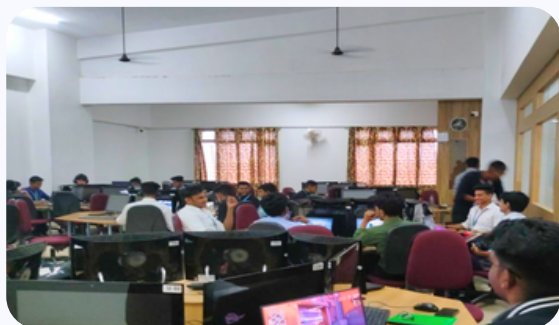
The Department of Computer Science (UG) organized Datathon 2024 on 08/08/2024, involving 41 teams and 120 participants. The event aimed to enhance data-driven decision-making skills using Qlik's analytics platform. Mr. Pankaj Muthe, Sr. Academic Program Manager for Asia Pacific at Qlik, delivered an insightful session on Qlik's applications in analytics. Participants analyzed datasets, created visualizations, and presented findings, with finalists evaluated by Mr. Muthe. The top three teams were awarded mementos. The event concluded with a Vote of Thanks by Kalaiselvi Ma'am. Datathon 2024 successfully showcased analytical skills, emphasized data insights, and highlighted Qlik's capabilities, making it a valuable learning experience.

Ideathon 24

The Department of Computer Science (UG) organized Ideathon 24 on 02/09/2024, with 126 participants. The event, in collaboration with the Institution's Innovation Council and Caze Labs, featured Mr. Ashray Venkat, CTO of Business Hero, and Mr. Amit Roushan, Co-founder & CTO of Caze Labs. It provided a platform for teams to brainstorm and develop innovative solutions, fostering cross-disciplinary collaboration. Ideathon 24 emphasized teamwork, creativity, and public speaking while offering valuable networking opportunities with mentors and peers.



Synchronize 2024 - Intra College IT Fest

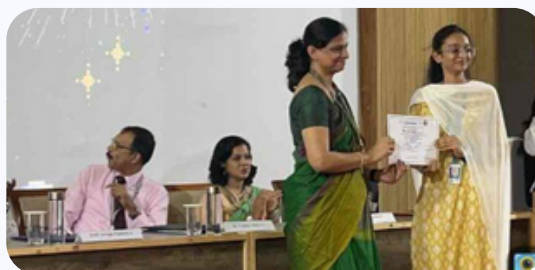


The Department of Computer Science (UG) hosted Synchronize 2024, an intra-collegiate fest themed "Synchronizing Modern Tech with Indian Ethos," from 3rd to 10th September 2024, engaging 868 students across multiple BCA sections. Featuring 12 diverse events, including

Carnival Stalls promoting entrepreneurship, the fest saw six factions compete, with TechVinzoo emerging as winners. Highlights included IT Manager, IoTize, and TechHunt, culminating in a grand finale with Mr. Pradeep M K, Chief Architect at IBM India Pvt. Ltd. The event concluded with a valedictory session by Fr. Deepu Joy, celebrating winners and participants.

Synchrotech 2024 - Intra College IT Fest

The Department of Computer Science (UG) organized Synchrotech 2024, an intra-collegiate IT fest themed "Singularity: Sync Your Tech Skills," from 11th to 20th September 2024, with 917 students from all years of Computational Studies. The fest featured 10 events across coding, AI, data analysis, cybersecurity, and IT knowledge. Lt. Col. V. S. Velan, Founder and CTO of Elena Geo Systems Pvt. Ltd., delivered an inspiring inaugural address. The event concluded with a valedictory session led by Dr. Calistus Jude AL, Dean of Faculty of Sciences, who presented mementos and certificates to the winners.

