





## **ABOUT**

The Department of Computer science was established in the institution during the year 2000 with an intake of 80 and increased to 180 in the year 2023. The department offers BCA program affiliated to Bengaluru City University. The department is equipped with state-of-the-art infrastructure and well-equipped computer labs with good internet, servers, hardware and software support.

The BCA curriculum offers subjects such as data structures, database management systems, computer architecture, operating systems, computer networks, software engineering, web technology, data analytics, machine learning, artificial intelligence and languages such as Python, Java, C++ etc to keep them in sync with advances in technology and prepare them for lifelong learning.

The distinctive strength of the department is its faculty. A total of twelve highly qualified, competent and experienced faculty members committedly guides the students all the way through and make them adequately competent in order to match global standards.

In addition to academics, the department organizes skill enhancement programmes, workshops, guest lectures, value added programmes, certification programs and industrial Visits on regular basis in order to bridge the gap between the academic and industry requirements. The department is supported by a large alumni group.

The department is dedicated to creating extremely skilled and successful graduates who are ready to take on the challenges of the real world.





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### **Mobile Architecture**



**DATE:** 20/5/2023

**TIME: 9:30AM ONWARDS** 

**RESOURCE PERSON: : MR RAVICHANDRA C R** 

**PARTICIPANTS:** : III YEAR BCA STUDENTS

**COORDINATOR: R SRIVIDYA** 

#### **Objective:**

- 1.To know the architecture of Mobile
- 2. To know about the features to be included in apps.

The Computer Science Department, MSRCASC has conducted a Seminor on 20/5/2023. Topic was "Mobile Architecture". It was conducted for BCA students. The resource person for the day was Mr. Ravichandra C R, Senior SDET, Vance. He is also alumini of our college.

The demand for mobile business applications is exploding, and business is booming for software development companies that understand the complexities of mobile application architecture. To meet the growing demand for high-performing mobile apps, the tools and methodologies for mobile app development are evolving, allowing developers to create high-quality cross-platform products in a relatively short period of time. He started the sesion by putting a question on SQL. He explained what an SQL is and its purpose.

He explained completely the monolithic architecture. He told the meaning of monolithic architecture. A monolithic architecture is a traditional model of a software program, which is built as a unified unit that is self-contained and independent from other applications. He also focussed on API and its types. He gave a depth knowledge on Microsoft Azure. He made the session as an interactive session. The students enjoyed the session



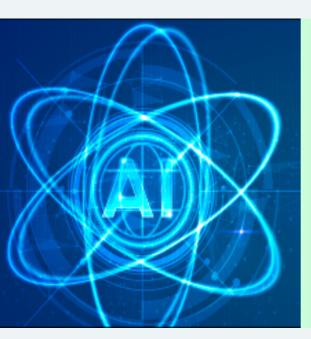




#### **Outcome:**

The success of any mobile app heavily relies on its architecture. Therefore, it's important to thoroughly consider what features we plan to include in app, how to deploy them, and how they will be connected in the architectural layers. The students got an idea on Mobile architecture.

## Value Added Course on "Artificial Intelligence with Real-Time Application"



**DATE: 15TH MAY 2023 TO 18TH MAY 2023** 

**VENUE: COMPUTER LAB** 

**PARTICIPANTS: III YEAR BCA** 

RESOURCE PERSON: MR. MOHAMMED AZHAR HUSSAIN, CTO, AQMENZ AUTOMATION PVT LTD,

INDOSKILL.

**NO OF STUDENTS: 78** 

**EVENT COORDINATOR: SHAIK VALLI HASEENA** 

Objective: Get Introduced to Artificial Intelligence, Students will get an opportunity to Learn

- Industry Standard AI Frameworks like Tensorflow, Keras, Django.
- Students will be given hands-on exposure to working on Artificial Intelligence Projects.
- Students will learn to build the Predictive Models & Deployment in Production.
- Students will learn Cloud Platform for Model Deploymeny like Heroku or AWS

#### Course Outline -

- Introduction to Artificial Intelligence
- Deep Dive into Python Libraries
- Al Foundation-1: Machine Learning
- Al Foundation-2: Deep Learning
- Model Deployment
- Major Application Projects
- Capstone Project given to Each Student

The Department of computer science in association with Aqmenz Automation Pvt Ltd, INDOSKILL organized the Value Added Course on "Artificial Intelligence with Real-Time Application" from 15th May 2023 to 18th May 2023 to the III years BCA Students Mr. Mohammed Azhar Hussain, CTO, Aqmenz Automation Pvt Ltd, INDOSKILL was the resource person for the course and delivered the lecture in the area of Artificial Intelligence. Ms. Shaik Valli Haseena was the faculty coordinator for the program.

Four-day value-added course was hosted by the event coordinator Ms. Shaik Valli Haseena. The inauguration of the program was done by Dr. Prathiba V Kulburgi by addressing students and introducing the resource person to the students. Later Session was handed over to the resource person. The below list shows the program flow program.

On day one the resource person gave a brief introduction to Artificial Intelligence & its Applications and showed hands-on experience with Anaconda & Spider IDE Installation. he later explored about basics of Python, AI, and Machine learning.

On day two the session started with an explanation about feature scaling projects and about regression models. Later they handled the session with a practical approach Git Hub installation, Remote Repository Creation. At the end of the day, the resource person gave an assessment to all students. Students were very happy as they got the opportunity to learn with practical exploration.

On day three The session started with very interesting topics such as deep learning, Neural networks, and Tensor Flow Basics: Sequential Models, Compilation, Training & Testing. Later he gave an explanation about Introduction to Model Deployment & Cloud Platforms and Model Deployment on Production Server using Streamlit, Car Sales Prediction using Linear Regression & Deployment using Streamlit.

At the end of the session, they addressed students with real-time projects like Real-time Plant Disease Prediction using CNN & Deployment, Practical Implementation of MNIST Dataset using ANN, Car Sales Prediction using Linear Regression & Deployment using Streamlit. On day 3 the formal valedictory function got over by thanking all the members of the INDOSKILL team by Dr. Poornima and Dr. Prathiba. Day four was completely by online assistance to the students through project allocation and demonstration about project data collection, code optimization deployment, and code building. The assessment was being taken care by Aqmenz Automation Pvt Ltd, INDOSKILL. and qualified students got certification from the organization.





#### **Outcome:**

- Hands-on with Python Libraries which leads to a strong foundation in Artificial Intelligence.
- Understands Predictive Models Building & Deployment.
- Students will get experience with Tensor Flow, Keras, Django/streamlit, and Heroku.
- 5 Major Projects have been Solved & a Separate Capstone Project assessment taken and completed by all students.

