

YEAR BOOK 2020-21

BITS & BYTES

"To learn and to evolve"



COMPUTER SCIENCE
cs@stpauls.ac.in



ST PAUL'S COLLEGE ,KALAMASSERY

NAAC RE-ACCREDITED AT "A" GRADE WITH CGPA 3.14



Department Of Computer Science

ST PAUL'S COLLEGE KALAMASSERY

PREFACE

The light of wisdom has opened the door to science fiction realities for the last few decades. From the driverless car to talented AI that writes creative books. Challenges are made by machine and solved by itself. Paving the way to its glorious future, computer science has won the world. Efforts are made by the data scientist to take world to the next level that is to save the world even from nature's hidden disasters. Machine learning approaches break the chain of genomics that cause pandemics. Security and business growth is at the tip of a mouse click. This science provides a vast curriculum for brave brains to crack the solutions. We computer science people are blooming talents to carve the future.

Bestowed with the blessings of our heavenly patron St. Paul's was established in 1965 with the pre degree course, begin basic science and arts courses in the year of 1978. The urge of the society to set foot on new technology demand the need of introduction of computer science course. The department was booting in 2016 in self-financing stream. There were diploma courses in computer science provided by MG University at the initial stage and later on concentrated on developing computer aspirants with B.Sc. degree in Computer Science. The course was a blessing to young minds who demand to impart knowledge in computer science other than going for engineering stream.

The syllabi and evaluation schemes changed during the functioning of Department. Initially BSc. Computer Science Degree Programme of Mahatma Gandhi University is under Choice Based Credit and Semester System (CBCSS) for the evaluation of students. The Evaluation of each Course shall consist of two parts: Continuous Evaluation (CE) and End Semester Evaluation (ESE). For the 2017 admission onwards the evaluation scheme changed to Choice based credit system (CBCS). Later the curriculum was modified to include a new subject IT and environment.

Thankful to almighty for His grace. We are grateful for the comments, reviews and suggestions received from Teachers, Friends, Computer Enthusiast and other Educationist during the year. Also, we express profound gratitude to Management, Principal and all associating staffs and former staffs and faculties, Alumni association and all other associates who have supported us throughout the year to accomplish our vision.

TEAM CS



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ACADEMIC ACTIVITIES

DEPARTMENT OVERVIEW

The Department of Computer Science inception in 2016, imparts quality education in the field of B.sc Computer Science, keeping in mind, the requirements of the dynamic, innovative and highly global environment of the present era. The Department has excellent infrastructure facilities with well equipped computer labs, classrooms and library. We offer progressive teaching-learning environment through a team of competent and committed faculty members, experienced in both teaching and industry.

Our Department maintains good relation with various IT organization, which help to impart industry standard trainings for our students. We effectively share the facilities and expertise to improve the capabilities for advanced education, skill development. Bridge courses are conducted for necessary courses to strengthen the prerequisites for learning. Technical sessions and seminars are conducted on a regular basis to provide an insight into current technological developments. Short term trainings, workshops and hands on courses are offered, to make the students competent enough to equip themselves with the highly dynamic needs of the Computer and IT industry. Apart from this the department provides certificate programmes in data science. We also strive to instil innovative thinking practices and empathy in the students to create best-in-class computer professionals, providing solutions to the current societal needs.

STAFF PROFILE

There are five faculty members in the Department of which two are presuming their research studies



Ms. Lincy N L
Assistant Professor, HOD
MCA, (M.Phil)

Assistant Coordinator (Quality Assurance)
DQAC
PTA Committee Member
NAAC Criteria VII Committee Member



Ms.Ancy C A
Assistant Professor
MTech,MBA (M.Phil)

Edupaul-Development Team member
E-Governance Committee
Resource Mobilization Team member
Secretary of department
NAAC Criteria VI Committee Member



Ms. Richu Norman
Assistant Professor
MTech

IEDC Department Coordinator
Treasurer of Department
NAAC Criteria IV Committee Member



Ms. Jisna Jaison T
Assistant Professor
MTech

Documentation Head
Website in Charge
E-governance Member



Ms. Anju Sreenivas
Assistant Professor
MSc Mathematics

Arts and sports Committee member
NAAC Criteria V Committee Member

STUDENT REPRESENTATIVES



DON F KING
Ist BSc CS



ALEENA C B
Ist BSc CS



RAKESH NARAYANAN
II BSc CS



BENETTA T A
II BSc CS



ATHUL TOM
III BSc CS



SANDRA SUNNY
III BSc CS

ACADEMIC PROGRAMS WITH PAPERS AND CREDITS

| | |
|---|--|
| <u>Semester I (Credits-21)</u> | <u>Semester II (Credits-20)</u> |
| <p>English-I Mathematics-I Computer Fundamentals And Basic Of PC Hardware Methodology Of Programming And C Language Fundamentals Of Digital Systems Software Lab-I</p> | <ul style="list-style-type: none"> • English-II • Mathematics-II • Data Communication • Computer Organization And Architecture • Object Oriented Programming U C++ • Software Lab-II |
| <u>Semester III (Credits-21)</u> | <u>Semester IV (Credits-20)</u> |
| <p>Probability And Statistics Database Management Systems System Analysis And Design Networking Fundamentals Data Structure Using C++ Software Lab-III</p> | <ul style="list-style-type: none"> • Linux Administration • Microprocessor And Assembly Language Programming • Computer Aided Optimization Techniques • Web Programming Techniques • Assembly Language Programmi Lab • Software Lab-Iv |
| <u>Semester V (Credits-20)</u> | <u>Semester VI (Credits-18)</u> |
| <p>System Software And Operating System IT And Environment Java Programming Using Linux Computer Security Open Course Software Development Lab-I (Mini Project)</p> | <ul style="list-style-type: none"> • Computer Graphics • Big Data Analytics • Programme Elective • Seminar • Software Development Lab-II (Main Project) • Viva Voce |

CERTIFICATE PROGRAMS

- **Role of algorithms and flowchart in Programming:**

It is the first step before coding of a program. Algorithm and flowchart are the powerful tools for learning programming. An algorithm is a step-by-step analysis of the process, while a flowchart explains the steps of a program in a graphical way. Algorithm and flowcharts helps to clarify all the steps for solving the problem.

- **Introduction to Python Programming:**

Python is one of the syllabus in bsc computer science .So to understand deeply as well as to work in application level department offers python programming live sections.

- **Data Science For Beginners :**

Department offers Data Science for the introductions and its applications for the beginners. Data Science is the area of study which involves extracting insights from vast amounts of data by the use of various scientific methods, algorithms, and processes. ... Data Science is an interdisciplinary field that allows you to extract knowledge from structured or unstructured data.

Apart from the certificate programmes department offers value added programmes to incorporate human values and social media manners through the value added program called Digital Citizenship and Netiquette. Netiquette is the combination of proper etiquette and internet use. This is a major part of digital citizenship skills. Cyber bullying is the new way for bullies to target individuals. It is much easier to hide behind a screen and say hurtful things than it is face-to-face.

ACADEMIC ORIENTATION

"FIRST STROKE IS HALF THE BATTLE"

The One-day academic Orientation "To Transform and To Lead" was held in July, 2019 at Seminar Hall, St Paul's College Kalamassery with the aim of equipping and orienting all the staff members for the challenges in the academic year ahead. The entire faculty of the Department of Computer Science participated in the same

BOARD OF STUDIES

Since we are running a MGU regulated course, the curriculum was designed by the members of university Board of Studies. Our department Board of Studies will concentrate for the approval of certificate courses, their syllabus updating and to develop experimental, observational, computational skills also which lead our students as an ambassador of sustainable development of our country.

Regular sitting of BOS team in connection with curriculum revision was initiated in the department and the final draft was submitted to the governing council for approval

Members are



Ms. Lincy N L
Assistant Professor
(Chairman/HoD)
Dept. Computer Science, St.Paul's College, Kalamassery



Dr. Manusankar
Assistant Professor
(Subject Expert)
Dept. Computer Science, HoD, Sree Sankara Vidyapeetom College,
Valayanchirangara, Perumbavoor



Ms. Sangeetha J
Assistant Professor
(Subject Expert)
Dept. Computer Science , HoD, St Alberts College, Ernakulam.