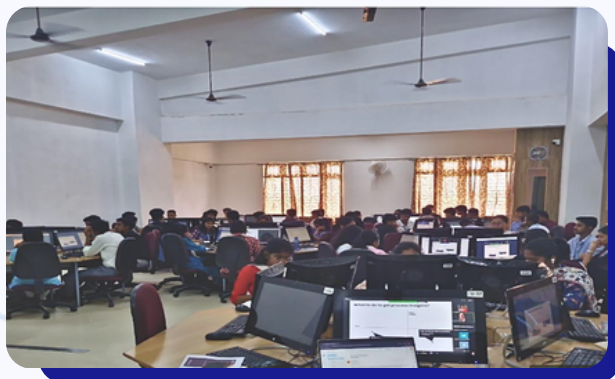


DOMAIN BASED CLUB AND ACTIVITIES



Celonis Process Mining Workshop

On 06/08/2024, a Celonis Process Mining Workshop was conducted for 120 students from III BCA with Analytics and III B.Sc. Data Science. Ms. Angela Sophia Gebert, Global Head of Academic Alliance at Celonis (Bavaria, Germany), led the session,



introducing data-driven techniques for analyzing and optimizing business processes. The workshop covered process mining fundamentals, emphasizing log data from traditional IT systems to bridge model-based and data-centric analysis. Real-world examples, case studies, and interactive demonstrations showcased Celonis' role in enhancing business performance and operational efficiency.

Qlik Bootcamp

On 07/08/2024, a Qlik Bootcamp was held virtually via Zoom for 123 beneficiaries, including BCA Data Analytics and BSc Data Science students. Led by Mr. Manikant Roy, a researcher from IIIT Delhi, the session provided hands-on experience in data analytics using Qlik Sense. Dr. Sevuga Pandiyan, Head of the Department, delivered the welcome address, followed by an introduction to Qlik. Mr. Roy conducted interactive exercises, showcasing Qlik Sense's data visualization and analytics capabilities. The session concluded with a Q&A segment on career guidance and technical queries, with Amreen, a 3rd-year BCA student, delivering the vote of thanks.

Cyber Suraksha

On 31/08/2024, the "CYBER SURAKSHA" program benefitted 120 individuals. The session was led by Mr. Joseph Sibychen, Director of NIIT Foundation and an Offensive Security Educator in Bangalore. The main objectives were to enhance cyber awareness across various groups and strengthen defences against cyber-attacks by uniting individuals for cybersecurity. The program covered cybersecurity fundamentals, including breach impacts, threat types, malware, phishing, Wi-Fi tracking, ransomware, and defense strategies like data backups and multi-factor authentication. The speaker recommended Bug Crowd, Flipper Zero, Parrot Security OS, and Kali Linux, boosting participants' confidence by 70% in identifying risks and promoting continuous learning in cybersecurity.



Expert Lecture on GEN AI

On 31/08/2024, Dr. Saigeetha Jaganathan, Chief Scientist in Data Science AI & ML at IBM, led an expert lecture for 422 students from BSC AI & ML, BCA DS, and BCA Analytics. The lecture focused on Generative AI (GenAI), explaining its capabilities to generate text, images, music, and more through models like GPT, DALL·E, and GANs, highlighting the difference between it and traditional AI. The session covered its vast applications across industries, such as content creation, healthcare, and education, and discussed its potential to revolutionize how industries innovate and automate workflows. Ethical challenges such as misinformation, intellectual property concerns, and data bias were also emphasized, stressing the need for responsible AI practices.



Soft Skills Training Session on Innovation Mantra

On 03/09/2024, Dr. Nidhi Raj Gupta from Kristu Jayanti College conducted a Soft Skills Training Session on "Innovation Mantra" for 79 students from II BCA Analytics, Cloud, B.Sc. IoT, and B.Sc. Data Science. The session focused on fostering creativity, critical thinking, collaboration, and communication to drive innovation. Dr. Gupta emphasized problem analysis, leveraging team strengths, and effective idea communication while highlighting adaptability and resilience as key innovation drivers. The session concluded with a vote of thanks by Ms. Neha N, Student Coordinator - CSSAT.



Soft Skills Training Session on Brainiacs



On 03/09/2024, Dr. L. Santhosh Kumar from the Department of English at Kristu Jayanti College conducted a "Soft Skills Training Session on Brainiacs" for 62 III BCA students. The session focused on developing emotionally intelligent team members with strong communication,

collaboration, and adaptability skills. Dr. Kumar emphasized team-building, leadership, and a growth mindset while guiding students in problem-solving and conflict resolution. The session concluded with a vote of thanks by Mr. Kevin R, Student Coordinator - CSSAT.