## Seminar - "Cloud Computing - Azure 104"



**DATE: 09/02/2023** 

**TIME: 10:00AM** 

**RESOURCE PERSON:** MR. VISWANATH M S

SOLUTION ARCHITECT, AUTOBOTS IN ASSOCIATION WITH CADD CENTRE TRAINING SERVICES PVT. LTD,BANGALORE

**PARTICIPANTS: 70 STUDENTS** 

**COORDINATOR:** DR. PRATHIBA V KALBURGI,

Objective: To study the importance of Cloud Computing in the E-commerce world using Azure

The seminar was organised as well as delivered by Mr. Viswanath M S, Solution Architect, Autobots in association with CADD Centre training services Pvt. Ltd, Bengaluru, with the support and encouragement from Dr. Prathiba V Kalburgi, HOD, Dept., of Computer Science, MSRCASC. The seminar started with the topic 'Introduction to the Cloud and Azure' where students got an abstract overview of the cloud architecture and other various technologies used in the industry. The resource person gave students his insight on the DevOps model, an overview of the Azure Cloud Portal and showed a hands-on demo of creating and deploying Virtual Machines (VM) on Azure. Topics such as Virtual Networks and their configurations on VMs, Artificial Intelligence and Machine Learning services on Azure were also covered by the speaker. Hands-on demo of creating a Virtual Private Network (VPN) using the SoftEther VPN service and on creating a Q&A chatbot and embedding it to Facebook Messenger was also shown. Students were also demonstrated on how to create an Azure app service and deploy a web application using GitHub and FileZilla.



The students were guided through the process of creating and deploying SQL databases, SQL servers as well as connecting Azure SQL database to Visual Studio. They were also guided on how to create and deploy a VM. The resource person did a great job in solving queries of the students and helping them through the entire process. Finally, the event was concluded with a quiz. The event was a great success as every student thoroughly enjoyed and learned a great deal from it.

## **Mobile Application Development Workshop**



**DATE:** 02/02/2023

**TIME:** 9:30AM ONWARDS

**RESOURCE PERSON: MR. AURANGJEB KHAN, ASSISTANT** 

PROFESSOR, CMR UNIVERSITY, BANGALORE

**PARTICIPANTS:** : III YEAR BCA STUDENTS

**COORDINATOR: MRS.SHILPA NAYAK** 

**Objective:** Enable students to create dynamic user interfaces for mobile apps.

The "Mobile Application Development" workshop was conducted on 2nd February 2023 by Mr. Aurangjeb Khan, at Ms Ramaiah College Of Arts Science & Commerce. The workshop was designed to help students to create dynamic interfaces for web applications. Around 60 participants from the department of BCA attended the workshop.

#### **Background Information**

Mobile app development is rapidly growing in many organizations across industries. The workshop is aimed to help the students acquire the skills and knowledge needed to build a mobile application with emerging technologies.

#### **Objectives**

The main objectives of the workshop were to:

- · Practical experience of creating a mobile application
- · Installing and running a webpage for the app using 2 types of codes
- · Creating own applications on AVD
- · Designing the application

#### Methodology

The workshop consisted of a combination of presentations, discussions and hands on experience for designing a mobile application. Students worked individually and in teams on

their systems to install and run AVD (Android Virtual Design) in session 1 and designing of the application using Java and XML code was done in the second session.

Steps of downloading Android Studio, choosing the version of android accordingly were taught and executed. During the installation process, there was a discussion on the types of Mobile Applications- Native, Hybrid and Web. Native application development was being carried out.

Software and the emulator installation was done, after which AVD's creation to build a potential application that could be on the PlayStore.

Different platforms of Operating Systems, it's platforms and Android Versions history (upto the latest existing version) were conceptualised.

Designing of Applications using XML and Java programming languages was introduced. Relevant usage of the codes were done, based on the layout and overall design of the application.

The workshop facilitator also discussed about data persistence, for real time applications.

The workshop provided a valuable opportunity for participants to learn about the working of mobile application development, it's implementation and how it's designed with the help of front end and back end coding.





#### **Outcome:**

The workshop was well received and taught basics of building a mobile application using Android Studio. Discussions on OHA (Open Handset Alliance) Smartphone Platform market share and Categories/Areas of designing applications were held. A practical experience of Native Android Application Development was achieved.

## **Cyber Security and Ethical Hacking**



**DATE: 16TH NOVEMBER TO 3RD DECEMBER 2022** 

**TIME:** 10:30 AM

**PARTICIPANTS: III YEAR BCA STUDENTS** 

**NO OF STUDENTS: 80** 

RESOURCE PERSON: MR.SUHAS MALLIKARJUNA,

CERTIFIED SECURITY ANALYST, MATEX

**COORDINATOR:** SHAIK VALLI HASEENA, HARIPRIYA G S

**Objective:** To give an awareness about cybersecurity and ethical hacking.: Plan a vulnerability assessment and penetration test for a network.

#### Course Outline -

- Cybersecurity Fundamentals
- Windows Security
- Introduction to Kali
- Basic Networking Protocols
- Windows Security
- Phishing Tools

A Ten Days Value added course on Cyber Security and Ethical Hacking was handled for V Year BCA students by the resource person Mr. Suhas Mallikarjuna, Certified Security Analyst, MATEX, Bangalore, alumni on 16.11.2022 to 03.12.2022 at Department of Computer Science, M S Ramaiah College of Arts Science and Commerce.

According to the Forbes report cyber security market is expected to grow up to \$170 Billion within 2020. With around 20% rise in job opportunities in the field of cyber security. MNCs like Accenture, Juniper, Cisco, TCS, Wipro, and Cognizant have invested huge amount in building up a team of cyber security professionals. This course on ethical hacking focuses strictly on how black hat hackers can gain access to critical and sensitive information of individual and organizations. Understanding in depth how to counter the attacks from black hat hackers the course demonstrates live hacking to spread awareness among individuals. In this workshop the resource person demonstrate how hackers can hack into smart phone, website hacking and admin panel bypass, undetectable virus which can steal data, ransomware development and safety measures, social media hacks and many more.

The ten days session covered the following Ethical Hacking questions: (i) How Do the users Know If the Transactions that they Do Are Safe or Not? (ii) What If someone is monitoring the users Gmail Accounts? What are the users going to Do Then? Have the users ever thought About It? The Students were benefited from the course in the following ways: (i) Firstly, the course gave student an insight of the Ethical Hacking i.e. compromise of email hacking DOS attacks SQL Injection etc. (ii) Hands-on session along with Theory sessions step by step (iii) This also provided the resource person own Ethical Hacking Toolkit and , which consists of all the Tools and Techniques covered in the course (iv) Students got to practise tools in lab sessions on windows security (v) They got an idea about Kali (vi) About phishing tools they had experienced who it works.

This course was for ten days with three hours' session each day, in a total of thirty hours properly divided into theory and hand on practical sessions. At the end of this course a competition was organized among the participating students where each participating student was given Certificate of Participation and the Winners will get Certificate of Merit.