Mr. Binu Jacob C
Senior Software Engineer
(Industrial Expert)
Cred.ai Bengaluru



Ms. Ancy C A
Assistant Professor
(Subject Expert)
Dept. Computer Science , St.Paul's College, Kalamassery



Ms. Anju Sreenivas
Assistant Professor
(Subject Expert)
Dept. Computer Science, St.Paul's College, Kalamassery



Ms. Richu Norman
Assistant Professor
Dept. Computer Science, St.Paul's College, Kalamassery.

INTERNAL EXAMINATIONS AND OPEN HOUSES

The Internal exams of both the semesters along with the assignments/ seminars/ viva were conducted according to the centralized schedule given by the Office of the Controller of Examinations. Retest was conducted for those who were absent for the internal exams. The marks so obtained were tabulated and shown to the parents during the Open House that was conducted at the end of every semester

COMPANY ASSISTED PROJECTS

Every student of sixth semester are subjected to do a main project by taking assistance from a company. The project topic shall be chosen from areas of current day interest using latest packages / languages running on appropriate platforms , so that the student can be trained to meet the requirements of the Industry. A project report should be submitted in hard bound complete in all aspects. For internal evaluation, the progress of the student shall be systematically assessed through various stages of evaluation at periodic intervals by the faculties of Department

MOU/COLLABORATION

The department of computer science signed an industrial MoU with Riss Technology Ernakulam, An ISO 9001:2008 certified company focuses on transforming and running business processes and operations including those that are complex and industry-specific. And also formed academic collaborations with SSV College Perumbavoor and St Alberts College Ernakulam .This collaborations will help our students to get training in different academic as well nonacademic skills.

SEMINAR

As part of the curriculum, External Seminar presentation was held for Final Year B.Sc CS students on 13/04/2021. External examiner invited was Ms. Sangeetha J, Assistant Professor and Head, Department of Computer Science, St Albert's College (Autonomous), Ernakulam.



ADMINISTRATIVE ACTIVITIES

ACADEMIC AND ADMINISTRATIVE AUDIT (AAA) INTERNAL TEAM VISIT

The internal team of the Academic and Administrative Audit (AAA), under the leadership of the Principal Valentine D'Cruz visited the department on the first week of July 2020. The data of last four years were compiled and presented. The files and other information were analyzed and feedback was given regarding which action has been taken. The data conversion of files in the e form was also verified and necessary suggestions for improvement were given.

Since we are undergoing accreditation process for fourth cycle, Department Presentation of last four year data was prepared and done in two levels

LEVEL 1:

The presentation was conducted in front of different deans in charges and make the necessary modification as suggested

LEVEL 2:

The presentation and department File checking was conducted by an audit team comprising of Principal, Management representatives and Deans in Charges.

LEVEL 3:

The modified presentation and department File checking was conducted by an audit team comprising of Principal, Management representatives and Deans in Charges.



DEPARTMENT ACTIVITIES

WEBINARS/WORKSHOPS CONDUCTED

1. Data Visualization in Data Science

Date : 27/06/2020

Resource Person: Dr. S Selvakani, Head Department of computer science, Thiruvalluvar University College.

A webinar on Data Visualisation was conducted on google meet by Dept of CS. Participants were familiar with the graphical representation of information and data. Also gained knowledge of using visual elements like charts, graphs, and maps, data visualization tools provide an accessible way to see and understand trends, outliers, and patterns in data.

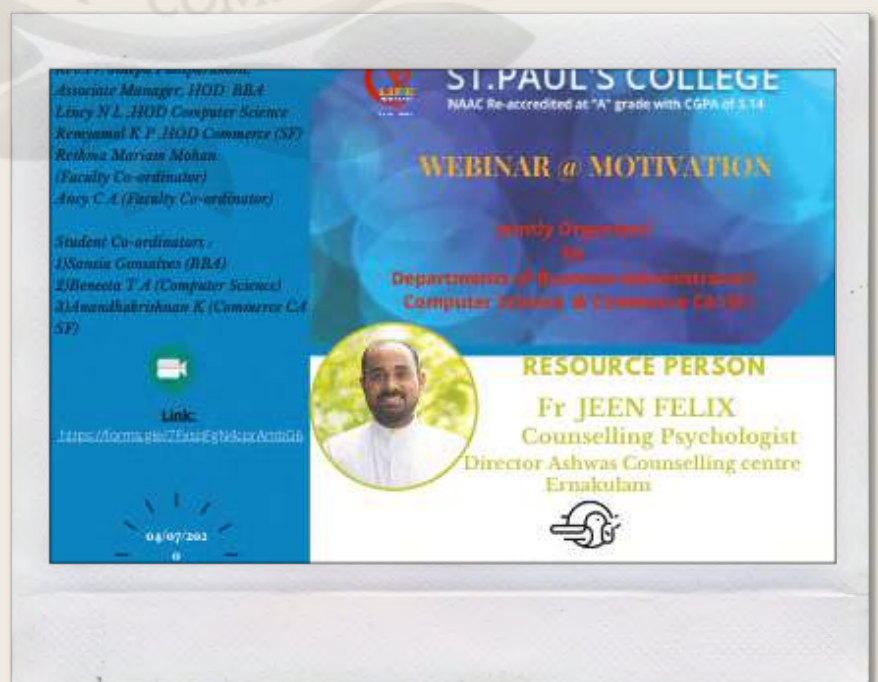
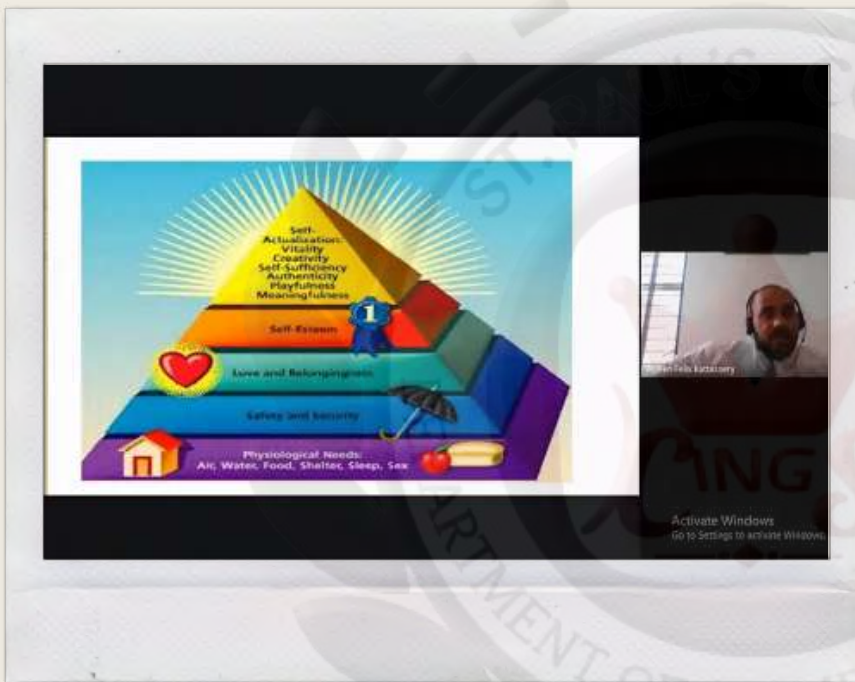


2. Motivation

Date : 04/07/2020

Resource Person: Fr. Jeen Felix, Counselling Psychologist, ASWAS counselling centre.

A webinar on Motivation was conducted on google meet by Dept of CS and BBA. As we know motivation also leads to increased effort and energy. Motivation increases the initiation and persistence of activities.