Soft Skills Training Session on Resume Building

On 11/09/2024, Ms. Bijin Philip, Coordinator of CECR & Talent Transformation at Kristu Jayanti College, conducted a "Soft Skills Training Session on Resume Building" for 230 V BCA students. The session covered resume formats, key components, and customization techniques. Interactive activities helped students refine their resumes with feedback. The session concluded with a vote of thanks by Ms. Neha N, Student Coordinator - CSSAT.



International lecture series - AI/ML and Image Processing in Honey Bee Monitoring Systems

On 12/09/2024, Dr. Rahman Tashakkori, Lowe's Distinguished Professor of Computer Science at Appalachian State University, delivered a lecture on "AI/ML and Image Processing in Honey Bee Monitoring Systems" to 150 V BCA students. The session aimed to foster international collaboration and expose students to global perspectives on AI and ML applications. Dr. Rahman highlighted his work on the BeeMon project, which uses neural networks and image processing to monitor honey bee hives by counting bees entering and exiting, providing valuable data on hive traffic and bee health. The system's traffic estimator generates graphical representations to assist beekeepers in monitoring hive conditions.



IoT Odyssey- Journey into the World of Smart Devices

On 21/09/2024, Dr. L. Selvam, Assistant Professor in the Department of Data Science at Madras Christian College, led an intensive one-day training session on "IoT Odyssey- Journey into the World of Smart Devices" for 58 I BCA IoT students at M4 Lab. The workshop covered the fundamentals of IoT, the evolution of the Internet, and the role of sensors and actuators. Dr. Selvam demonstrated how to connect sensors to a NodeMCU 8266 microcontroller and explained the differences between microcontrollers like Arduino and Raspberry Pi. Students wrote IoT project code using Arduino IDE and embedded C. A smart light project was showcased using hand gestures, followed by students working in groups to build their own smart light projects with IR sensors and the Blynk IoT platform.



Expert Session on Cloud-Driven AI: Unlocking the Power of Machine Learning



On 25/10/2024, Dr. Nagarajan Srinivasan, President of Wyoming Global Research World OPC Pvt. Ltd., Bengaluru, led an Expert Session on "Cloud-Driven AI: Unlocking the Power of Machine Learning" for I and III Semester BCA Cloud Computing students. The session provided a comprehensive understanding of AI, Machine Learning (ML), and Cloud Computing, covering foundational concepts, cloud integration, and practical applications. Dr. Srinivasan discussed the importance of data in AI applications, explored cloud computing fundamentals, and highlighted the benefits of using platforms like AWS, Azure, and Google Cloud for AI/ML. Real-world case studies demonstrated successful AI/ML implementations, and the session concluded with insights into future trends like quantum and edge computing, emphasizing the ethical considerations in AI/ML development.

Seminar on Low Code Technologies



On 26/10/2024, Ms. Sherley Gracia, Associate Software Engineer at Collabera Digital, Bengaluru, conducted an alumni talk on "Low-Code Technologies" for 559 First-year BCA students. The session introduced the basics of low-code platforms, focusing on Out Systems for creating scalable web and mobile applications. Ms. Gracia demonstrated tasks like entity creation, parameter management, and app publishing, highlighting the platform's flexibility and integration with traditional coding languages. She emphasized the growing significance of low-code platforms in the tech industry and encouraged students to explore them to enhance their development skills.

Seminar on Problem Solving and Ideation



On 26/10/2024, Mr. Ajith Kumar G, Apprentice Leader at Mu Sigma Business Solutions Pvt. Ltd., conducted a seminar for 426 students on "Problem Solving and Ideation." The session introduced MongoDB concepts, emphasizing its strengths in building scalable, high-performance applications for web and mobile. Mr. Kumar provided an overview of database structures, entity creation, and data organization, along with MongoDB's real-time capabilities in app development and offline efficiency. He highlighted MongoDB's growing significance in the tech industry and encouraged students to explore its potential to enhance their development skills. The session concluded with insights into the industry demand for MongoDB expertise.