#### **Outcome:**

Learnt about ethical hacking ways and security threats. It helps students to get a high-paying opportunity in the Cyber security industry. The program has been designed a collaboration with MATEX to provide the best learning outcome to the students.

## Workshop — Mental Health and Mindfulness



**DATE:** 18/10/2022

**TIME:** 2:30PM - 4:30PM

**RESOURCE PERSON:** MRS. ADITI ARUN RAO, ASSISTANT PROFESSOR, DEPARTMENT OF HUMANITIES, MSRCASC

**PARTICIPANTS: : 180 STUDENTS** 

**COORDINATOR:** HARIPRIYA G S, SHAIK VALLI HASEENA

**Objective:** The objective of the workshop is to raise awareness of mental health issues around the world and to mobilise efforts in support of mental health.

A workshop on mental health was conducted by the department of Computer Science of MSRCASC. It was a one-hour workshop conducted in Sir M Visvesvaraya Auditorium of the college. The workshop was presided over by Mrs.Aditi Arun Rao, Assistant Professor, Department of Humanities and she was the speaker of the day.

The workshop commenced at 2:30PM by an introduction of the speaker given by Mrs. Dhanashri Vaishali, Assistant Professor, Department of Computer Science. Mrs. Aditi soon began with the topic for the day "Mental Health and Mindfulness". She carried out the workshop with the help of a colorful and creative powerpoint presentation. She spoke about what wellbeing is and types of wellbeing which includes emotional wellbeing, psychological wellbeing and social wellbeing.

She gave us an idea about the factors that can affect Mental Health which are biological factors, life experiences, family history and lifestyle. It is our choice to become what we want as we become what we feed our brain.

Later, Mrs. Aditi moved on to the methods of having positive mental health. She focused on being an optimistic person than being pessimistic in nature. She discussed the steps of mental wellbeing and spoke about mindfulness and its benefits. She also gave us a 7-day social media detox plan which goes like: day1 to pamper yourself with yoga and meditation. Day2 to learn something new, day 3 for raising positive vibrations, day 4 to change your environment and so on till day 7. She taught us 4 steps of self-care which are connect, move, rest and unplug. She also taught us how to take any form of criticism.

Towards the end of the session, Mrs. Aditi conducted a short meditation session of 5-7 minutes. She taught the students some muscle relaxation exercises and breathing exercises.

The session was concluded by vote of thanks by Ms.Dhanashri Vaishali, Assistant Professor, Dept. Of Computer Science, which was followed by a group of all the faculty members and participants of the workshop.







#### **Outcome:**

This workshop was of great help to all the students as it focusses on mental health and wellbeing.

## IT and Network Services & Project Management



**DATE:** 09/12/2022

**TIME:** 10:30 AM

RESOURCE PERSON: MR. SHAIK SIRAZ, PMP CERTIFIED SPECIALIST, DEPUTY GENERAL MANAGER, HUAWEI

TECHNOLOGIES.

**PARTICIPANTS:** : III YEAR BCA STUDENTS

**COORDINATOR:** HARIPRIYA G S, SHAIK VALLI HASEENA

**Objective:** How Networking applications will manage and monitor the functions and services remotely in Industry.

Skill enhancement provides the opportunity and knowledge for an individual to develop and strengthen the necessary skills to gain, maintain, and advance in a chosen area. Skill enhancement programs are focused around training that combines the best practices from education, career counseling, and technology training. A One Day Skill Enhancement Programme on "IT and Network Services & Project Management" was handled for V Year B.C.A students by the resource Mr. Shaik Siraz, PMP Certified Specialist, Deputy General manager, Huawei Technologies, Bangalore on 09.12.2022 at Visvesvaraya Auditorium, MS Ramaiah College of Arts Science and Commerce.

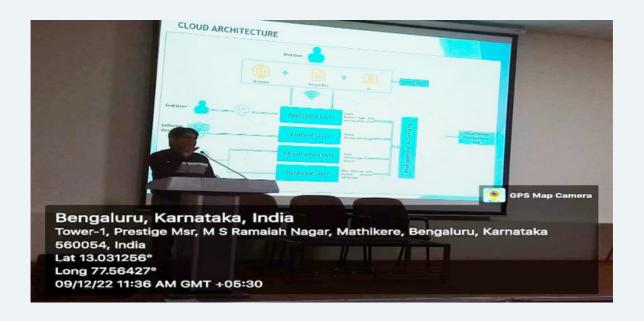
Program has started by the welcome speech of Shaik Valli Haseena and introducing the resource person of the day. He started with the importance of the networks in the present era and how it playing the vital role to lead our lives without that. He explained about the Network infrastructure and its types.

He gave the real world examples to manage the Network infrastructure and also the services of network.

He explained in deeply how exactly Networks are interrelated to the cloud architecture associated with the security.

Students were very happy to clear their doubts by asking some more examples how the Network infrastructure and Cloud infrastructure.

At the last Vote of thanks has given by Ms. Haripriya G .S and session has got ended.





Outcome: Recognizing the different Network protocols to manage the services of Networks.

### **Microsoft certified Azure AI Fundamentals**



**DATE:** 14/06/2022 TO 19/06/2022

**TIME:** 2:30PM - 4:30PM

**RESOURCE PERSON:** ATUL SHARMA, M/S ATS INFOTECH PVT LTD MICROSOFT- AEP(AUTHORIZED EDUCATION

PARTNET)

**PARTICIPANTS: : III YEAR BCA STUDENTS** 

**COORDINATOR: SUMA C** 

**Objective:** To build a career and demonstrate the knowledge of common AI and machine learning workloads—and what Azure services can solve for them.

On the first day the resource person gave insight about learning azure AI. The course is designed to give you a comprehensive understanding of the Azure AI services and tools that Microsoft provides for building intelligent applications. The course covers the fundamentals of AI, including machine learning, deep learning, and natural language processing. Will learn how to use Azure AI services to build intelligent solutions that can process, analyze, and interpret large amounts of data to help you make informed business decisions.

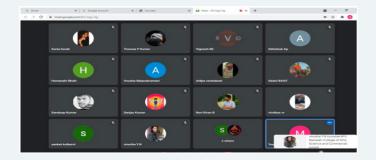
He said that mastering the basics in AI can help students jump-start their career and to get ready to dive deeper into the other technical opportunities Azure offers. Artificial intelligence (AI) opens doors into possibilities that might have seemed like science fiction only yesterday. Using AI, students can can build solutions, improve apps and advance technology in many fields, including healthcare, financial management, and environmental protection, to name just a few. They will aslo also gain hands-on experience with Azure AI tools such as Azure Machine Learning, Cognitive Services, and Bot Service. You'll learn how to create and deploy machine learning models, build chatbots, and use pre-built APIs for vision, speech, and language processing. He said the purpose of The AI-900: Microsoft Azure AI Fundamentals exam is designed for candidates who want to demonstrate their foundational knowledge of artificial intelligence and its applications. The exam measures the following skills:

Understanding of AI workloads and considerations: This module provides an overview of AI and its applications, including machine learning, deep learning, and natural language processing Ability to describe fundamental principles of machine learning on Azure.

