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Tech Glimpse

CSE Department Magazine
Volume 7, 2021

Vision of the Institute

Development of academically excellent, culturally vibrant, socially responsible and globally competent human resources.

Mission of the Institute

1. To keep pace with advancements in knowledge and make the students competitive and capable at the global level.

2. To create an environment for the students to acquire the right physical, intellectual, emotional and moral foundations and shine as torchbearers of tomorrow's society.

3. To strive to attain ever-higher benchmarks of educational excellence.

Vision of the Department

To develop highly talented individuals in Computer Science and Engineering to deal with real world challenges in industry, education, research and society.

Mission of the Department

1. To inculcate professional behavior, Strong ethical values, innovative research capabilities and leadership abilities in the young minds & to provide a teaching environment that emphasizes depth, originality and critical thinking.

2. Motivate students to put their thoughts and ideas adoptable by industry or to pursue higher studies leading to research.

Program Educational Objctives (PEO's)

1. Empower students with a strong basis in the mathematical, scientific and engineering fundamentals to solve computational problems and to prepare them for employment, higher learning and R&D.

2. Gain technical knowledge, skills and awareness of current technologies of computer science engineering and to develop an ability to design and provide novel engineering solutions for software/hardware problems through entrepreneurial skills.

3. Exposure to emerging technologies and work in teams on interdisciplinary projects with effective communication skills and leadership qualities.

4. Ability to function ethically and responsibly in a rapidly changing environment by applying innovative ideas in the latest technology, to become effective professionals in Computer Science to bear a life-long career in related areas.

Program Specific Outcome (PSO's)

1. Ability to apply skills in the field of algorithms, database design, web design, cloud computing and data analytics.

2. Apply knowledge in the field of computer networks for building network and internet based applications.

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Editorial Desk

Editorial Committee

Chairman
Dr L Basavaraj, Principal

Chief Editor
Dr Putte Gowda D, HOD, CS

Student Coordinators
Darshini R
Nandakishor B M

Dear Readers,

We are delighted to bring out our department magazine "Tech Glimpse". This magazine will showcase the activities and credentials of CS & E department staff and students.

I wish to express my gratitude for the invaluable encouragement and support by our beloved Principal and staff.

Your valuable comments and suggestions are appreciated. We wish all the readers an enjoyable reading.

Dr Putte Gowda D
Chief Editor

Department of Computer Science and Engineering

The Department of Computer Science & Engineering started in the year 2010. It is a evolving academic centre for higher education, research and novel in the key areas of Computer Science. It has been imparting quality education to meet the technological advancements and industrial requirements. The strength of students are progressively increasing every year and this is possible due to qualified and experienced faculties with excellent academic delivery process imparted. The first initiative taken by the department is "Computer Society of India - Student Branch", which is a professional body at National Level, in the year 2012, all the students have got enrolled as a members to this branch. The department has obtained CSI institutional membership and maximum teaching faculties have become CSI life members and platform is provided for the students to enhance their technical skills by participating in various events conducted under this professional body.

MOU has signed between Geekslab Techologies Pvt.Ltd., Department has Centre of Excellence in networking -CISCO, by providing CCNA Certification to students in networking and all final and pre final year semester students have done internship under this programme. The Department has got library, which believes in sharing of knowledge in the form of books, the most novel way of building the young mind by technical and ethical knowledge for students. Department also conducts various workshops, technical talks, and CSI events to students to up skill their skills. Technical training and Aptitude training is delivered to students to improve in their placement activities. Students have published various papers on project and have been awarded the best paper presentation. Students actively involved in hackathons, sports, cultural and many intercollege events and have bagged prizes.

Webinar on Latest Technologies

Department of Computer Science & Engineering had organized Three days webinar on "Latest Technologies" from 9th July to 11th July 2020 virtually for faculties and students.

Around 390 participants were registered for the event. Through telegram link all the event activities, PPTs and feedback link were shared. E mail confirmation was also made for all the participants. The registration for the webinar was free. Many students and faculties have effectively participated. Live YouTube link was provided for the participants to attend and free certificates were issued to active 130 participants.

Eminent speakers from various institutions were invited as resource persons. Dr. Puttegowda D, HOD, CSE, Thanked all the speakers for delivering their topics excellently and also the management and Principal Dr Basavaraj L for their kind support in organizing the event.

Mr. Anil Kumar BH and Ms. Kavyashree E D coordinated the events and event was hosted by Ms. Keerthana M M on all the three days.
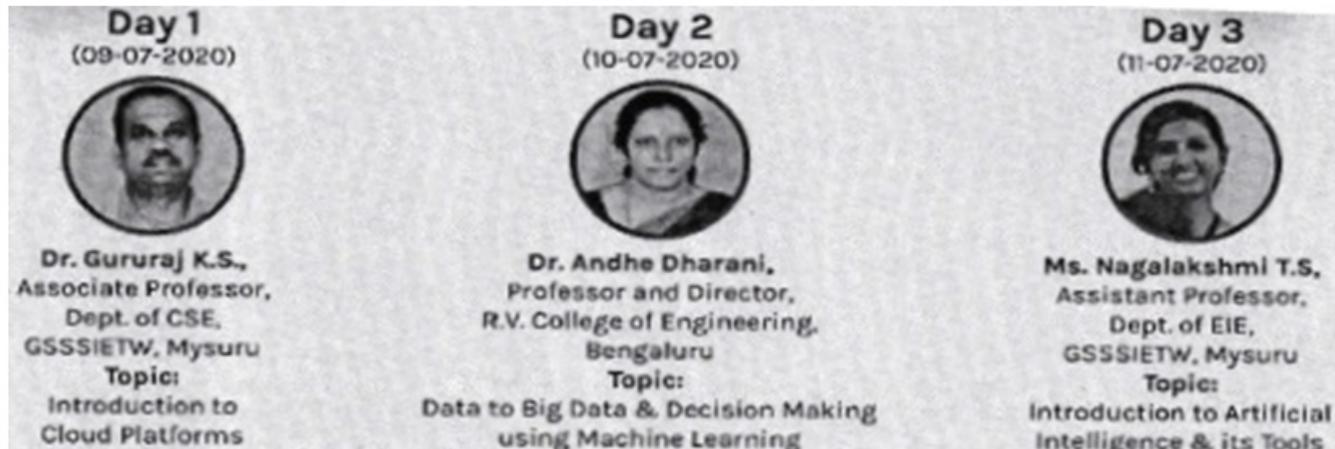
Day 1:

Resource person: Dr. Gururaj K S, Associate Professor, Dept. of CSE, GSSSIETW, Mysuru
Topic De1ivered: An Introduction to Cloud Computing Platforms.