Women in Cyber Security - KJC Student Chapter



On 15/11/2024, the Women in Cyber Security (WiCyS) Student Chapter at Kristu Jayanti College organized a session with Ms. Lekshmi Nair, President of WiCyS India, for I BCA Cyber Security A & B students. The session aimed to inspire female students to pursue and succeed in cybersecurity by promoting long-term career perspectives, self-advocacy, and cultural adaptability. Ms. Nair shared her journey in cybersecurity, highlighting the importance of perseverance, learning, and diversity in the field. The event encouraged students to develop technical and leadership skills while contributing to a more inclusive cybersecurity workforce, emphasizing women's pivotal role in the sector.



EXTENSION ACTIVITIES

Computer Literacy Programme

From 12th to 14th March 2024, the Department of Computer Science (UG) organized a "Computer Literacy Programme" for migrant workers' children. The programme benefited a total of 21 participants, including six in-house and 15 external attendees. The initiative aimed to bridge the digital divide by introducing children



to fundamental computing skills. Participants were familiarized with computer components such as the mouse and keyboard, taught basic system operations, and introduced to applications like MS Paint, MS Word, and Notepad. MS Paint served as a creative and accessible platform for fostering artistic expression and enhancing digital literacy in an engaging way. This program successfully empowered migrant workers' children by equipping them with foundational digital skills, encouraging creativity, and paving the way for their active participation in the digital age. It highlighted the importance of inclusive education and the role of technology in shaping a brighter future for all.



Empowerment Through Assistance: Supporting Those in Need

The Computer Science Department (UG), in collaboration with the Karnataka Civil Defense Corps, organized a social outreach program, "Empowerment Through Assistance: Supporting Those in Need," on 02/03/2024. Seven second-semester BCA students visited the Refugee Foundation in Kothanur, benefiting 18 individuals. The initiative focused on the psychological development of children in refuge homes, enhancing emotional resilience, social skills, and mental well-being. Activities like storytelling, games, and talent showcases fostered cultural exchange, educational enrichment, and emotional support. The program promoted mutual learning, community bonding, and the unifying power of connection.



Process Mining using EMS - Celonis 2023

The Women Data Science Forum hosted a student enrichment program on "Process Mining Using EMS - Celonis 2023" on 17/10/2023, attended by 33 students from III BCA, I B.Sc., and III B.Sc. Led by Ms. Saba Sanober Ansari and Ms. Revathy R, the two-hour session introduced the fundamentals of process mining and the role of Celonis EMS. Through hands-on exercises, participants explored how process mining optimizes business workflows, enhances decision-making, and improves compliance in industries like manufacturing, healthcare, and finance. The program aimed to equip students, particularly women, with in-demand skills in process mining and highlighted career opportunities in this growing field.



Exploring Research Fundamentals and Emerging Technologies



The Department of Computer Science (UG), in collaboration with the ACM Women Student Chapter, conducted a technical session on 26/03/2024 for I BCA girl students on "Exploring Research Fundamentals and Emerging Technologies: Power BI and Zero Knowledge Proof." Led

by Ms. Sophy Jose (MSc Data Science), Ms. Nasreen Anjum (MCA), and Ms. Devika Chandran (MSc Computer Science), the session covered Power BI for data analysis and visualization and Zero Knowledge Proof (ZKP) for secure digital transactions. Students explored data integration, visualization, and analytics with Power BI while also gaining insights into research paper writing, essential steps, and presentation techniques.

Women Leadership Tech Talk - 2024

The Women Leadership Tech Talk-2024, held on 05/04/2024, engaged 255 students in exploring cybersecurity and Generative AI (GenAI) to inspire future women leaders in tech. Major Preeti Bhisikar, Cybersecurity Solution Design Leader at IBM, covered encryption, network security, risk



management, and ethical considerations. Dr. Saigeetha Jegannathan, Chief Data Scientist at IBM, discussed AI methodologies from symbolic AI to deep learning, emphasizing hands-on model building. The event equipped students with foundational knowledge and practical skills, concluding with an interactive Q&A session that reinforced continuous learning and adaptability in an evolving tech landscape.