Understanding of features of computer vision workloads on Azure It covers the basics of Azure AI services, including Azure Cognitive Services, Azure Machine Learning, and Azure Bot Service Ability to describe features of Natural Language Processing (NLP) workloads on Azure Understanding of features of conversational AI workloads on Azure.

The exam consists of 40-60 multiple-choice questions and will have 60 minutes to complete it.

The resource person said that The Microsoft Certified: Azure AI Fundamentals certification could be a great fit for students if they would like to:Prove that they have the AI skills it takes to build a better world. Getting Azure AI Fundamentals certification can supply the foundation they need to build their career and demonstrate knowledge of common AI and machine learning workloads—and what Azure services can solve for them. It also Validates the foundational knowledge of machine learning and AI concepts, along with related Azure services. The students learnt the Fundamental concepts for Artificial Intelligence. They also gained knowledge about the concepts on AI workloads , fundamental principles of machine learning on Azure , features of computer vision workloads on Azure. The had insight on Natural Language Processing (NLP) , features of conversational AI workloads on Azure. They were given hands on lab to visualize things like how to use Azure Machine Learning to train and deploy models, as well as manage the ML lifecycle (MLOps). The department conducted entry level test which was MCQ and in that test 24 students qualified for attending the course. Microsoft conducted test at the end of the course in which 8 had qualified and certificates were issued to them.





#### **Outcome:**

- Prepare data for use by an Azure Machine Learning Studio experiment
- Train a machine learning model in Azure Machine Learning Studio
- Deploy a model trained in Azure Machine
- Prepare data for use by an Azure Machine Learning Workbench experiment
- Train a machine learning model in Azure Machine Learning Workbench
- Deploy a modeltrained in Azure Machine Learning Workbench to make predictions

### Techeve 2022



**DATE:** 30/5/2022 TO 31/5/2022

**TIME:** 10:30 AM

PARTICIPANTS: BCA AND B.SC. STUDENTS

**NO OF STUDENTS: 120** 

**VENUE: DEPARTMENT OF COMPUTER SCIENCE LAB** 

**COORDINATOR:** MR. LAKSHMIPATHI V AND

MS.DHANASHRI VAISHALI

#### **Objective:**

- To promote the interest in current technology among students
- To bridge the gap between industry and campus.
- To provide an arena for students to test their coding skills.
- To connect the students with ground breaking ideas to design the website.

The Department of Computer Science, MSRCASC had organized IT\_FEST called "Techeve 2022" for the students of BCA and BSc(cs) on 30/5/2021 and 31/5/2021. On day 1 i.e. on 31/5/2021, the session was inaugurated by our HOD Dr. Prathiba V Kalburgi ma'am and respectful Mrs. Haripriya Ma'am. After motivational speech and prepping the students, the event was handed over to the president of Technofreak Shahzad Bin Shahjahan, he introduced the students to each events and explained the rules and welcomed everyone to the event. IT quiz and Type master was conducted on 30/05/2022 and Codigo, Sherlock Codes and Sell It was conducted on 31/05/2022.

#### IT Quiz

- The contest was for all the students of Computer Science.
- Questions were based on common computer knowledge which a computer science student should possess.
- First round was written quiz, and three teams qualified for the final stage.
- Final stage consisted of 4 rounds, which was based on recent trends, computer theories and some mind busters.

#### Type Master

- Type master consisted of 12 contestants.
- Fastest typist among the participant's wins.
- An essay of 500 words were given and the students have to type it in monkeytype.com
- Top 3 fastest typist won with an average of 50WPM.

#### **CODIGO**

- The contest is open to anyone with a knack for programming.
- You will be ranked as per the number of problems solved.
- Ties will be broken by the total time for each user in ascending order of time.
- The contest will consist of three rounds: Quiz, Debugging and Coding
- You can write the program in any language you wish (C, C++, Java, Python)
- You should not open any tab or application in middle of the contest or else you will be considered as foul and dismissed.
- Your answers will be checked for plagiarism.

#### Sell It

- Sell it was an interactive event.
- Students was given a platform to showcase their creative skills.
- Co-ordinators explained the rules and structure of the event.
- Participants were given a simple topic like: paper, pen, etc.
- Participants were given a 45 minutes to prepare a presentation for the topic showcasing their creative skills
- After 45 minutes, participants were given a platform to present their product and compel the judges to buy them.
- Judges asked questions about the product and awarded points for their creative skills, speaking and presentation.

#### Sherlock codes

- A treasure around the department, clues placed in classrooms, computers and labs.
- First round consisted of written test from which 4 teams were selected for the final round.
- Written test consisted of witty questions, some algorithms and recent trends.
- 10 different clues were placed in and around the campus for the student to find in the final round.
- First three teams to find all the clues won the event.













#### **Outcome:**

With this kind of IT fest the students were able to test their skills and learnt many new thigs from the various events. Our students participated in the event actively and made the event grand success. Our volunteers and teachers worked hard to make this event a success. Students could understand their level of knowledge and work hard towards achieving their goals. Students got a platform to showcase their skills in front of their classmates and got certificates which boosts their chances of finding a good career

## National Level Faculty Development Program on "Recent Trends-2022"



**DATE:** 21 /3/2022 TO 25/3/2022

**VENUE:** ONLINE

**RESOURCE PERSON: : DR. MENAKA C, ASSOCIATE** 

PROFESSOR, JAIN DEEMED TO BE

UNIVERSITY

MR SUDHIR CHANDRAPPA, SAP FINANCE CONSULTANT, WALMART DR. K. KANNAN, PROFESSOR SRI VIDYA NIKHETHAN ENGINEERING

COLLEGE, TIRUPATI, AP

DR T SRINIVAS RAO, COE AND PROFESSOR, INDIAN ACADEMY DEGREE COLLEGE, AUTONOMOUS,

BENGALURU.

**EVENT CORDINATOR:** HARIPRIYA G S, R SRIVIDYA

#### **Objective:**

- 1. Faculties will gain the knowledge about the various research scopes in Cloud Computing.
- 2. To consolidate the impact of AI and its applications in health care domain
- 3. To expose the Research scholars and faculty in emerging technologies in
- 4. the areas of Bigdata that enables effective participation in Big data projects.

Computer Science Department, MSRCASC has conducted a National Level Faculty Development Program titled "Recent Trends-2022" from 21/3/2022 to 25/3/2022 with various topics from 2.30PM-4.30PM.