Introduction

Before the Era of Internet
- If you wanted to sell things to the public, you needed a storefront
- Increased cost in real estate, Maintenance and Shrinkage
- Prohibitive cost to entry
- You could have hundreds of millions of storefronts worldwide
  - Without real estate
  - Without fixtures
  - Without maintenance
  - Without shrinkage
  - With [relatively] zero cost to entry

Dr. Gururaj K S, Gave an brief overview on cloud introduction, cloud characteristics, cloud computing reference model, cloud deployment models, cloud computing services, Amazon Web Services (AWS) and Google cloud: Compute Engine Features, Data Processing, Virtual Machine Images, Storage Features and Issues with the internet, cloud. AWS platform working was shown practically with sample examples.

Day 2
Resource person: Dr. Andhe Dharani, Professor and Director, R.V. College of Engineering, Bengaluru.
Topic Delivered: Data to Big Data and Decision Making using Machine Learning.
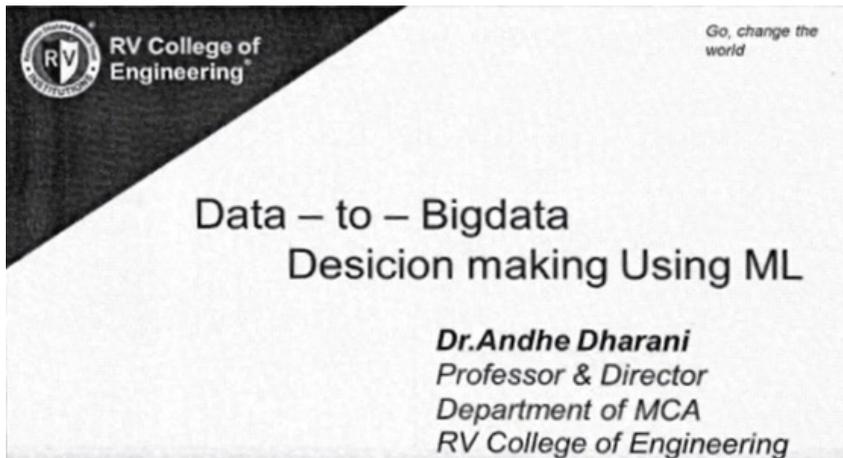

Dr. Andhe Dharani, gave detail explanation on data and Its types, meta data and database, sensor data, data model, and decision making. Also explained comparison on artificial intelligence, machine learning, deep learning. Difference between traditional programming and machine learning, How do machines learn. Types of machine learning and their comparison, also gave a brief overview on sample data sets working in kaggle. How to select a model & training the model, tools used in handling the data, and Python libraries was summarized. There was also execution of sample programs on spyder tool.
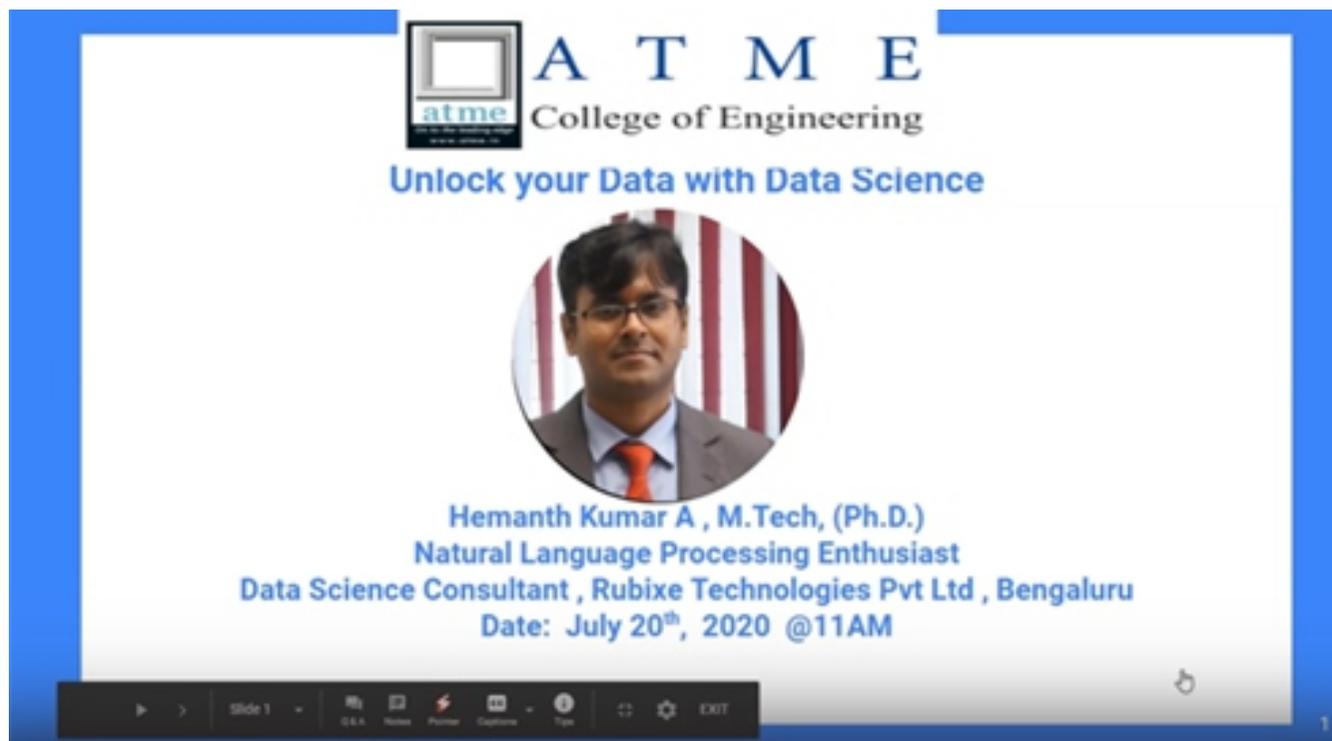
Day 3
Resource person: Ms. Nagalashmi T.S, Assistant Professor, Dept. of CSE, GSSSIETW, Mysuru.
Topic Delivered: An Introduction to Artificial Intelligence and its Tools