Yoga Workshop

The Centre for Life Skills Education (CLSE), in collaboration with the Department of Computer Science (UG), conducted a workshop on "Peer Group Stress Management through Yoga" for 29 faculty members on 21st December 2023. Led by Dr. Jonas Richard A, Director of CLSE, and Mr. Vignanth Babu K G,



Programme Coordinator from the Department of Psychology, the session emphasized Yoga's role in work-life balance and well-being. Faculty engaged in tailored Yoga practices for stress management, highlighting its physical, mental, and spiritual benefits. The workshop reinforced the importance of integrating Yoga into daily routines for a healthier professional life.

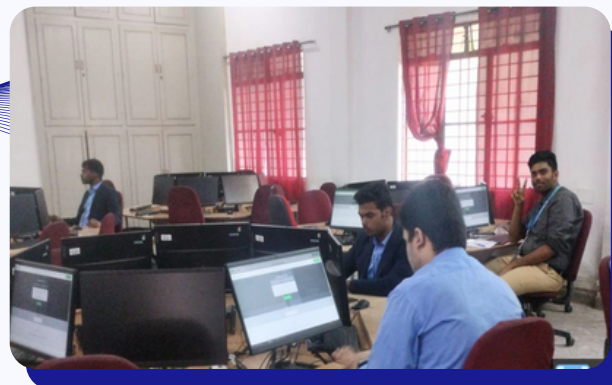
COMMEMORATIVE DAYS

International E-Waste day



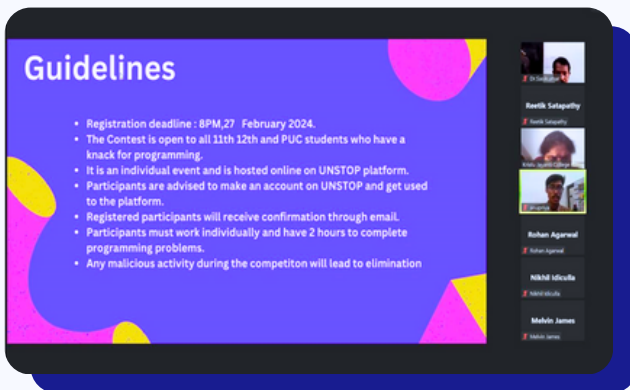
The Department of Computer Science (UG) and the Centre for Environment and Sustainability commemorated International E-Waste Day on 14th October 2023 at Kristu Jayanti College, Bangalore. The event aimed to raise awareness about e-waste management, reduce pollution, and encourage the recycling of electronic waste. A week-long awareness campaign from 4th to 20th October involved collecting discarded electronics, such as keyboards, wires, and circuit boards, which were deposited in designated bins across the campus. These were then handed over for proper recycling. The initiative educated students on the hazardous effects of e-waste, promoted sustainable practices, and instilled a sense of responsibility to make eco-friendly choices.

Codehack 3.0



On 27th and 28th February 2024, the Department of Computer Science (UG) at Kristu Jayanti College organized CODEHACK 3.0, an intra-collegiate coding competition to mark National Science Day. The prelims, held online on 27th February, featured multiple-choice questions on coding and technology, aligned with the BCA syllabus, with 103 participants, out of which 25 students advanced to the finals. The offline finals on 28th February challenged participants to decode a program, testing their logical thinking and problem-solving skills. The event fostered technical excellence and innovation, enhancing students' coding proficiency and competitive spirit.

Velocity 2024



The Velocity Coding Competition, held on 28th February 2024 to celebrate National Science Day, was an online event organized by Kristu Jayanti College Autonomous, Bengaluru, in collaboration with KJGDSC. The competition aimed to enhance participants' understanding of basic Data Structures and Algorithms (DSA) concepts while providing a platform for 11th, 12th, and PUC students across India to demonstrate their coding skills. With 50 registered participants, the event took place on the Unstop platform, where participants joined a Zoom meeting while attempting the competition. The contest featured 25 questions categorized into 10 easy, 10 medium, and 5 hard, with participants choosing from Java, Python, or C as their programming language. The competition had a duration of 2 hours, and the top prizes were INR 15,000 for 1st place and INR 10,000 for 2nd place.