3. Online Tools for Self Development

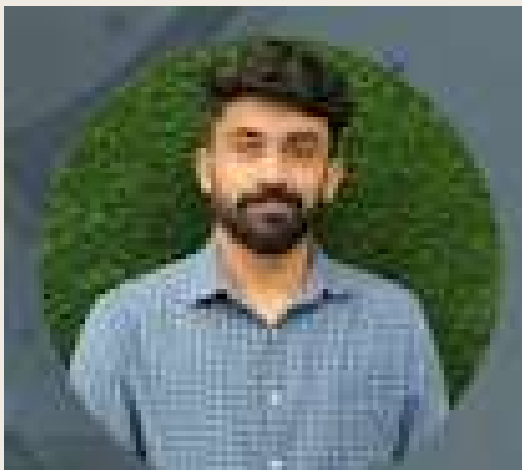
Date : 15/07/2020

Resource Person: Ms. Rupali Memane, Assistant Professor and IQAC coordinator, Training placement officer, Arihant college, Pune.

A webinar on Online Tools for Self Development was conducted on google meet by Dept of CS. About 50 students participated and Participants were familiarized with online tools for self development.



4. National Webinar on Machine Learning: Concepts & Applications



Date : 14/08/2020

Resource Person: Nithin Gopinath, AI Consultant, EY TVM.

A national webinar on Machine Learning: Concepts & Applications was conducted on google meet by Dept of CS in collaboration with IQAC and IEDC. Resource person was Mr Nithin Gopinath.

Participants get familiarized with the research trends in ML.

ST. PAUL'S COLLEGE KALAMASSERY
 NAAC Re-accredited Institution with 'A' Grade
 (Affiliated to Mahatma Gandhi University, Kottayam)
 Kalamassery - 683503. Phone : 0484-2555572

DEPARTMENT OF COMPUTER SCIENCE
 IN ASSOCIATION WITH TRAINING AND DEVELOPMENT CELL &
 INTERNAL QUALITY ASSURANCE CELL

Presents

RESOURCE PERSON

**NATIONAL WEBINAR ON
 MACHINE LEARNING: CONCEPTS
 AND APPLICATIONS**

14 Aug 2020 2:30pm

Reg link: <https://foras.glo/MtWfsatop1Qa812x5>

Nithin Gopinath
 AI Consultant

Mr. Nithin Gopinath has graduated his M.Tech in Computer Science and Engineering, Specialized in Machine Learning. He has got more than 3 years of industry experience and consulting in the domain of Artificial Intelligence. He is the author of several scopus indexed publications in Machine Learning.

Our Patrons
 His Grace Most Rev. Fr. Joseph Kalamtharankal
 Rev. Fr. Antony Vackar Arackal, Manager
 Rev. Fr. Joseph Antony Pallipparambil, Associate Manager

Organizing Committee
 Prof. Valanathan P. Cruz, Principal
 Prof. Jose Suresh, Vice-Principal
 Rev. Fr. Sebastian Kaveli Podyyamparambil
 Dr. Jisha E. Thomas, Assistant Professor & Dean (IQAC)
 Dr. Suresh Babu, Assistant Professor & Dean (Training & Development Cell)
 Ms. Anicy C.A., Assistant Professor & Head (Dept of CS)
 Ms. Manya Tomal P., Assistant Professor (Webinar Co-convenor)
 Ms. Harini Nishetha T., Assistant Professor (Webinar Co-convenor)
 Mr. Arun Thomas, Student Convener
 Ms. Shilpa, Student Convener

ABOUT THE WEBINAR

Machine learning (ML) is the study of computer algorithms that improve automatically through experience which is a subset of artificial intelligence. Machine learning algorithms are used in a wide variety of applications, such as email filtering, where it is difficult or infeasible to develop conventional algorithms to perform the needed tasks. This webinar tries to introduce you with this most trending research area of Computer Science with its applications from Natural Language Processing and Computer Vision.

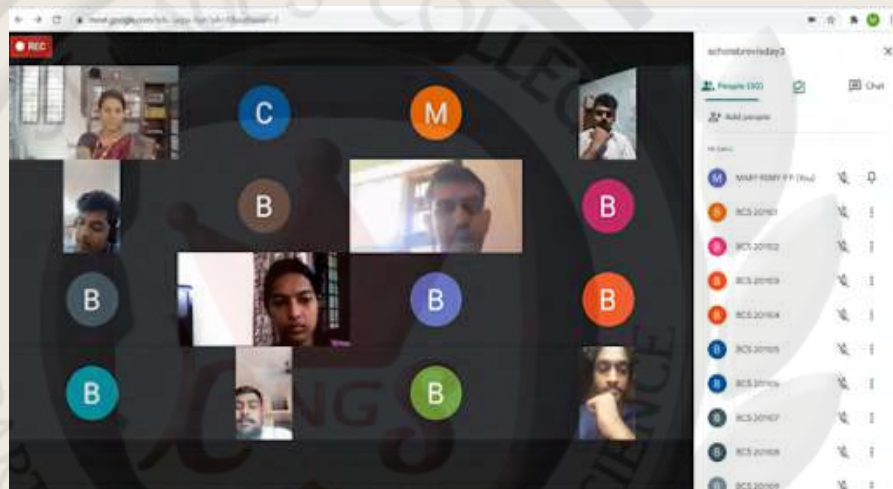
ABOUT COLLEGE

St. Paul's College, affiliated to Mahatma Gandhi University and Regulatory councils/bodies such as UGC, NCTE, AICTE, MCI and DCI is a prestigious arts and science college which functions under the Archdiocese of Verapoly. The College was founded by Dr. Joseph Attipotty, the late Archbishop of Verapoly to commemorate the historic visit of His Holiness Pope Paul VI to India in connection with the 38th International Eucharistic Congress held in November - December 1964. The College is re-accredited by NAAC with 'A' Grade in the third cycle, ISO Certified and has participation in NIRF 2019.

ABOUT THE DEPARTMENT

The Department of Computer Science inception in 2016, imparts quality education in the field of B.Sc. Computer Science, keeping in mind the requirements of the dynamic, innovative and highly global environment of the present era. Our Department maintains liaison with various IT organization, which help to impart industry standard trainings for our students. Technical sessions and seminars are conducted on a regular basis to provide an insight into current technological developments. Short term trainings, workshops and hands on courses are offered, to make the students competent enough to equip themselves with the highly dynamic needs of the Computer and IT industry.

For more details contact:
 Ms. Anicy NL: 9837143908
 Ms. Anicy CA: 9567600569
 Email: cs@stpauls.ac.in
stpauls.ac.in



5. Hands on Workshop: Diving into pHP

Date : 26/9/2020

Resource Person: Ms. Sarisha Satheesan, Assistant Professor and Systems Head, Department of Computer Science, KMM College of Arts and Sciences, Thrikkakara.

A hands on workshop on Diving into pHP was conducted by Department of Computer Science. Participants were familiarized with research and technical skills on php and database connectivity.