Day 1 i.e on 21/3/2022 topic was on Research Scopes in Cloud Computing. The resource person for the day was Dr. Menaka C, Associate Professor, Jain deemed to be university. Intially we started the program by inaguration. Our beloved principal Dr A Nagarathna had spoken few words about the event. Then followed with HOD's words related with the event. After inaguration the session was handed over to the resource person. She conducted the session to share her knowledge with faculty about Research scopes in Cloud Computing. She started saying what is cloud computing, why cloud computing etc. The Cloud computing emerges as a new computing paradigm which aims to provide reliable, customized and QoS guaranteed dynamic computing environments for end-users. She has discussed with various cloud computing research topics like Big data, Cloud balancing, mobile computing, green cloud computing, edge computing etc. She also discussed about applications of Big Data. She also covered the various cloud computing platforms. She also advised the faculties to do research in Cloud Computing.

Day 2 i.e on 22/3/2022 topic was on SAP in Manufacturing/Retail Organizations. The resource person for the day was Mr Sudhir Chandrappa, SAP Finance Consultant, Walmart. In this session he covered SAP in manufacturing. He discussed about the development and deployment of SAP. He discussed about the various plannings like Non operative planning, Demand Management and supply plannings. He explained the various organizational goals like operational, strategic, Tactical with various examples. Decision making was discussed.

Day 3 i.e on 23/3/2022 topic was on Recent trends in Applications of AI-ML Algorithms. The resource person for the day was Dr. K. Kannan, Professor Sri Vidya Nikhethan Engineering College, Tirupati, AP. In the session he started with introduction to Machine learning. He explained the concept with video examples. Machine learning is a branch of <a href="artificial intelligence">artificial intelligence</a> (AI) and computer science which focuses on the use of data and algorithms to imitate the way that humans learn, gradually improving its accuracy. He told the diffence between machine and human. He covered the architecture of ML, Uses of ML model, AI-ML sustainable goals. He then moved on to core techniques of Machine Learning. He discussed with supervised learning, Unsupervised learning and reinforcement learning with a beautiful and colourful image examples. He explained clustering Vs Classification with a nice example. He even explained the algorithms like priori algorithm etc.

Day 4 i.e on 24/3/2022 topic was on Impact of AI in Healthcare Industry. The resource person for the day was Dr. K Chokkanathan, Associate Professor, MITS, Madenapalli, AP. First he started saying what is artificial intelligence and AI is adopted in healthcare.

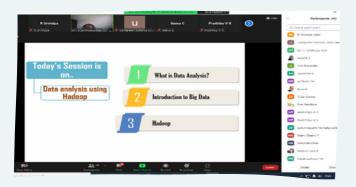
He told AI is the development of computer system that are capable of performing tasks that normaly require human intelligence such as decision making, object detection, solving complex problems and so on. He discussed with the various applications of AI and the latest AI applications in health care. He explained how Ai is used in Diagonistics, medical imaging, medical research, nutrition, wearables etc with a very good examples. He also came up with benefits of virtual assistance and benefits of AI for health care. He explained the challenges in health care AI market.

Day 5 i.e on 25/3/2022 topic was on data Analysis using Hadoop. The resource person for the day was Dr T Srinivas Rao, COE and Professor, Indian Academy Degree College, Autonomous, Bengaluru. He started the session with the concepts What is data analysis?, Introduction to big data, Hadoop. He told data analysis as the process of applying logical and analytical reasoning in the evaluation of data. He covered introduction to big data, Big data time line, Big data classification, Big Data characteristics, use cases by Indutry. Structured V/s Unstructured data was explained neatly with an example. Types of Big Data technologies is also covered in the session. Hadoop eco system was explained.

All the sessions were very interactive and the five days FDP ended with a valedictory fuction.















#### **Outcome:**

Train and educate the participants to interact with the techniques related to research in Cloud Computing. Importance of AI technologies related to Healthcare. Gain experience in doing independent study and research on real world big data problems.

## **Extension Activity Program in collaboration with NSS**



**DATE: 17/03/2022** 

**TIME**:10:30 AM

PLACE OF ACTIVITY: SINGANAYAKANAHALLI GOVT.

HIGHER PRIMARY SCHOOL

**COORDINATOR:** MRS. HARPRIYA,

**Objective:** The objective of the extension education is the overall development of the rural children. The Department of Computer science is extending its services in imparting technical skills in "Fundamentals of Computers and internet" to the government school students to improve their knowledge in the field of computers.

7 faculty members along with 13 student volunteers visited the school premises at 10:30am. As they were well informed of our visits, we were warmly received by the principal - Rajayya R and staff members of the school. The department faculties provided their services to the school children in 3 sessions.

The first session was by Mrs. Dhanashri Vaishali, and Mrs. Savitri Kulkarni, Asst. Prof, conducted yoga and meditation for the betterment of the school students. A few minutes of Yoga during the day can be a great way to get rid of stress that accumulates daily, in both, body and the mind. Meditation is relaxation and rejuvenates the body and mind. With this aim in mind, a special session was organized by MSRCASC for the school students. In the present day when students face stress, tension, fear, etc., yoga and meditation can help dispel these. Mrs. Vaishali motivated the students and conveyed the importance of making yoga an integral part of our daily life by extending the practice of yoga. The session concluded with an interactive session between the instructor and the students in which the queries of the students were addressed satisfactorily.



The second session was by Mrs. Srividya and Mrs. Suma, Asst. Prof, conducted awareness program on "fundamentals of computers and internet" to improve the knowledge of school students in the field of computers. Stationaries and refreshments were provided to the students of the school. In the modern world computers hold tremendous significance. The importance of computers cannot be denied in the corporate or business world.

To shape the dreams of under privileged children to whom Information and Communication Technology education is a luxury, Mrs. Srividya and Mrs. Suma, Faculty member of Department of Computer Science organized a "Computer Awareness Programme" for underprivileged children studying in Government School. The session has proven to be very inspiring and informative for the students.

The third session was by Mrs. Shilpa Nayak, Asst.Prof., conducted Zumba for entertaining the students and bust their stress out during exams. Zumba is one of the best known fitness class to improve balance, agility and strength of our body. The school students enjoyed one hour of Zumba fitness class which helped students in burning their calories and reduce the stress level of exams.

At the end of the day, Mr. Lakshmipathi, Asst.Prof, distributed the prizes for the outstanding students in all the three sessions.







#### Learning outcomes:

·Students from class 6 to class 8 i.e., 123 students were benefitted from the extension program.

- Students got the basic idea about computer and computer peripherals.
- The presentation incorporated with supportive images and the students were shown the real hardware components of computer. Students interacted with the faculty member and clarified their doubts.
- Students were motivated positively with yoga, meditation and Zumba fitness session.
- We also encourage them to practice yoga, meditation and Zumba for their physical and mental health.