Ms. Nagalakshmi T S, gave a brief overview on introduction to Artificial Intelligence, It's need and challenges, Artificial intelligence type classification, Applications of AI & its requirements, AI Tools such as Matlab, Keras, Microsoft Azure, Tensor flow, scikit learn, caffe, PyTorch, Open NN, Apache mahout, Theano etc. and Dataset repository was explained in brief, Anaconda installation was shown along with its packages. In spyder tool sample program was explained.
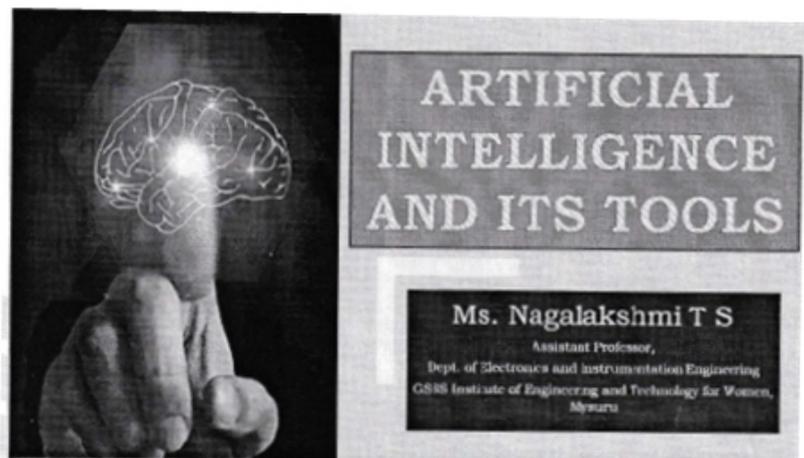
Report on Webinar CSI

Department of Computer Science and Engineering of ATME College of Engineering, Mysuru organized a Webinar on **"Unlock Your data with Data"** on 20th July 2020 from 11:00 A.M to 1:00 P.M under CSI Student Branch .Hemanth Kumar A, Data Science Consultant, Rubixe Technologies Pvt Ltd, Bangalore was the resource person. It was coordinated by Sneha N P   Assistant Professor, Anil Kumar C J Associate Professor and Vibha U Assistant Professor. More than 200 members participated in the webinar.
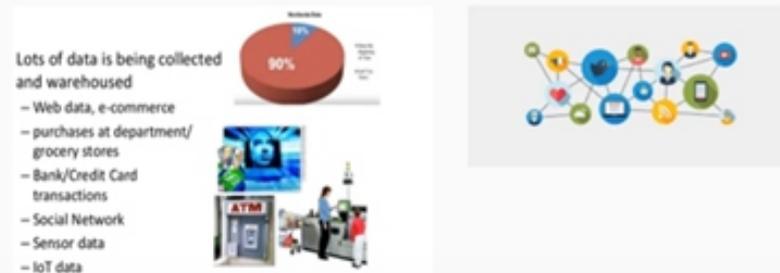
Technical Talk on Natural Language Processing

Department of Computer Science & Engineering had organized a Technical Talk on "Natural Language Processing" on 30th Sep 2020 virtually for faculties and students.

Around 190 participants were registered for the event. Through telegram link all the event activities and feedback link were shared. Registration for the Technical Talk was free. Many students and faculties have effectively participated. Live YouTube link was provided for the participants to attend and free certificates were issued to active 189 participants.

Eminent speakers from various institutions were invited as resource persons. Dr. Puttegowda D, HOD, CSE, Thanked all the speakers for delivering their topics excellently and also the management and Principal Dr Basavaraj L for their kind support in organizing the event.

Mrs. Impana Appaji and Mrs. Sneha N P coordinated the events and event was hosted by Mrs. Impana Appaji., Assistant professor, Dept., of CSE.

RESOURCE PERSON

Mr. Amom Nandaraj Meetei

Resource person at Linguistic Data Consortium for Indian Languages (LDC-IL) at Central Institute of Indian Languages (CIIL), Mysore.

Dr. Prathibha R J

Assistant Professor in the Department of Information Science and Engineering, JSS Science and Technology University (formerly SJEC), Mysuru.

Resource person: Dr. Prathibha R J - Assistant Professor, Dept., of ISE SJCE, Mysuru
Topic De1ivered: Parts of Speech (PoS)
Tagger: A Primitive Module in Natural Language Processing (NLP) Applications

Dr. Prathibha R J, Gave an brief overview on natural language processing followed by development of some primitive modules that are prerequisite for the design of Parts of Speech (PoS) tagger for English language. Chosen English as the natural language for which parts of speech tagger is developed, linguistic background of English language was also explained with examples. The steps that are involved in developing PoS tagger for English are illustrated with examples. The steps are text normalizer where normalization of input raw text is done and morphological stemmer and analyzer which will provide the morphological and grammatical features of each input word in the document, later PoS tagger which is implemented using rule based or morpheme based and stochastic based approaches were explained with examples. For each module, result analysis also discussed with statistics and performance metrics. At the end, applications of PoS tagger and also natural language processing were discussed.

TECHNICAL TALK

ON

Parts of Speech (PoS) Tagger : A Primitive Module in Natural Language Processing (NLP) Applications

Dr. R J Prathibha
Assistant Professor
Department of Information Science and Engineering
JSSSTU-SJCE, Mysuru.
rjprathibha@sjce.ac.in

Linguistic Background of English Language

- Declinable Words: Declinable words are generated by adding a set of suffixes to root-word.