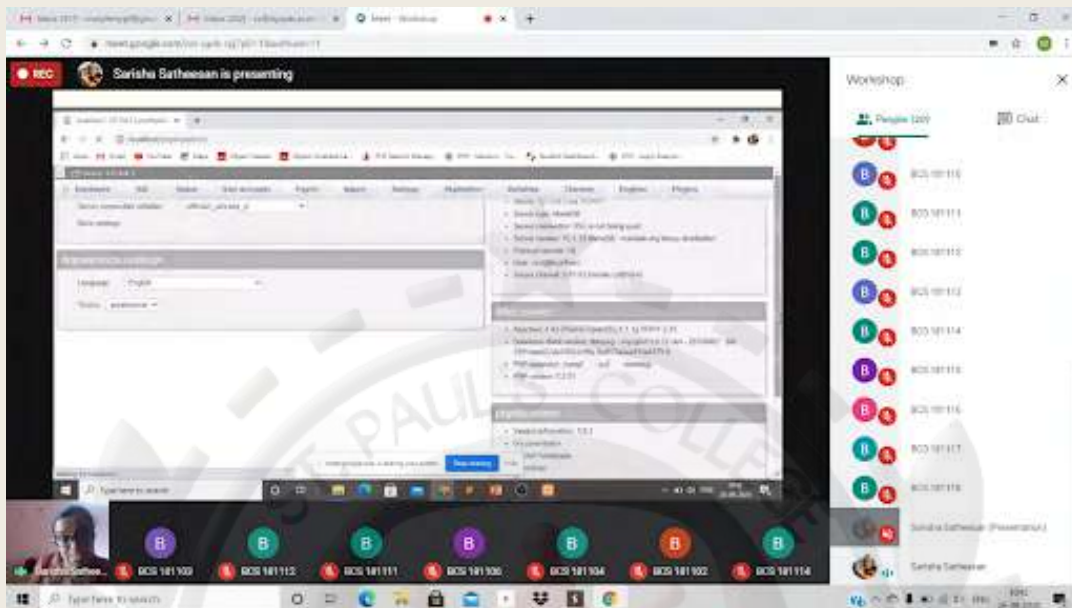
HANDS ON WORKSHOP

DIVING INTO php

RESOURCE PERSON :
 Sarisha Satheesan
 Assistant Professor and Systems Head,
 Department of Computer Science,
 KMM College of Arts and Science,
 Thrikkakara

DATE : 26/9/2020

CO-ORDINATORS :
 STUDENT CO-ORDINATOR - ARHINAV M

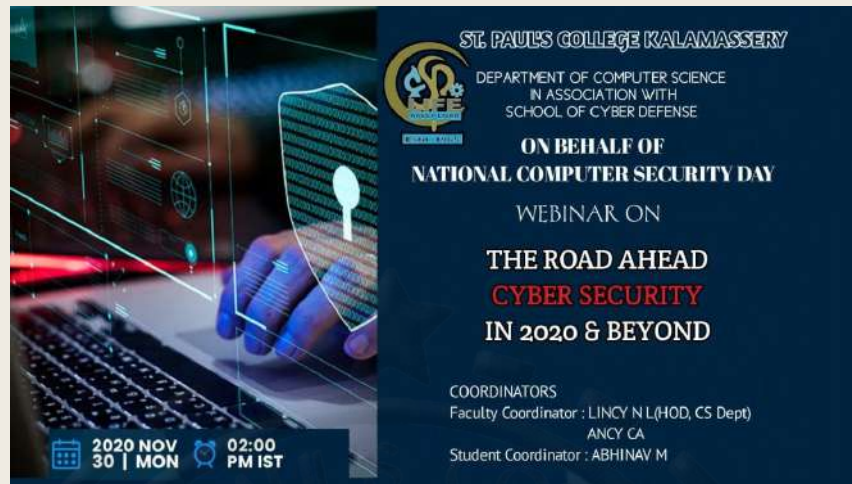


6. National Computer Security Day Celebration -Nov 30

Date : 30/11/2020

Resource: School of Cyber Defence

National computer security day was celebrated by the Dept of CS. As a part of this a webinar on “The Road Ahead Cyber Security in 2020 & Beyond” was conducted. Participants get familiarized with the research trends in Computer Security.



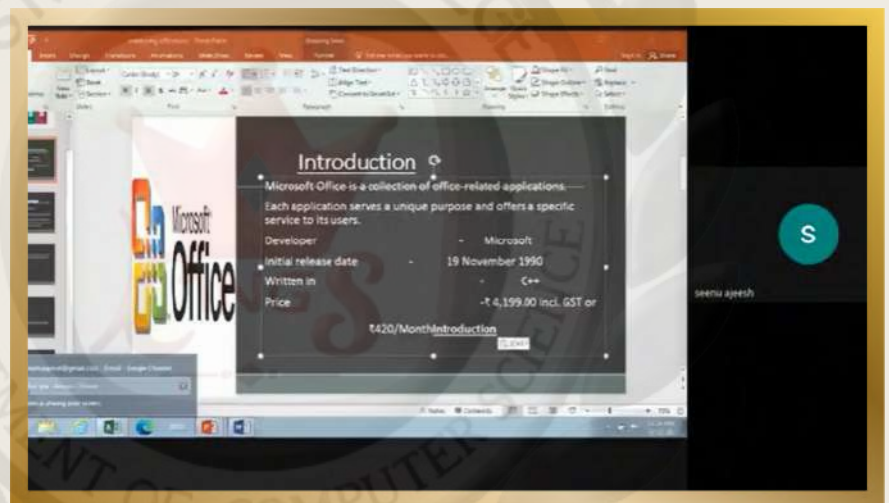
7. Computer Literacy Week 2/12/2020-7/12/2020

a. Unpackaging Office Tools

Date : 02/12/2020

Resource Person: Prof. Seeniya Joseph, Bharata Mata College.

As part of World Computer Literacy Day 2020, Department of Computer Science celebrates Computer Literacy Week. On Day 1: 02/12/2020@10:30 am IST, organizes Webinar on “UNPACKAGING OFFICE TOOLS.” Participants were familiar with process of transforming raw facts into meaningful information. Students gained knowledge about preparing presentations and doing time consuming arrangement of data using excel in a simple way and in short time. Also students found the session helpful to prepare their seminar and project reports in a professional manner.



b. AI Readiness And Industry 4.0

Date : 03/12/2020

Resource Person: Mr. Christy Elias, Software Development Consultant ,Netsentries Infosec Solutions Pvt. Ltd.

As part of World Computer Literacy Day 2020, Department of Computer Science organized webinar on “AI Readiness and Industry 4.0.” Participants achieved a brief idea about the applications of Artificial Intelligence in industry . Students became familiar with basics concept of how AI is at the core of enabling organizations in enhancing product quality, securing and optimizing manufacturing operations, and enabling disruptive business models..



ST PAUL'S COLLEGE, KALAMASSERY
DEPARTMENT OF COMPUTER SCIENCE

Computer Literacy Week Celebration 2020

WEBINAR ON

**AI READINESS
AND
INDUSTRY 4.0**

RESOURCE PERSON
CHRISTY ELIAS
SOFTWARE DEVELOPMENT CONSULTANT
NETSENTRIES INFOSEC SOLUTIONS PVT. LTD.

DAY 2: 03-12-2020 @ 12.PM

COORDINATORS:
LINCY NL (HOD)
MARIA NEETHU TITUS (FACULTY COORDINATOR)
ABHINAV M (STUDENT COORDINATOR)



c. Introduction To Hacking With Aspects Of Cyber Security

Date : 04/12/2020

Resource Person: Mr.Arun Mahendru, Co-Founder ,CREW247 and Cyber security Analyst and cyber forensic analyst

As part of World Computer Literacy Day 2020, Department of Computer Science organized webinar on “Introduction to Hacking with aspects of Cyber Security” Participants became aware of the need for cyber security and basics of hacking .Also participants were introduced basic tools used in the area of hacking.


ST PAUL'S COLLEGE, KALAMASSERY
DEPARTMENT OF COMPUTER SCIENCE
Presents Webinar On

INTRODUCTION TO HACKING WITH ASPECTS OF CYBER SECURITY

AS A PART OF
Computer Literacy Week Celebration 2020

@ 11.30 AM : 04-12-2020 (DAY 3)

Resource Person:
ARUN MAHENDRU
CO-FOUNDER CREW247,
DIGITAL FORENSIC ANALYST
& CYBER SECURITY ANALYST



Coordinators
LINCY N L (HOD)
MARY FEMY P F
(FACULTY COORDINATOR)
SAMUEL ANTONY
(STUDENT COORDINATOR)



WHY WE NEED CYBER SECURITY

1. Cyber attacks affect all people
2. Change in technology is causing boom in cyber attacks
3. Damage to business
4. Increased regulations and legislation

d. Bridging The Gap Between Education & Industry

Date : 07/12/2020

Resource Person: Mr Joseph Job, CTO , Spectrum Software Solutions.