An Act of Tribute to all NGO's (MIME)

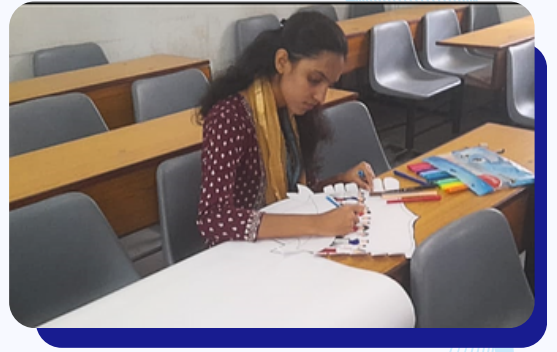


On 28th February 2024, a mime performance was organized at Chavara Square from 10:50 am to 11:00 am, attended by II Semester BCA students and KCDC volunteers. The event celebrated compassion and thanked NGOs for their transformative efforts in society. The mime performance, held after World NGO Day, creatively depicted the impactful contributions of non-governmental organizations worldwide. Through silent expressions and gestures, the students highlighted themes of humanitarianism, social justice, and community empowerment.



Anti Ragging Week

The "Observance of Anti-Ragging Week" campaign, held from 13th August 2024, aimed to raise awareness about the harmful effects of ragging and promote a ragging-free campus culture. Organized by the Department of Computer Science (UG), the event emphasized students' mental and physical well-being through activities like a poster design competition on the theme "Anti-Ragging", with 20 participants. The winners of the competition were Kirthana Ashok Naik (First Prize) and Monisha RJ (Second Prize).



International E-Waste day : Join the E-Waste Hunt - Retrieve, Recycle, and Revive!



The "International E-Waste Day" celebration at Kristu Jayanti College, held from 14th to 22nd October 2024, aimed to raise environmental awareness and promote sustainable e-waste disposal. Organized by the Centre for Environment and Sustainability (CES) and the

Department of Computer Science (UG), the event encouraged students and staff to participate in e-waste collection, with wooden boxes placed at campus entrances. Themed "Join the E-Waste Hunt - Retrieve, Recycle, and Revive," the initiative supported Sustainable Development Goals and emphasized responsible recycling.

Tech Talk on Current Trends in Cyber Security

The "Tech Talk on Current Trends in Cyber Security," held on 14th October 2024, focused on the cybersecurity risks of IoT devices in industries like healthcare, manufacturing, and transportation. Led by Akash Saxena, Manager, Cyber Security at Capgemini, the session highlighted how IoT enhances efficiency but increases vulnerability to cyberattacks. Discussions covered strong authentication, encryption, and continuous monitoring to secure IoT systems. Real-world cases like the Mirai botnet and Stuxnet illustrated threats such as man-in-the-middle, DDoS, and ransomware attacks.



Revisiting the Fundamental duties: Viewing the citizens Constitutional Obligation

On March 12, 2024, Prof. Mahesh S Betasur, Assistant Professor at Kristu Jayanti College of Law, conducted a session for II BCA A, BCA B, BCA C, and BCA (Analytics) students, totalling 164 beneficiaries. The session aimed to educate students



about their duties and responsibilities as citizens of India. Prof. Mahesh began by explaining the Constitution of India, its significance, and the various rights it grants to citizens. He also elaborated on the duties and responsibilities that each citizen must follow, providing real-life examples to make the session engaging. His presentation was concise and effective, helping students understand the power of the Constitution and its role in ensuring the smooth functioning of India's democratic system. The students gained valuable insights into their constitutional rights and responsibilities, learning about the importance of these rights in maintaining a well-functioning democratic system.



STUDENT ACHIEVEMENTS

NASA International Space Apps Challenge

A team of five talented students from the department brought pride to the college by winning the prestigious NASA International Space Apps Challenge. Competing against numerous participants, their project, titled "Galactic Problem Solver," tackled the theme of addressing challenges on Earth and in space. The team—comprising V Meenakshi Iyer (22BCAD64), Samridhi Kashyap (22BCAA53), K Vrutika (22BCAA66), Priyagita (22BCAA46), and Aneesha Jose (22BCAA09)—secured the top spot and a cash prize of ₹5,000 for their innovative solution.