  1. Inflectional Words
  2. Derivational Words

1. Inflectional Words:

- Inflectional words are generated by adding inflectional suffixes to root-word.
- All inflected words belong to same lexical category.

Example: Study, Studying, Studied, Studies etc., belong to verb category.

2. Derivational Words

- Generated by adding derivational suffixes to root-word.
- The lexical category of derived word changes from the original lexical category of root-word.
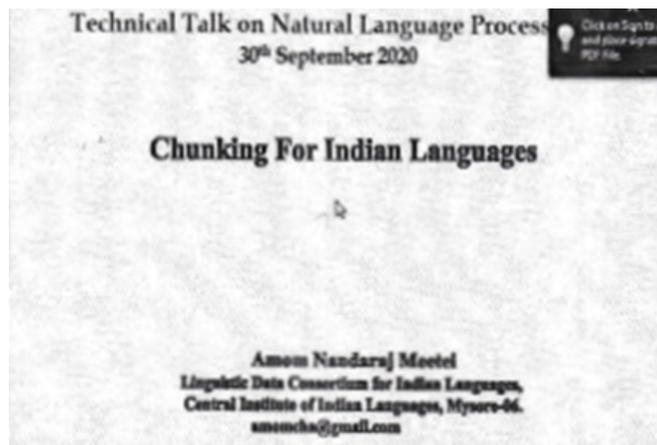
Examples:
  - Noun to adjective: success (N) + ful => successful (ADJ)
  - Adjective to noun: happy (ADJ) + ness => happiness (N)
  - Adjective to verb: commercial (ADV) + ize => commercialize (V)
  - Verb to noun: speak (N) + er => speaker (N)

Resource person: Mr. Amom Nandaraj Meetei- Resource person at (LDC-IL) at CHL, Mysuru.
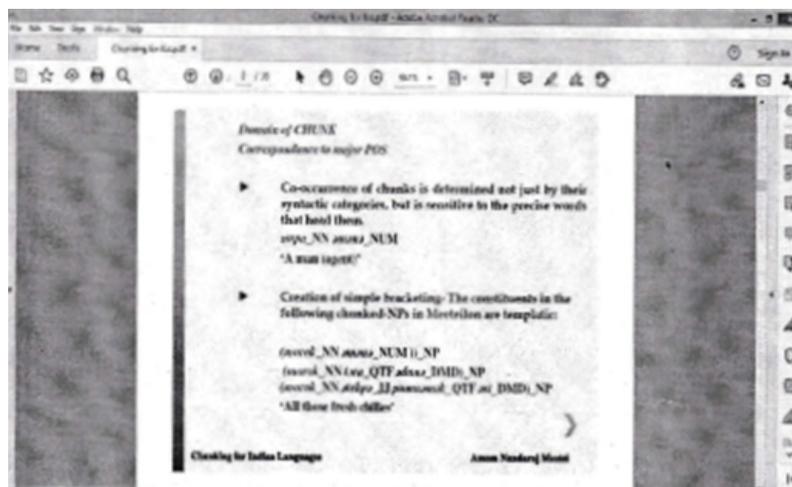**Topic Delivered:** "Chunking for Indian Languages"

Mr. Amom Nandaraj Meetei, Gave an brief overview on the topic entitled "Chunking for Indian Languages". He started his lecture primarily placing a focus on the definition of chunking and its implied perspectives in NLP. The process of annotating tagged tokens with structures in a non-hierarchical and non-recursive way is Chunking. Logically, there must have only one READ surrounded by modifiers within a chunk. Identifying the head in chunk is a challenging task. There may be adjectives in series in a noun chunk and based on the logical slogan of 'one head per chunk', one has to decide the chunk in question. Linguistically, there are recursive nested phrases where a number of head words can appear one after one. Based on the strategy that nested non-recursive clusters should be identified with their heads, for example, in a possessive construction, there are two nouns, one as a possessor and the other as a possessum, so in this construction, Amom emphasized, each noun has to be chunked separately. The same logic applies to other constructions such Spatio-temporal noun (NST) constructions where the ground NP is followed by an axial part (NST) in most of Indian languages. In this construction, too, NSTs are to be considered to be independent chunks. There are finite and non-finite verbal chunks. Amom gives a linguistic clue that non-finites verbs don't have overt subject of its own and they have unique forms determined by various markers responsible for identifying different non-finite verbs such as gerund, infinitive and participles. Amom concludes his lecture by spelling out the fact that the ultimate goal of research on Natural Language Processing (NLP) is to parse and understand language. For this reason, much research in NLP has focused on intermediate tasks that make sense of some of the structure inherent in language without requiring complete tagging understanding. One such task is chunking or partial parsing.

Technical Talk on "Pervasive Computing"

Department of Computer Science & Engineering had organized a Technical Talk on "Pervasive Computing" on 19th NOV 2020 virtually for faculties and students as a part of decennial celebration.

Around 157 participants were registered for the event. Through telegram link all the event activities and feedback link were shared. Registration for the Technical Talk was free. Many students and faculties have effectively participated. Live YouTube link was provided for the participants to attend and free certificates were issued to active 157 participants.

Eminent speakers from various institutions were invited as resource persons. Dr. Puttegowda D, HOD, CSE, Thanked all the speakers for delivering their topics excellently and also the management and Principal Dr Basavaraj L for their kind support in organizing the event.

Mrs. Impana Appaji and Mrs. Sunitha Patel M S coordinated the events and event was hosted by Mrs. Impana Appaji., Assistant professor, Dept., of CSE.

Resource persons and topic delivered are listed below.

Resource Person : Dr. Srinath S, Associate Professor, Dept., of CSE, SJCE, Mysuru.
Topic Delivered : Pervasive Computing.