As part of World Computer Literacy Day 2020, Department of Computer Science organized webinar on Participants became aware of getting themselves equipped with latest technologies to bridge the gap between industry and education sector for beginning a professional career. Considering the evolving nature of industry and changes in the labor market, students felt mandatory for to acquire extra skills and knowledge in technologies.

ST.PAUL'S COLLEGE
NAAC Re-accredited at "A" grade with CGPA of 3.14
Department Of Computer Science
As a Part Of Computer Literacy Week -2020
Presents Webinar On

Bridging The Gap Between Education & Industry

Red Hat Solutions

Day 4 : 7/12/2020 @ 11 : 30 AM Google Meet

Resource Person
Joseph Job
CTO
Spectrum SoftTech Solution

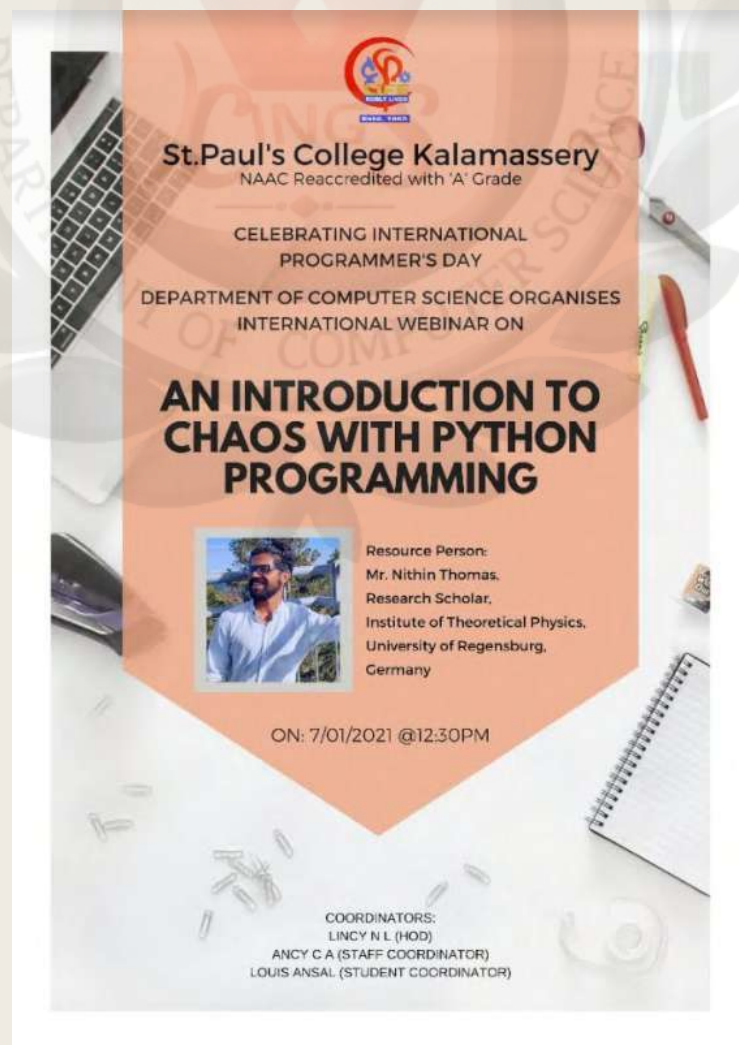
Coordinators
Faculty : Lincy N L (HOD, CS)
Anju Sreenivas
Student : Benetta T A

8. International Programmer's Day

Date : 7/1/2021

Resource Person: Mr. Nithin Thomas, Research Scholar, Institute of Theoretical Physics, Germany

Department of CS organised an International Webinar on “An Introduction to chaos with Python Programming”, as part of celebrating International Programmer's Day on 07/01/2021. Resource Person for the day was Mr. Nithin Thomas, Research Scholar, Institute of Theoretical Physics, Germany



The poster is for a webinar titled "AN INTRODUCTION TO CHAOS WITH PYTHON PROGRAMMING". It is organized by the Department of Computer Science at St. Paul's College Kalamassery, which is NAAC Reaccredited with 'A' Grade. The event is held on 07/01/2021 at 12:30 PM. The resource person is Mr. Nithin Thomas, a Research Scholar at the Institute of Theoretical Physics, University of Regensburg, Germany. The poster also lists the coordinators: Lincy N L (HOD), AnCY C A (Staff Coordinator), and Louis Ansal (Student Coordinator). The background of the poster features a laptop, a notebook, and some stationery items.

St. Paul's College Kalamassery
NAAC Reaccredited with 'A' Grade

CELEBRATING INTERNATIONAL
PROGRAMMER'S DAY

DEPARTMENT OF COMPUTER SCIENCE ORGANISES
INTERNATIONAL WEBINAR ON

**AN INTRODUCTION TO
CHAOS WITH PYTHON
PROGRAMMING**

Resource Person:
Mr. Nithin Thomas,
Research Scholar,
Institute of Theoretical Physics,
University of Regensburg,
Germany

ON: 7/01/2021 @12:30PM

COORDINATORS:
LINCY N L (HOD)
ANCY C A (STAFF COORDINATOR)
LOUIS ANSAL (STUDENT COORDINATOR)

ORIENTATION FOR NEW COMERS

1. SCHOLA BREVIS

14/12/2020-17/12/2020

a. Food for Thoughts in the Digital Era

Date: 14/12/2020

Resource: Fr Christy David Pathiala

Phd Scholar. Assistant manager St Albert's

On day 1 of Scola Brevis, An International Talk on “Food for Thoughts in the Digital Era” was conducted by the Department. Being a tech savvy, the resource person started with his life story and his interest to technology, he mentioned “the new electronic interdependence recreates the world in the image of a global village” and concluded with latest research trends in AI, which infact served as an outstanding start of orientation for the new batch.

presents

SCHOLA BREVIS
for I B.Sc CS Students

DAY 1: 14/12/2020 @ 8:30 am

INTERNATIONAL WEBINAR
Food for Thoughts in the Digital Era



Resource Person:
Fr Christy David Pathiala
Research Scholar
Department of Information Technology
University of Cumberlands, USA.
Parochial Administrator
St Agnes & St Joseph's Church
Diocese of Bismarck, USA.

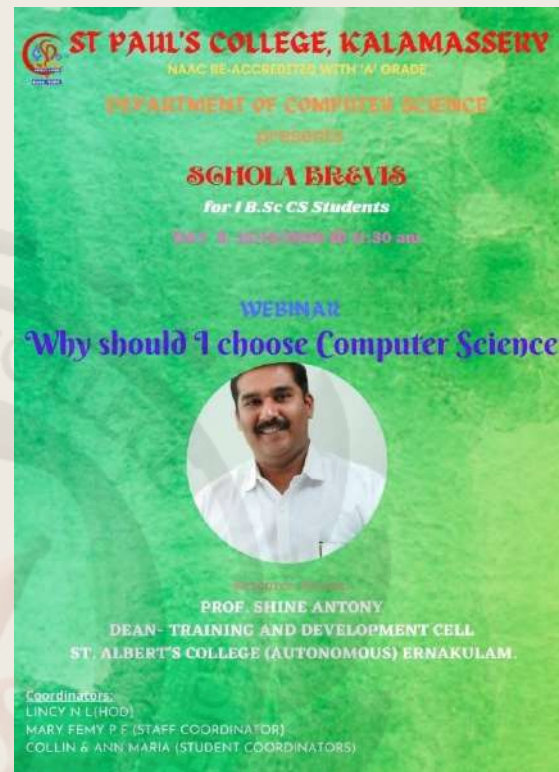
$x^2 - 4x + 5 = 5$
 $x^2 - 4x = 0$
 $x(x - 4) = 0$
 $x = 0$ or $x = 4$

b. Why Should I Choose CS

Date : 16/12/2020

Resource Person: Mr. Shine Antony, Dean Of Training and Development Asst Prof CS ,St Alberts College Kalamassery.