## Virtual Master Workshop – Networking and Cloud Engineering



**DATE:** 05/02/2022 - 06/02/2022

TIME: 12:00 PM TO 04:00 PM

**RESOURCE PERSON: : MR. NAVEEN CHANDER, GLOBAL** 

AWARDEE" INNOVATIVE EDUCATOR"

**PARTICIPANTS: : III YEAR BCA STUDENTS** 

**COORDINATOR:** MRS.R SRIVIDYA,

#### **Objective:**

To prepare students with the technical knowledge and skills needed to protect and defend computer systems and networks.

- Networking Fundamentals
- IP Addressing and Subnetting
- Basic Routing and Switching
- Cloud Engineering Concept

This workshop was conducted by the department of computer science in collaboration with Cisco - 3Q Sutantra – Future Gateway for BCA and B.Sc students. This two-day workshop provided hands-on networking basics, taught by an experienced technical trainer. Students learned about cabling, network protocols (including a close-up look at TCP/IP), network devices like hubs, switches, routers, firewalls, repeaters, gateways, and more. Students will learn how to create a secure network and avoid common network security mistakes. This hands-on networking fundamentals training workshop had got students up to speed with practical tools and techniques that they can put to use right away to make their network run faster and more securely with fewer problems.

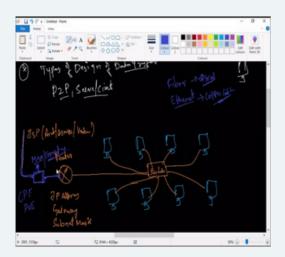
#### Highlighted topics of the workshop:

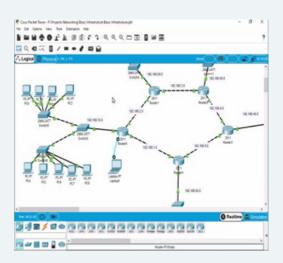
- ·Network devices and channels Eg TV, CCTV, smart watch etc.
- ·U S Cables: Under sea cables.
- ·I P address: Adress assigned to comuter on a perticular network.
- ·Network equipments required to develop a company:
- ·Subnet: logical subdivision of an ip network. It helps the network into 2 or more network.
- ·Cisco packet tracer; it's a visual simulation tool designed that allows users to create network topologies and imitate modern computer networks.

Basic commands such as;

- o Config.if
- o Enable command
- o Host name
- 8.MAC address: it's a unique identifier assigned to a network interface controller (INC)
- 9.Cloud

The sessions were really interactive and involved student's active participation. The students gave a positive feedback about the workshop and showed their interest in getting further exposure in Networking and Security.







#### **Outcome:**

- Introduction to the networking access devices like LAN card, wireless router, router, Switch, Bluetooth etc.
- Introduction to cat cable & Crippling, making cross cable & straight cable.
- Introduction to topology, layer structure, layer structure simulation by video.
- Making LAN & WAN Network.
- Telnet, Protocol, remote desktop services etc.
- CCNA Simulation & CISCO tracker 5.0

## **Webinar on Data Privacy and Security**



**DATE:** 28/01/2022

**TIME:** 10:30 AM

**RESOURCE PERSON: DR. ANITA A PATIL** 

ASSOCIATE PROFESSOR RAMAIAH COLLEGE OF LAW,

BENGALURU

**PARTICIPANTS: 102 BCA STUDENTS** 

**COORDINATOR:** MRS. SHILPA NAYAK

**Objective:** To understand the Cyber Laws in India in context of Data Privacy and Cyber Security as well as the upcoming new laws on Data Privacy.

The program was organized on the occasion of "INTERNATIONAL DATA PRIVACY DAY". The speaker for the program was Dr. Anita A Patil, Associate Professor, Ramaiah College of Law, Bengaluru. Program was very interactive with a PowerPoint presentation and everyone were excited in knowing something new. Teachers also participated in the program. We were made aware about the importance of data privacy day. We were made aware about the statistics on the cybercrimes occurring all over the world and the amount of people being affected by these crimes. The information on various actions taken on the illegal cyber activities were explained which helped us in improving our knowledge on cybercrimes.





The speaker informed us about how the technology developed from the year 2000 till date on the cybercrime activities and the enhancement in the digital world to control it. Various online applications such as Online money transactions, online ticket booking, online food delivery and many more are being used in the present world for easy accessibility and to save time. The importance Data privacy and security were explained to be kept in mind while using these applications. Advantages and Disadvantages of online virtues and privacy on data virtues were explained in detail with the help of the presentation. Real time examples were explained to have a clear view on the implementation of cyber laws. The session was very interactive and helpful. Each and everything was explained in detail and normal language that everyone can easily understand and follow.

## Career Guidance on Resume Building and Interview Tips



**DATE:** 14/12/2021

**TIME:** 12:00 PM TO 04:00 PM

**RESOURCE PERSON:** : MR MUTHANNA M U TAX ANALYST EY, EY AND UNISYS, BANGALORE

PARTICIPANTS: : 45 STUDENTS (3RD YEAR BCA)

#### **Objective:**

You never get a second chance to make a first impression. The impression you give a potential employer via your resume or an interview is usually your only opportunity to communicate that you're the right person for the job - so make it count.

It is often difficult to "sell" yourself and respond to "Tell me something about yourself." A great way to respond is by using transferable skills. Unlike job-related skills (e.g., used a cash register), these skills can be applied in every occupation. Below is a list of transferable skills. Check off 5-8 words that apply to your school activities, volunteer work, and/or current or previous jobs The session was represented by Mr Muthanna M U, Tax analyst EY, EY and Unisys, Bangalore.

COMMON INTERVIEW QUESTIONS: The following are sample questions that are typically asked of interviewees. Some questions are designed to get specific details while other questions are designed to get a feel for your personality and character. It is a great idea to decide how you would answer these questions beforehand.

Questions You Can Ask During the Interview: At the end of a job interview, the interviewer may ask, "Do you have any questions?" The interviewer will expect you to have intelligent, well-thought-out questions that indicate you have some knowledge of the job for which you are applying. Also, it reveals how well you listened to the interviewer. Do your research and ask appropriate questions? Here are some examples. Would you describe the duties I would be performing? What would be the time frame for filling this position? If hired, who will be my supervisor? How would I be trained or introduced to the job? With whom would I be working with

and what are their duties? How would my performance be evaluated? Who would evaluate me and when? Can someone in this position be promoted? If so, to what position? Of your most successful employees, what characteristics do they possess that helped them to be successful? What is the customer service philosophy of your company? What is the best part about working here?

#### INTERVIEWER CHECKLIST

- 1. Appearance overall grooming, dress, posture, and appropriateness
- 2. Sociability overall warmth and friendliness
- 3. Handshake firm and confident
- 4. Eye contact ability to look directly at you during interview
- 5. Composure overall confidence in responding to questions
- 6. Conversation ability to speak clearly, using proper language, grammar, and tone
- 7. Responses the questions were answered honestly, seriously, and completely, ability to "sell" him/herself with appropriate responses
- 8. Courtesy ability to show respect and interest
- 9. Job application neatly written and complete
- 10. Resume clear, concise, positive, typed, technically correct
- 11. Interviewer comments:





#### **Outcome:**

To secure a challenging position in a reputable organization to expand my learnings, knowledge, and skills.