Dr. Srinath S, Gave an brief overview on Pervasive computing, also called ubiquitous computing, He also spoke regarding the growing trend of embedding computational capability into everyday objects to make them effectively communicate and perform useful tasks in a way that minimizes the end user's need to interact with computers as computers. He showed how the Pervasive computing devices are network-connected and constantly available. Unlike desktop computing, pervasive computing can occur with any device, at any time, in any place and in any data format across any network and can hand tasks from one computer to another.
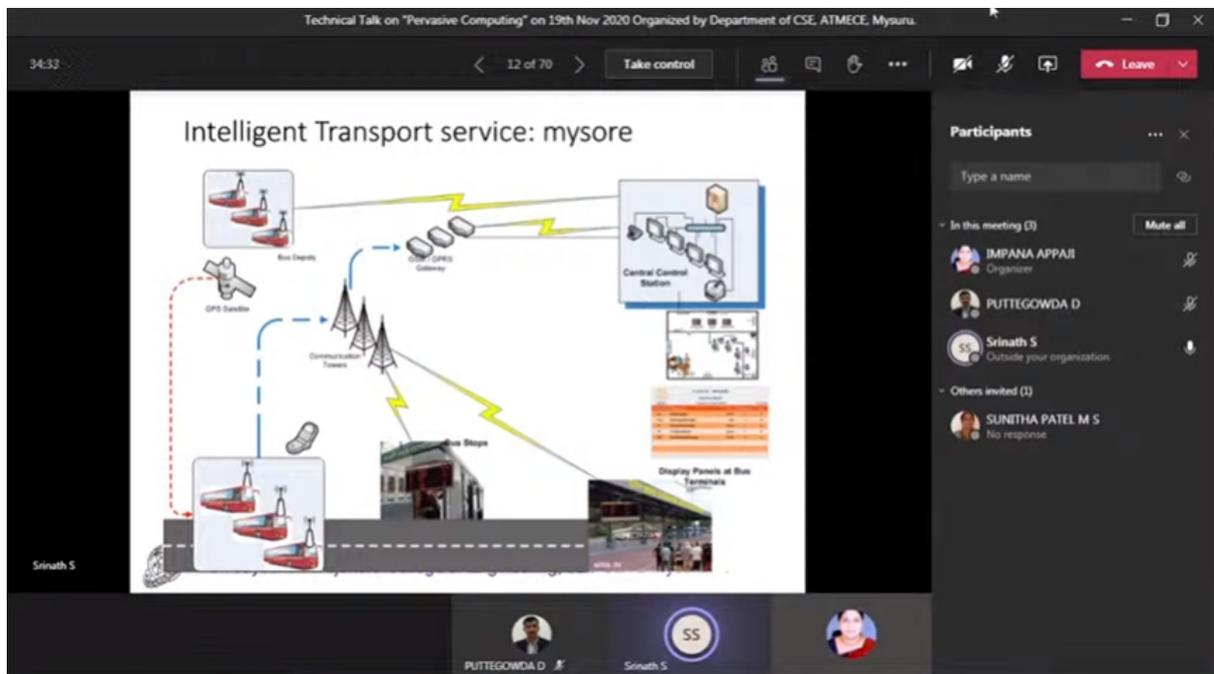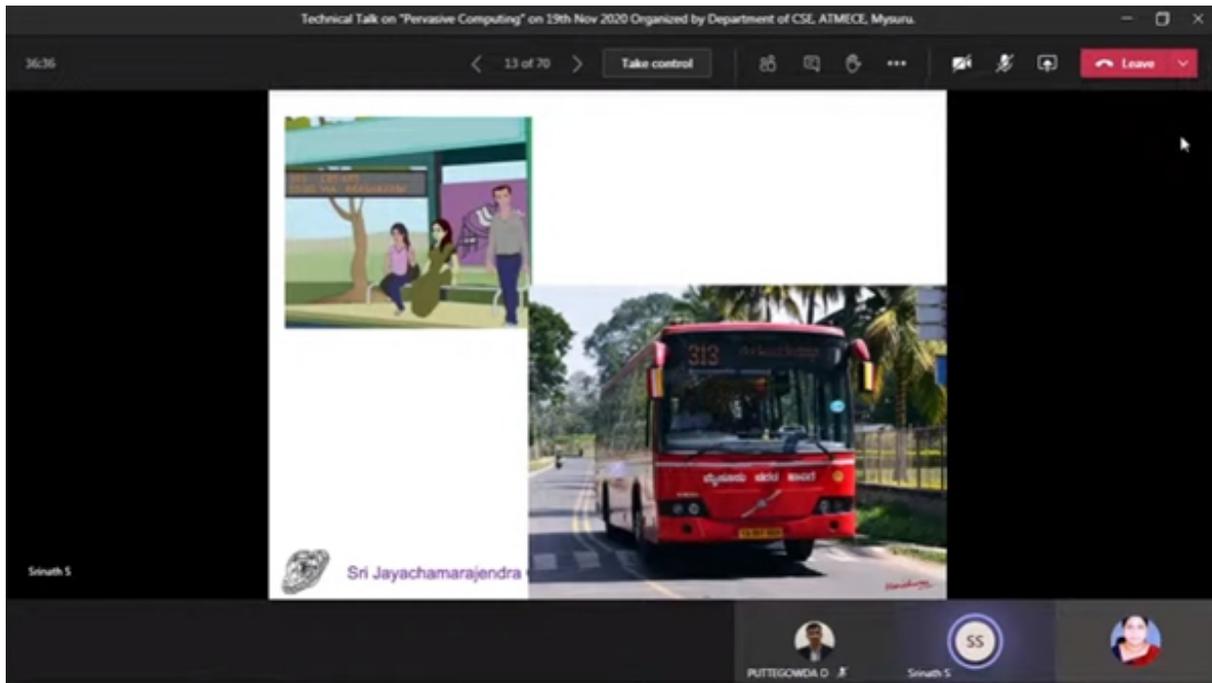
Webinar on Industrial Application of NLP : A Case Study of Text Classification

Department of Computer Science & Engineering had organized a webinar on "Industrial Application of NLP: A Case Study of Text Classification" on 28th November 2020 virtually as a part of decennial celebration for faculties and students.