As part of Schola Brevis, Department of Computer Science organized webinar on "WHY SHOULD I CHOOSE CS." Participants achieved a brief idea about the career options after choosing Computer Science in industry . Students became familiar with basics Technologies of how Computer Science is at the core of enabling organizations in enhancing product quality, securing and optimizing manufacturing operations, and enabling disruptive business models..

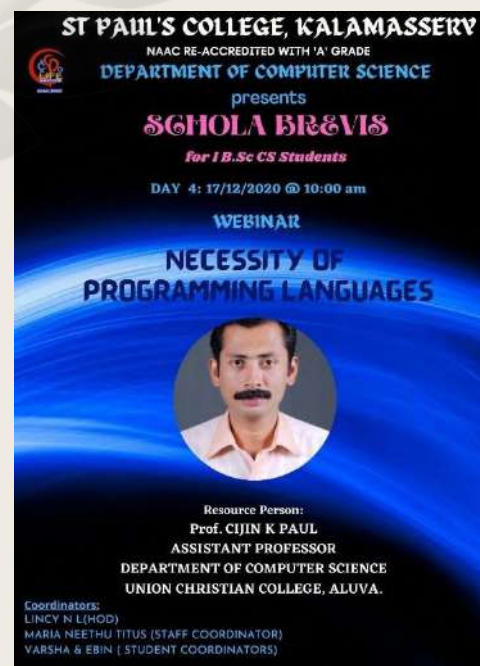


c. Necessity of Programming Languages

Date : 17/12/2020

Resource Person: Prof. Cijin K Paul, Asst Prof Department of computer science, UC College Aluva.

A webinar on Necessity of Programming Languages was conducted on google meet by Dept of CS as a Resource person was Cijin Sir as a part of Schola Brevis for first Year students. Participants were familiar with the graphical representation of information and data. Also gained knowledge of using visual elements like charts, graphs, and maps, data visualization tools provide an accessible way to see and understand trends, outliers, and patterns in data.



d. Awareness on University Exams

Date : 17/12/2020

Resource Person: Dr Manju K Menon,
Asst Prof & COE St Paul's College Kalamassery

A webinar on getting awareness on exams was conducted on google meet by Dept of CS. Participants were familiar with the exam pattern and mark distribution by university. Also get known to how to behave in an exam hall.



ST PAUL'S COLLEGE, KALAMASSERY
NAAC RE-ACCREDITED WITH 'A' GRADE
DEPARTMENT OF COMPUTER SCIENCE
presents
SCHOLA BREVIS
for I.B.Sc CS Students

DAY 3: 16/12/2020 @ 10:00 am
WEBINAR
AWARENESS ON INTERNAL AND EXTERNAL EXAMS



Resource Person:
DR. MANJU K MENON
ASST. PROFESSOR & CONTROLLER OF EXAMINATIONS
ST PAUL'S COLLEGE, KALAMASSERY.

Coordinators:
LINCY N L (HOD)
ANJU SREENIVAS (STAFF COORDINATOR)
DON & ALEENA (STUDENT COORDINATORS)

COMPETITIONS CONDUCTED BY DEPARTMENT

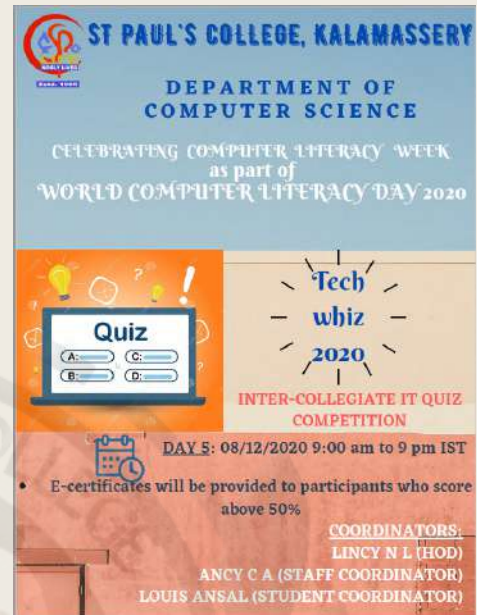
1. Quiz -Computer Literacy Week Celebration

Date : 08/12/2020

No. of Participants : 119

Platform: Google meet

Report : As part of World Computer Literacy Day 2020, Department of Computer Science organized an Intercollegiate level online IT Quiz Competition.



2. Virtual Christmas Day Celebration Competition

Department of Computer Science organised virtual Christmas day celebrations for the students. 12 students participated for almost 3 events (Christmas photo contest, Christmas card making competition and Christmas craft competition.)

RESEARCH ACTIVITIES

Research conducted in the Department of Computer Science, builds on very latest technological developments. This includes, for instance, the use of cutting edge techniques to harness the potentials of Artificial Intelligence, Machine Learning, Communication Technology and Cyber Security for research and to explore its implications in daily life. The projects and seminar of the curriculum is suitably handled to explore more research opportunities from students. During the last academic year, we were able to come up with good number of publication records.

Members of the Department focuses on these areas:

- Publish their research work with good quality.
- Contribute the knowledge by presenting their works in International Platforms.
- Collaborate with external faculties/IT professionals to run workshops bringing together researchers and industry experts to gain knowledge in trending technologies. These workshops facilitate the sharing of experience and discussions aiming to identify solutions to the problems at hand.

STUDENT PUBLICATIONS:

- “Understanding the Future Communication: 5G to 6G”, Vinesh Raj and Ancy C A, International Research Journal on Advanced Science Hub, Volume 03 Issue 5 May 2021.
- “Research on DNN Methods in Music Source Separation Tools with emphasis to Spleeter”, Louis Ansal C A and Ancy C A, International Research Journal on Advanced Science Hub, Volume 03 Issue 5 May 2021.



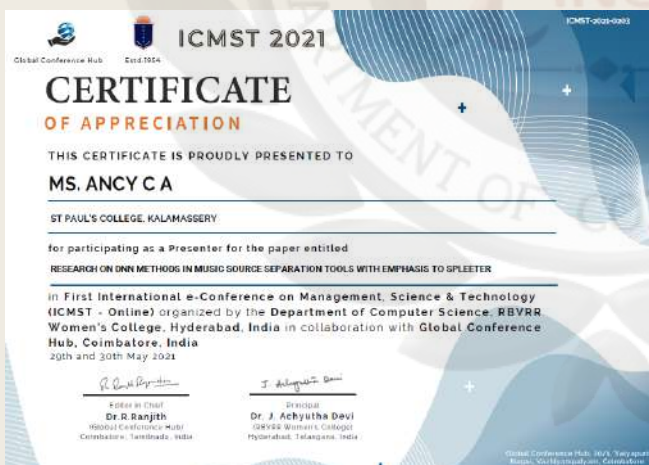
FACULTY PUBLICATIONS:

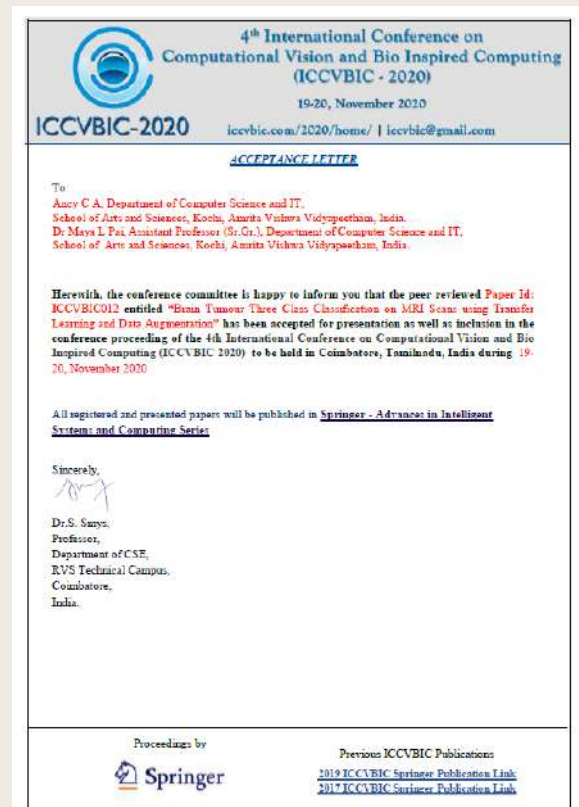
- “A Machine Learning Approach To Detect Botnet Traffic”, Lincy N L and Neenu Kuriakose, International Journal Of Innovations In Engineering Research And Technology Volume 8, Issue 5, May.-2021.
- “Prevention and Mitigation of Attacks on MQTT”, Neenu Kuriakose , Lincy N L and Haritha Rajeev, International Journal for Research in Applied Science & Engineering Technology, Volume 9 Issue V May 2021.
- “Cybersecurity Aspects Of Blockchain”, Lincy N L and Neenu Kuriakose, International Journal of Creative Research Thoughts, Volume 9 Issue 5, May 2021.
- “Botnet Attack Detection Using Machine Learning Algorithm Integrated With Ensemble Algorithm”, Lincy N L, Dr. Uma devi, Dr. Vimina E R, International Conference on Soft Computing for Security Applications, June 2021.
- “Brain Tumour Three Class Classification on MRI Scans using Transfer Learning and Data Augmentation”, Ancy C A and Dr Maya L Pai, Proceedings in Springer- Advances in Intelligent Systems and Computing Series, Springer Book Chapter.
- “Understanding the Future Communication: 5G to 6G”, Vinesh Raj and Ancy C A, International Research Journal on Advanced Science Hub, Volume 03 Issue 5 May 2021.
- “Research on DNN Methods in Music Source Separation Tools with emphasis to Spleeter”, Louis Ansal C A and Ancy C A, International Research Journal on Advanced Science Hub, Volume 03 Issue 5 May 2021.



PAPER PRESENTATIONS:

- **Ancy C A:** Paper entitled "Understanding The Future Communication: 5G to 6G ", was presented in 1st International Conference on Management, Science and Technology, Hyderabad, India, on 29th May 2021.
- **Ancy C A:** Paper entitled "Research on DNN Methods in Music Source Separation Tools with emphasis to Spleeter", was presented in 1st International Conference on Management, Science and Technology, Hyderabad, India, on 30th May 2021.
- **Vinesh Raj:** Paper entitled "Understanding The Future Communication: 5G to 6G ", was presented in 1st International Conference on Management, Science and Technology, Hyderabad, India, on 29th May 2021.
- **Louis Ansal C A:** Paper entitled "Research on DNN Methods in Music Source Separation Tools with emphasis to Spleeter", was presented in 1st International Conference on Management, Science and Technology, Hyderabad, India, on 30th May 2021.
- **Ancy C A:** Paper entitled "Brain Tumour Three Class Classification on MRI Scans using Transfer Learning and Data Augmentation", was presented in 4th International Conference on Computational Vision and Bio-Inspired Computing, 19 November 2020, India.
- **Ancy C A:** Paper entitled "Tumour Classification in Graph-Cut Segmented Mammograms Using GLCM Features-Fed SVM", was presented in International Conference on Advances in Business, Commerce and Information Technology, 30th July, 2020, India.





EXTENSION/ OUTREACH ACTIVITIES

Environment Day- 2020 Celebrations

St. Paul's College, Kalamassery adopted the Miyawalki method to add more greenery to its campus. The alumni, students and teachers of the college planted over 2500 saplings in the campus on 20 June 2020. This green initiative was inaugurated by Rev. Fr. Mathew Kallingal, Vicar General of Arch Diocese of Verapoly. The project was supported by CSR funds of GST Global. Our Department also take part in that event by planting tree and promoting students to preserve nature



Being eco friendly or environmentally friendly is becoming more and more important, we convey the students the importance of keeping the campus ecofriendly and conserving the nature for a better future.



Pauline Swachatha Mission

Our department took part in swachatha Mission organised by the college and as a part of students and teachers took initiative in cleaning the class rooms ,staffrooms and campus surroundings



ACHIEVEMENTS

STUDENT ACHIEVEMENTS

- **LOUIS ANSAL -III BSc**

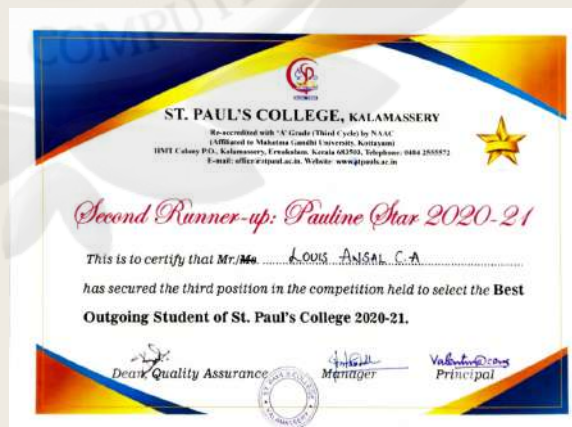
1. Secured the Second Runner-up Award in Pauline Star Competition 2020- 21, held to select the Best Outgoing Student of ST Paul's during the academic year.
2. Outstanding Performance for NCC
3. Paper Accepted in IRJASH Journal
4. Got 2nd Prize in College arts fest



LOUISANSAL-2ND Runner Up
(Pauline Star)



LOUIS ANSAL – NCC



- **VINEESH RAJ -III BSc**

1. Paper Accepted in IRJASH Journal



- **UNIVERSITY RANKS**



Adrija N Saju
MGU 1st RANK
Student
2017-2020



Aysha M A
MGU 4th RANK
Student
2017-2020



Aishwarya
MGU 6th RANK
Student
2017-2020

FACULTY ACHIEVMENTS

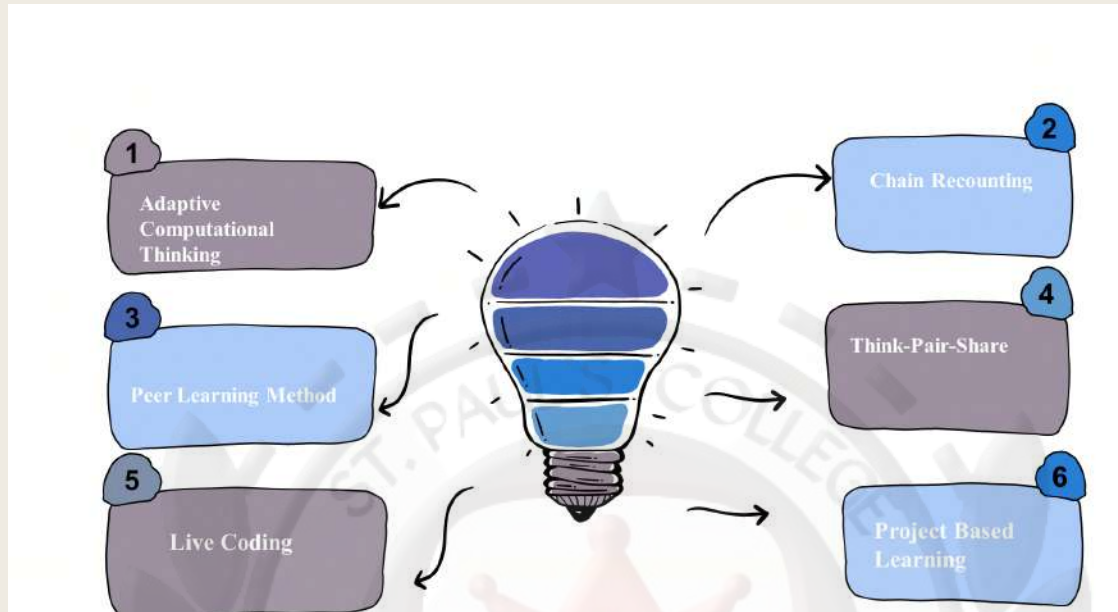
- **Ancy C A, Assistant Professor CS Department**