## Workshop on Applications of Neural Networks in Image Processing and Visualization



**DATE**: 14/07/2021

**EVENT COORDINATOR: SUMA C.** 

**DHANASHRI VAISHALI** 

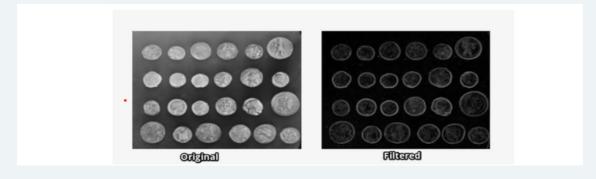
**NO OF STUDENTS PARTICIPATED: 83** 

**Objective:** To introduce the concept of image processing and basic analytical methods to be used in image processing

A national level virtual workshop on 14th July 2020 was organized by the Department of Computer Science. The Resource person was Dr V Jayashree, Rtd, HOD Electrical and Professor Electronics (PG) Textile and Engineering Institute.

The workshop was on "Applications of Neural Networks in image Processing and Visualization".

Resource person gave introduction to image processing in the beginning of the workshop she defined Image processing is a way to convert an image to a digital aspect and perform certain functions on it, in order to get an enhanced image or extract other useful information from it. It is a type of signal time when the input is an image, such as a video frame or image and output can be an image or features associated with that image. the Image Processing system includes treating images as two equal symbols while using the set methods used.



It is one of the fastest growing technologies today, with its use in various business sectors.

Image processing basically involves the following three steps.

Importing an image with an optical scanner or digital photography.

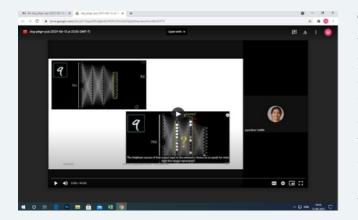
Analysis and image management including data compression and image enhancement and visual detection patterns such as satellite imagery.

It produces the final stage where the result can be changed to an image or report based on image analysis. Image processing is a way by which an individual can enhance the quality of an image or gather alerting insights from an image and feed it to an algorithm to predict the later things.

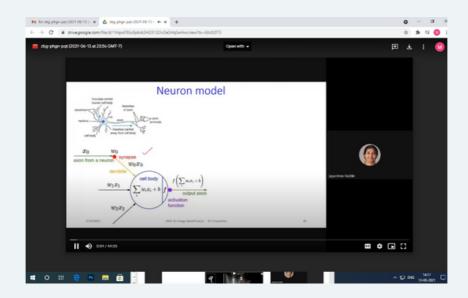
The resource person told about the types of neural networks

- Artificial Neural Networks (ANN)
- Convolution Neural Networks (CNN)
- Recurrent Neural Networks (RNN)

She also gave an insight on neural networks where it is based on models of the human brain and are composed of a large number of simple processing elements that operate in parallel. In the human brain, more than a billion elements or cells, called neurons, are individually connected to tens of thousands of other neurons. Although each cell operates like a simple processor, the massive interaction among them makes vision, memory, and thought processes possible.



To obtain a background marker, the binary image from the threshold operation was inverted, and the distance from every pixel in the background to the nearest pixel inside a seed was computed. These maximum distances form a meshwork of ridges between the seeds that define a region of influence for each seed. By isolating this meshwork using an auxiliary watershed operation followed by a threshold, a binary image of the background marker was computed. The seed marker and the background marker binary images were then added together and a frame was added around the image



**Outcome:** Understand the need for image transform and to develop any image processing applications.

## **Data Visualization using Python Workshop**



understand, observe, analyze.

**DATE::** 24/7/2021

**TIME:** 10:30 AM

RESOURCE PERSON: DR. VAKULA RANI J, PROFESSOR AND I&E HEAD, DEPARTMENT OF MCA, CMR INSTITUTE OF

TECHNOLOGY, BENGALURU.

**PARTICIPANTS:** 61

**COORDINATOR:** SUMA C, R SRIVIDYA

**Objective:** To learn how to take data at first glance has little meaning and present that data in a form that makes sense to people.

It is a fun, interactive, hands-on workshop that will make Students fluent in data visualization techniques, using Python. Data visualization is a vital skill for a data scientist, and in this workshop, the resource person gave idea of some of the most important plots encountered in the field. The students will learn a systematic and structured approach to construct elegant, publication-quality data visualizations that tell the stories behind the data. They will learn the importance of data visualization The grammar of graphics: a structured, systematic approach to building complex data visualization Understand the anatomy of plots, Graph and network visualizations, Effective plots: know what can be left out of plots, focusing on what's important to your visualization

Dr. Vakula Rani told that a lot of data is being generated on a daily basis. She discussed about data science process including data collection, data cleaning, data analysis, data modelling & data visualization. She also focused on applications of data science industry. Discussed potential of data science for future applications with ever increasing data. To analyze this data for certain trends, patterns may become difficult if the data is in its raw format. To overcome this data visualization comes into play. Data visualization provides a good, organized pictorial representation of the data which makes it easier to

In the introductory session of Python, Dr. Vakula Rani introduced core fundamentals of Python required to understand the various Python libraries. She discussed advantages of using Python over other programming languages. Participants practiced Python programming syntax and learned how to create and manipulate Python lists, tuples, dictionaries, arrays and functions in Python. She introduced Numpy Python library which is used to build arrays and to perform interesting calculations on arrays. Specifically, she introduced several arithmetic operations such as sum (), sort () etc. and several functions such as zeros (), ones (), revel (), flatten (), etc. She also discussed benefits of using Numpy library over list and arrays supported by core Python. She demonstrated some examples using Numpy and the participants practiced those examples concurrently.

The resource person educated participants about Pandas Python library. She discussed data frame to load dataset, series objects and panel objects. She also explained the importance of visualization of huge amount of data. Students learned how to create and customize plots on real data using Matplotlib Python library. Specifically, they learned how to generate plots, histograms, power spectra, bar charts, error charts, scatterplots, etc., with just a few lines of code

#### **Outcome:**

Properly document and organize data and visualizations in order to prepare them for reuse. Understand the landscape of Python data visualization libraries. Create static and interactive charts using specialized Python libraries.

## National Faculty Development Program on "Recent Trends"



**DATE:** 8/6/2021 TO 12/6/2021

TIME: 12:00 PM TO 04:00 PM

**RESOURCE PERSON:**: DR. B G PRASANTHI, ASSOCIATE,

PROFESSOR, ST JOSEPH COLLEGE. DR. ALLI A. HOD. DCA. PRESIDENCY

COLLEGE

DR. JAYASHREE VADDIN, RETD.