Around 109 participants were registered for the event. Through whatsApp link all the event activities, PPTs and feedback link were shared. The registration for the webinar was free. Many students and faculties have effectively participated. Live YouTube link was provided for the participants to attend and free certificates were issued to active 50 participants.

Eminent speakers Dr Bharath Bhushan from Pune was invited as a resource person. Mrs.Kavyashree E D and Ms. Lavanya N coordinated the event and event was hosted by Dr J V Gorabal,Professor ,CSE.

NLP is a branch of Artificial intelligence and Machine learning. Text classification is done using rule based approaches which uses machine learning and deep learning techniques. Initially Text mining or classification transfers the unstructured data into structured data and analyse the data to extract the required information. The resource person took example of Alexa and explained how google assistant works using human speech which also deals with NLP.

Webinar on Artificial Intelligence and Machine Learning

One day webinar on Artificial Intelligence and Machine Learning via Online on 14th Dec 2020 at ATMECE, Mysuru. It was conducted in the Department of Computer Science and Engineering at ATME College of Engineering, Mysuru.

A Webinar was conducted for final year students on 14th Dec 2020 year students regarding Artificial intelligence and Machine Learning By Verma, Geeks Lab. In Webinar resource person focused on how AI & ML will revolutionize the world in future. It was very informatic and educating experience. The following topics presented in webinar.

- Why Al and ML
- Basics of AI and ML
- Importance of Moths in Al and ML
- AI ML Applications
- Job opportunities in the field of AI & ML

Workshop on "Database Application Development"

Date : 23/12/2020 and 24/12/2020

Resource Person : Anil Kumar B.H, Rashmi K

Venue : Department of Computer Science & Engineering, ATMECE.

Event Description: Conducted two day's workshop on "Database Application Development" in CS Dept. This workshop is targeted to pre final year students for implementation of mini project using database. This workshop is concentrated on different front end design tool like PHP, JAVA and JSP with MySQL database.

Day 1: Explained JDBC process. Java Database Connectivity (JDBC) is an application programming interface (API) for the programming language Java, which defines how a client may access a database. It is a Java-based data access technology used for Java database connectivity and also it is a part of the Java Standard Edition platform, from Oracle Corporation.

Created page using JSP. Java Server Pages (JSP) is a Java standard technology that enables you to write dynamic, data-driven pages for your Java web applications. JSP is built on top of the Java Servlet specification. The two technologies typically work together, especially in older Java web applications. MySQL has stand-alone clients that allow users to interact directly with a MySQL database using SQL, but more often MySQL is used with other programs to implement applications that need relational database capability. Developed simple application using Java Server Page as front end and MySQL as backend. Implemented operation like insert new record to application, updating of record and delete record from table. And also applied triggers and stored procedure for application.

Day 2: The Day two session started with PHP scripting language .PHP is a server side scripting language that is embedded in HTML. It is used to manage dynamic content, databases, session tracking, even build entire e-commerce sites and focused on PHP syntax and semantics are the format and the related meanings of the text and symbols in the PHP programming language. They form a set of rules that define how a PHP program can be written and interpreted. The PHP syntax and semantics are the format and the related meanings of the text and symbols in the PHP programming language. They form a set of rules that define how a PHP program can be written and interpreted and also focused on Apache server, Apache HTTP Server, colloquially called Apache, is a free and open-source cross-platform web server software, released under the terms of Apache License 2.0. Apache is developed and maintained by an open community of developers under the auspices of the Apache Software Foundation.

Participated 80+ students in online workshop through MS Teams platform.

Fit Photos of inauguration as well as student participation:

Photo of workshop while designing app
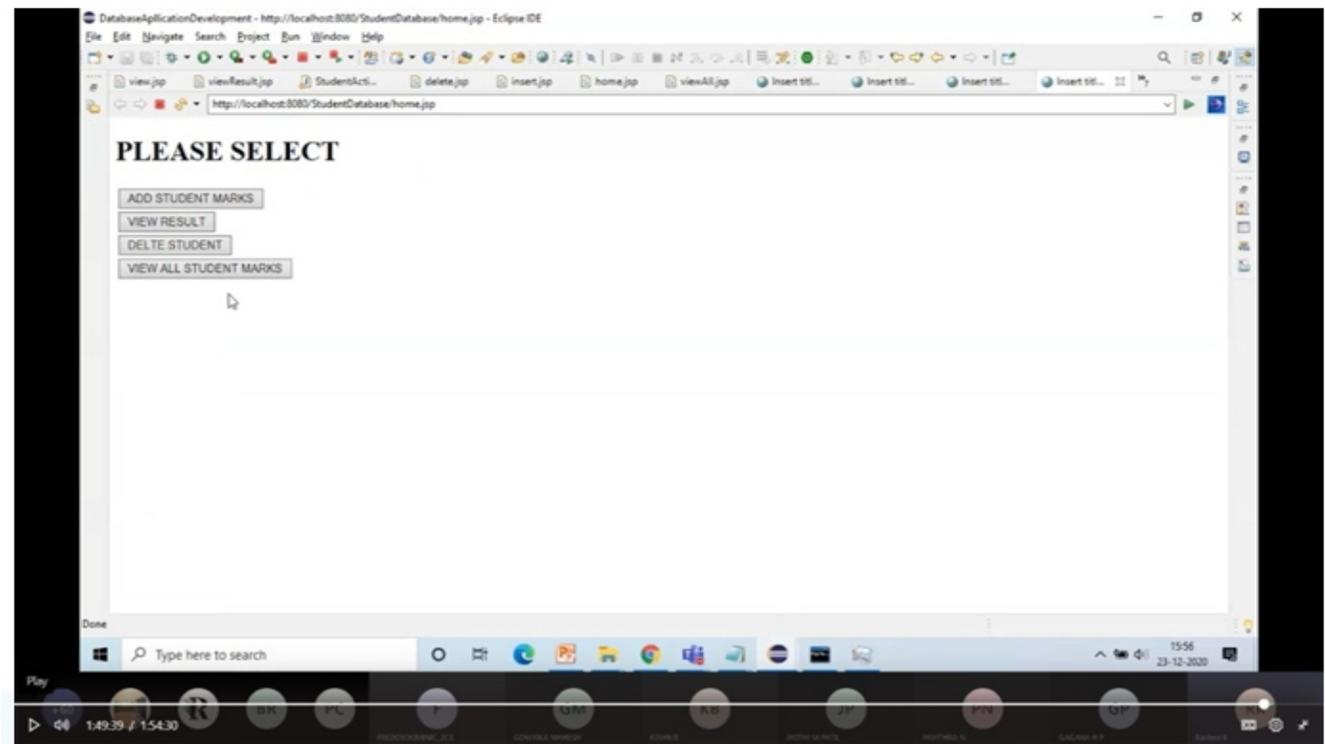
Seminar on Career Guidance