- **KJC ACM-W Student Chapter** Engages at Algorithm Festival, ACM-W Student Chapter, IISc Bangalore
- **Cyber Security Essentials** – Level 2 Cisco Netacademy and NIIT Foundation

UiPath SDC Summit

A team of students from our department showcased their skills at the UiPath SDC Summit held at St. Joseph College of Engineering, Chennai. The participants, V Meenakshi Iyer (22BCAD64), Bhavana Perumal (22BCAD11), and Dhruv Kabara (22BCAB20), represented the college with great enthusiasm, demonstrating their expertise in automation and innovation.



Hack-a-bot 2024

The highly anticipated Hack-a-bot 2024 event, sponsored by UiPath, brought together the brightest minds in automation and innovation. With 115 students showcasing their skills and creativity, the event concluded with a grand cash prize of ₹10,000, making it a memorable highlight of the year.

- U S Abhiram (21BCAE10) has been recognized as a UGC NEP Sarathi for his contributions to implementing and promoting the National Education Policy (NEP).

PATENTS

Mr. A. Sevuga Pandian: Robotic Dustbin Patent [Application Number: 202421091299]

Dr. Margaret Mary T,

Dr Divya K S: Iot Controlled Clip Lamp Patent Application Number-3935600 -01]

Dr. Prakash V S:Transformer Less Capability T-Source Inverter For Solar Pv Applications Patent [Application Number-202341067690]

Dr. A Kanagaraj: Intelligent Uv Sensor Device [Application Number-401218-001]

Dr. Prakash V S,

Dr. Karthikeyan, Dr. A Kanagaraj: Efficient Multigrain Collecting And Packing Equipment Without A Motor Or Fuel [Application Number-202341077625]

Dr. Kalaiselvi K , Dr.Mary Jacob, Dr. Gopika ,Dr. Jasmine Beulah: A Secure Architecture Using Block Chain Technology For Shared Electric Vehicle Charging [Application Number-398125001]

Dr. A Kanagaraj: Adulteration Monitoring Device [Application Number-6322416]

Dr. A Kanagaraj: Device To Formulate Herbal Medicine [Application Number-6349616]

Dr. Prakash V S: Dual Perseverance Sprayer For Pesticides And Fertilizers Blender In Agriculture [Application Number-202241034259]

Dr. Sudharsan: Ai Based Compact Cardiac Defibrillator [Application Number-6320776]

Dr. Gopika : PNEUMONIA DETECTION USING CNN IN FEDERATED LEARNING ENVIRONMENT[Application Number-202441088008]

Dr. Sudharsan: Wrist Band For Woman Security [Patent Application Number-394194-001]

Dr. Revathy V R, Dr. Gopinath D: Method and System for Real-Time Cybersecurity Risk Assessment and Management [Application Number-202441005904]

Dr. Sudharsan: Iot Based Breath Analyser [Application Number-395121-001]

Dr. Sudharsan: Block Based Stenosis Detection In Coronary Vessels Of X-Ray Angiograms[Application Number-202441011249]

Dr. Gopinath D : IoT and Machine-Learning based Smart health care Management Systems in hospital management/Administration [Application Number-202421091299]

DEPARTMENT ACHIEVEMENTS

- In the India Today - MDRA Survey 2024, the Department of BCA was ranked 4th nationally and achieved 3rd place among BCA programs in Bengaluru.
- Centre of excellence for Honeywell CSR, Qlik, Celonis.
- Winners - NASA Space Hack 2024
- MongoDB - Institution Partner in Success 2024
- NASSCOM Future Skills - Outstanding commitment in upskilling Digital Engineering
- 35 Student's Research Publications(Scopus & WOS)

COLLABORATION & LINKAGES

Kristu Jayanti College has established strategic MoUs with leading organizations to enhance academic collaboration and industry exposure. These partnerships provide students with access to cutting-edge technologies, and specialized training programs

The department has established collaborations and linkages with

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|---------------------------------|-------------------------|
| 1. Elena Geo Systems | 1. UiPath |
| 2. RedHat Academy | 2. Infosys Spring Board |
| 3. Infosys Springboard | 3. AWS Academy |
| 4. Celonis | 4. Oracle Academy |
| 5. Kerala Blockchain Technology | 5. IBM Skill Build |
| 6. NASSCOM Future Skill | 6. Microsoft Educator |
| 7. Qlik | |





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