PROFESSOR AND HOD,

ELECTRICAL ENGINEERING AT TEXTILE AND ENGINEERING

INSTITUTE.

**EVENT CORDINATOR:** HARIPRIYA G S, R SRIVIDYA

#### **Objective:**

- 1. To identify and analyze relevant papers & write a research paper with appropriate references.
- 2. How to protect information and information infra structure in cyberspace, build capabilities to prevent and respond to cyber Threats.
- 3. To introduce the concepts of image processing and basic analytical methods to be used in image processing

Computer Science Department, MSRCASC has conducted a National Faculty Development Program titled "Recent Trends" from 8/6/2021 to 12/6/2021 with various topics from 3.00PM-4.00PM.

Day 1 i.e on 8/6/2021 topic was on "Network and Cyber Security". The resource person for the day was Dr B G Prasanthi, Associate Professor, St Joseph College . After inaguration the session was handed over to the resource person. She conducted the session to share her knowledge with faculty about network and cyber security. Everyone knows that security is essential in the Digital Age. Regular news reports about high-profile cyberattacks and data breaches leave no doubt that strong security is a must.network security became essential to protect the electronic network infrastructure of these vital systems. The advent of the internet changed everything, adding once-unimagined technological capabilities but also creating new vulnerabilities; and giving rise to a critical new industry — cybersecurity. Cybersecurity is "the practice of protecting systems, networks and programs from digital attacks". Network security is "the process of taking physical and software preventative measures to protect the underlying networking infrastructure from unauthorized access, misuse, malfunction, modification, destruction, or improper disclosure, thereby creating a secure platform for computers, users and programs to perform their permitted critical functions within a secure environment." She explained network security cloud based solutions. She also explained about encryption and decryption concepts with examples.

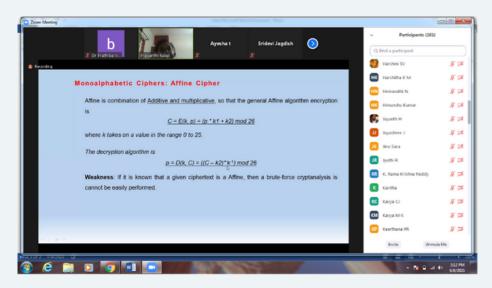
Day2 i.e on 9/6/2021 topic was on "Technical Writing session 1". The resource person for the day was Dr. Alli A, HOD, DCA, Presidency College. In this session she told the meaning of technical writing and how to write a technical report and what are the rules to be followed in writing the technical paper and importance of writing a technical report. A technical report is a formal report designed to convey technical information in a clear and easily accessible format. A technical report is a sole medium through which the audience and readers of your project can understand the entire process of your research or experimentation. A technical report is considered as a product that comes with your research, like a guide for it.

Day3 i.e on 10/6/2021 topic was on "Technical Writing session 2". The resource person for the day was Dr. Alli A, HOD, DCA, Presidency College . In this session she explained about each and every section contained in the research paper and about the order of the sections. She told how the abstract to be written, how many lines should be there in the abstract, how to select the keywords, what should be there in the introduction and conclusion. She also explained how to include the references and how the complete paper should be.

Day4 i.e on 11/6/2021 topic was on "Concepts of Computer Vision". The resource person for the day was Dr. Jayashree Vaddin, Retd. Professor and HOD, Electrical Engineering at Textile and Engineering Institute. In this session Madam explained the meaning of Computer vision its concepts with various examples and how it can be used in various sectors and its applications. She explained Deep Learning based computer vision algorithms. computer vision is one of the hottest subfields of artificial intelligence and machine learning, given its wide variety of applications and tremendous potential.

Day5 i.e on 12/6/2021 topic was on "Artificial Neural Networks in Image Recognition". The resource person for the day was Dr. Jayashree Vaddin, Retd. Professor and HOD, Electrical Engineering at Textile and Engineering Institute. In this session she explained how to recognise images using artificial nueral networks with various examples. Image recognition is the task of identifying images and categorizing them in one of several predefined distinct classes. So, image recognition software and apps can define what's depicted in a picture and distinguish one object from another. Neural networks are computing systems designed to recognize patterns. They consist of three types of layers: input, hidden layers, and output. The input layer receives a signal, the hidden layer processes it, and the output layer makes a decision or a forecast about the input data. Each network layer consists of interconnected nodes that do the computation. All the sessions were interactive.5 Day FDP session was ended with valedictory function









#### **Outcome:**

To identify and write different types of research papers. Analyze and resolve security issues in networks and computer systems to secure an IT infrastructure. Understand the need for image transforms and to develop any image processing application.

# Digital Forensics Awareness and Cyber Security with Machine Learning



**DATE:** 01/12/2021

**TIME:** 10:30 AM

**RESOURCE PERSON:** MRS. GEETANJALI R

SENIOR TEACHING ASSISTANT, DEPARTMENT OF MCA.

RAMAIAH INSTITUTE OF TECHNOLOGY

**PARTICIPANTS: 2ND AND 3RD YEAR BCA STUDENTS** 

**COORDINATOR:** MRS SHILPA NAYAK

**Objective:** To prepare students with the technical knowledge and skills needed to protect and defend computer systems and networks. All can be used to spot cyber threats and possibly malicious activities.

In the 1st session, Mrs. Geetanjali R, gave an amazing presentation giving us the information regarding the basic knowledge of cyber security, technical skills needed to protect and defend computer systems, also the different laws involved in cyber security. She gave in depth knowledge of different types of cybercrimes such as access without permission, data theft, damaging computers, denial of access, access to unauthorized person, identity theft, cyber staking, cyber terrorism and how to secure oneself and take precautions against such crimes which are at their peak these days. Further she emphasized to follow safety rules while browsing or during internet transactions. Few to mention - keeping personal information professional and limited, the type of contents to be downloaded or uploaded, using secure sites for online transaction, updating the antivirus at regular periods. She discussed some real time examples on Cyber Security applications related to social media impacts.

The next session was on the topic digital forensics, imparted the knowledge to students about the importance of digital forensics. Digital forensics requires a large amount of data to be analyzed and extracted from the crime scene and an investigated to provide possible digital evidence as proof in the court of law. She also gave an idea on how machine learning is considered as an approach in the field of digital forensics. Various machine learning algorithms and techniques were discussed to understand the process of extracting and analyzing digital evidence taking real time situations as examples.

The sessions were really interactive and involved student's active participation. The students gave a positive feedback about the seminar and showed their interest in getting further exposure in Cyber Security and digital forensics in Machine Learning.





#### **Outcome:**

- The seminar created awareness among the students regarding the different frauds, threats, vulnerabilities possible in the world of internet and how to secure oneself against such threats.
- Students were able to know the importance of Cyber Security when handling their digital assets.
- They were able to understand the role of Machine Learning in IT career.



# THANK YOU