A seminar was conducted by the Department of Computer Science and Engineering, ATMECE, Mysore for final year students regarding career guidance and employment opportunities on 20th Jan 2021. The Resource person Mr. Rajeshfrom NICT Pvt Ltd, Bangalore briefed that Career guidance help students to understand their strengths and weaknesses and then match them match them with their skills and interest so that they get the best suitable career choice.
Things discussed in seminar,
- Lack of self-awareness
- Personality Traits
- A plethora of options
- Facts Vs Propaganda
- Lifestyle and personality
- Desire & Discipline
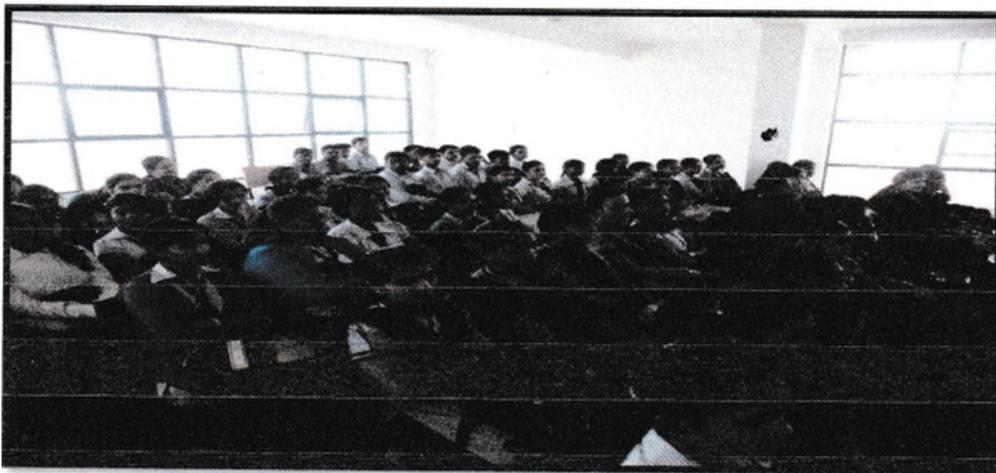
Report on National Level Online FDP on "New Avenues and Role of Faculty in Effective Implementation of NEP-2020 In HEI's" Organized by ATME College of Engineering

ATME College of Engineering had organized a National Level Faculty Development Program on "New Avenues and Role of Faculty in Effective Implementation of NEP-2020 in HEI's" on 29th January 2021 through Online Platform.

The event was organized to understand the basic elements of NEP-2020, to discuss the Features of NEP 2020 and to understand the role of faculty in the implementation NEP 2020.
Dr. Karisiddappa, Honorable Vice Chancellor, VTU, Belagavi presented the keynote address. Prof. T. V. Kattimani, NEP Draft Committee Member, Vice Chancellor, Central Tribal University, Andhra Pradesh and Dr. Govinde Gowda M S, Dean-Academics, ATME College of Engineering, Mysuru were the speakers for the Faculty Development Program.

Dr. L Basavaraj, Principal, ATMECE, Mysuru rendered the welcome address and gave quick insights on NEP-2020.

Sri. L Arun Kumar, Honorable Chairman, ATMECE, Mysuru in his presidential address said that COVID-19 pandemic has affected many sectors and the NEP-2020 has brought a welcoming change in the education sector. He further said the policy has highlighted the importance of education in nation building and highlighted the changes addressed in the policy. He envisaged how the policy aims to meet the needs of 21st Century and it provides a silver lining amidst the uncertain pandemic situation.

Dr. Karisiddappa, Honorable Vice Chancellor, VTU Belagavi in his keynote address said, National Educational Policy-2020 is a transformational concept and the role of students in Higher Technical Education is pivotal. It aims at providing the right direction, perspective and techniques that will help teachers adopt to the new curricula structure, to rebuild their teaching methods and explore new realms of research. He spoke on the drawbacks and challenges in existing education system and employability. He said the policy will open a student centric window and give them an opportunity to explore the field of their choice in HEI. He spoke on the compliances in education through measurable outcomes, Multiple entry and exit scheme. He stressed, we need to have a curriculum structure, where the students get employable in industries. He said colleges should aim at Quality assessment through Accreditation from NBA/NAAC and focus towards degree awarding institution. He highlighted opportunities for Faculty members in Teaching, Research in higher education through National Education Policy and said Karnataka has the potential to become good destination for Higher Education.

Session-I was delivered by Dr. Govinde Gowda M S, Dean-Academics, ATME College of Engineering, Mysuru on 29th January 2021. He started the session and addressed the importance of the NEP. He briefed about the schooling education and in detail explained about Multiple entry and exit scheme. He further gave insights about central eligibility test, Pre service Teacher education, Teacher recruitment and employment, Teacher audit/Performance appraisal and Innovative Teaching methods. He gave various good practices as an example that are followed in ATMECE during his session.

Session-II was delivered by Prof. T. V. Kattimani, NEP Draft Committee Member, Vice Chancellor, Central Tribal University, Andhra Pradesh on 3rd February 2021. He started the session and spoke on the benefits and challenges in current education system. He spoke in detail on the translation of technological information to its regional language to minimize the language barrier in various state of India. He explained how the technology has evolved in the state of Jharkhand and where tribes gradually evolved utilization of rural technology. He further gave insights on Solid Waste Utilization,

and the role of Engineers, Scientists, Students to come up with Innovative Indigenous Technology. Finally, he concluded that Teachers should become Life-long Learners to upgrade their skills & to utilize the skillset during Career Counselling of students.