1. Received “Best Young Faculty” National Award 2020-21, from Novel Research Academy, Puducherry.
2. Won “Outstanding Young Research Scholar” National Award 2020-21, from Kamarajar Institute of Education and Research, TN



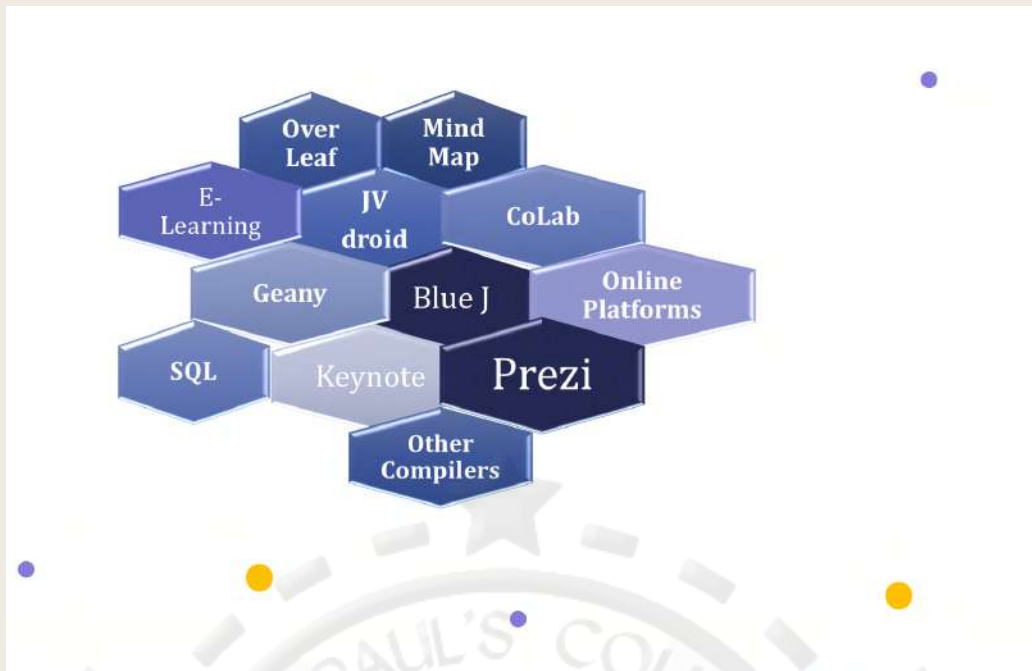
LEARNING METHODS

INNOVATIVE METHODS



| No | Name of the Innovative method adopted | Description of the method |
|----|---------------------------------------|--|
| 1 | ADAPTIVE COMPUTATIONAL THINKING | Student will be taught base algorithms & will be given case studies to check for understanding |
| 2 | PEER LEARNING METHOD | Students will be taught with theoretical concepts and will be asked to learn more from peer groups |
| 3 | CHAIN RECOUNTING | Every day class starts with recollecting topics of previous session by asking questions to students |
| 4 | THINK-PAIR-SHARE | Students will be made into groups & certain portions will be asked to take presentations, by which they will think among groups and share their thoughts |
| 5 | PROJECT BASED LEARNING | Students learn new technologies through research & coding, submit the report & conduct presentation (Seminar) |
| 6 | LIVE CODING | Give the base codes for learning and ask students to do live coding at Labs |

ICT METHODS



What is Database?

A database is a systematic collection of data. They support electronic storage and manipulation of data. Databases make data management easy.

- An online telephone directory uses a database to store data of people, phone numbers, other contact details.
- Let us also consider Facebook. It needs to store, manipulate, and present data related to members, their friends, member activities, messages, advertisements, and a lot more.

DATA STRUCTURE

Teacher: ANCY C A | Category: DEPARTMENT OF COMPUTER SCIENCE | Price: ₹1,000.00

20 students | 13 lessons | 1 quizzes | 10 week duration

Overview | **Curriculum** | Instructor | Reviews

Module 1 : Introduction to DS and Concepts of Arrays
This module covers the concepts of Structured data, arrays, searching and sorting techniques.

- Basics of DS
- Introduction to Structured Data
- Array Concepts
- Array Operations- Insertion
- Array Operations- Deletion
- Array Applications- Sparse



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<https://elearning.stpauls.ac.in/course/data-structures-using-c++/tab-tab-curriculum>

Teacher: ANCY C A | Category: DEPARTMENT OF COMPUTER SCIENCE | Price: ₹1,000.00

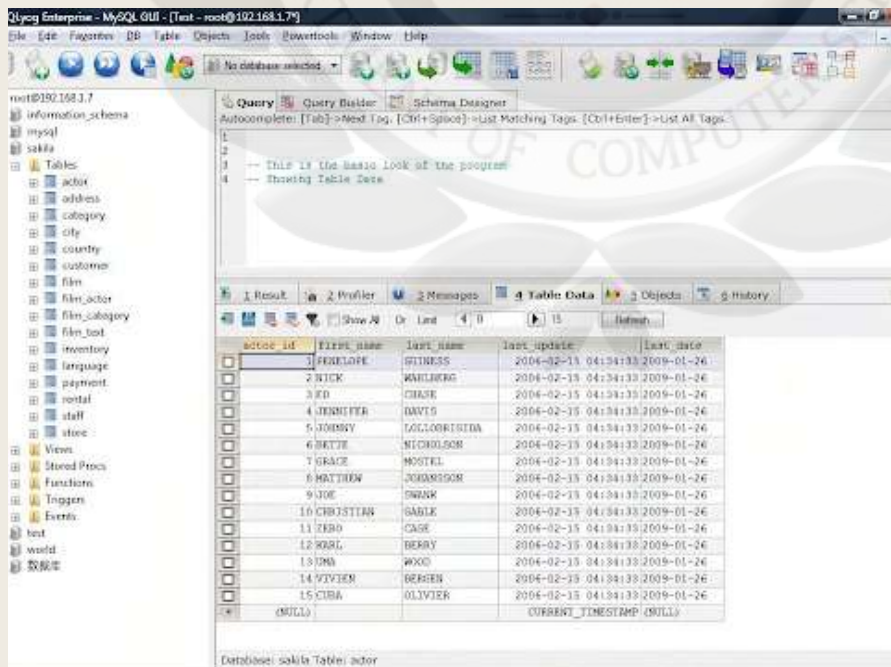
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FACULTY DEVELOPMENT PROGRAM ATTENDED

LINCYNL

- Deep Learning Using PyTorch - AICTE approved FDP
- Data Sciences - AICTE approved FDP
- Cyber Security AICTE approved Conducted by Madurai Kamaraj University
- Data Sciences AICTE approved Conducted by CUSAT
- Research Methodology National Level by Kamal Nehru College

ANCYCA

- Python Programming by IIT Bombay & MHRD
- Advance Deep Learning Techniques with Python (Phase 1) by AICTE
- Data Science by AICTE
- Digital Image Processing & its Applications by AICTE
- Advance Deep Learning Techniques with Python (Phase 2) by AICTE
- Data Science & its Application in STEM by AICTE
- An Induction Program for Young Teachers AICTE Sponsored Orientation
- Augmented Reality vs Virtual Reality by AICTE
- Research Methodology by Kamla Nehru Mahavidhyala College
- Sensor Networks, IoT and Internet of Everything by AICTE





IMP NATIONAL DAYS CELEBRATED



FUTURE SCOPE

Implementation and effective usage of e-learning platform to deliver education that equips each student with broad outlooks, academic sophistication, language proficiency, and fundamental knowledge in their field of specialization. Also to increase the academic scores. We will look forward to extend the research activities and publications by both the students and faculties
Moving forward with the following future plans we believe that we could accomplish our goals.

They are

- Implementation and effective usage of e-learning platform to deliver education that equips each student with broad outlooks, academic sophistication, language proficiency, and fundamental knowledge in their field of specialization.
- To increase the academic scores.
- To extend the research activities and publications by both the students and faculties.

For more details contact us

cs@stpauls.ac.in