About 105 participants from various Engineering colleges across the India participated in the event. Questionnaire and discussion was held after each session.

As a part of the program, Mock & Pre-assessment test was conducted on 27th and 28th January respectively to assess the awareness about the NEP. Post–assessment test was conducted on 4th January after the conclusion of the program to evaluate how effectively the contents reached the participants. Mr. Thejkumar J, Assistant Professor, Department of Mechanical Engineering rendered the Vote of Thanks. The event was streamed live through YouTube.

The online Faculty Development Program was coordinated by Dr. Yathisha L, Associate Professor, Dept. of ECE, Mrs. Sunitha Patel M S, Assistant Professor, Dept. of CSE, Mr. Thejkumar J, Assistant Professor, Dept. of ME, Mrs. Sneha N P, Assistant Professor, Dept. of CSE, Mr. Shreeshayana R, Assistant Professor, Dept. of EEE, Mr. Girish M, Assistant Professor, Dept. of ECE, Mrs. Bharathi B, Assistant Professor, Dept. of CE Mr. Srivathsa H U Assistant Professor, Dept. of CE, ATME College of Engineering.

CISCO Certification on "Network-king"

Event type: Inter College.

Date: 05/04/2021 and 09/04/2021

Venue: Department of Computer Science & Engineering, ATMECE.

Resource person/Guest Name: Mr Anil Kumar B H and Mr Kiran B

Designation: Assistant Professor

Event Description: Conducting five days of FDP on "Network-king" in CS Dept. This FDP is targeted to faculties of various diploma colleges.

Objective: This course is designed to impart knowledge about detailed knowledge of Computer Networks, various protocols used in Communication, Managing and configuring Cisco Switches and Routers and various WAN technologies.

The Department of Computer Sciences Engineering had signed MoU with CISCO Systems, Bangalore on 21-01-2018. The CISCO center of excellence on Advanced Networking available in the department provides world class networking infrastructure. The faculty members have been constantly trained by CISCO Networking Academy, to offer the latest industry relevant networking curriculum. The Department is offering the certification course CCNA (Cisco Certified Network Associate) to the students since.

The course provides experience to the faculties on networking concepts for 5days. Faculty in charge are Anil Kumar B H, Kiran Kumar B.

Outcome: After completion of the course the faculties will be able to manage network for an Organization. Certificate has been issued for the participants.

Three Days Online Workshop on Basics of Object Oriented Programming using C++ for IV Sem Students

Department of Computer Science and Engineering, ATME College of Engineering, Mysore organized Three Day Workshop on Basics of Object Oriented Programming using C++ for IV Sem Students from19th April 2021 to 21st April 2021 at 2.00 pm to 5.00 pm.

Workshop Objective:
• Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.
• Understand dynamic memory management techniques using pointers, constructors, destructors, etc

- Describe the concept of function overloading, operator overloading, virtual functions and polymorphism.
- Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming.
- Demonstrate the use of various OOPs concepts with the help of programs

Workshop Context:

Introduction to Object Oriented Programming
- Concept of OOP
- Features of OOP
- Introduction of 'C++'
- Structure of 'C++' program
- Executing and Debugging a 'C++' Program

C++ Tokens and Type Casting
- Keywords and Identifiers
- Operators
- Constants
- Variables
- Data Types
- Precedence of Operators
- Scope and Lifetime of Variables

Classes & Objects
- Classes & Object Specifier
- Defining data members and member functions
- Array of objects
- Managing console I/O
- C++ stream classes
- Formatted and unformatted console I/O
- Usage of manipulators

Function in C++
- Call by reference, Return by reference
- Function overloading and default arguments
- Inline function
- Static class members
- Friend functions
- Virtual Functions

Constructors and Destructor
- Concept of Constructor
- Types of Constructors
- Memory allocation (new and delete)
- Usage of destructor

Operator Overloading
- Overloading Unary and Binary operators
- Overloading using friend function

Inheritance
- Types of inheritance
- Virtual base classes and abstract base classes
- Constructor and destructor in derived class
- Working with files

File operations
- File pointer and their manipulation
- File updation with random access

Exception Handling
- Various Exception Handling classes
- Implementing try and catch block
- Use of throw keyword

Resource Persons: Kiran B, Asst. Prof. Dept. of CSE, ATMECE, Mysuru.
Workshop Date & Time: 19th April 2021 to 21st April 2021 2.00 pm to 5.00 pm

Workshop Outcome:
- Able to Understand OOPs Concept, C++ language features.
- Able to Understanding and Applying various Datatypes, Operators, Conversions in program design.
- Able to Understand and Apply the concepts of Classes & Objects, friend function, constructors & destructors in program design.
- Able to Design & implement various forms of inheritance, String classs, calling base class constructors.
- Able to Apply & Analyze operator overloading, runtime polymorphism, Generic Programming.
- Able to Analyze and explore various Stream classes, I/O operations and exception handling

Webinar on "CAREER PATHWAY AND STUDY ABROAD OPPORTUNITIES"

The Department of Computer Science and Engineering of ATME College of Engineering organized a webinar on the topic "CAREER PATHWAY AND STUDY ABROAD OPPORTUNITIES". The Objective of the webinar was to help aspiring students to acquire a challenging engineering career in life. Webinar session was conducted on June 23,2021 from 3:30 pm to 4:30 pm.

Mrs. Kavyashree E D, Assistant Professor, Dept. of Computer Science of ATME College of Engineering welcomed all the participants to the webinar session.

The Speaker of the webinar was MsNandini M, Team Leader @ AECC GLOBAL. She gave an Overview on the Importance of Education, also provided insights on career prospects. She also spoke about the studies in Abroad. She mainly discussed about some of the topics that are mentioned below,
21st century-Importance of Education

* Mentorship
* Our belief
* Why study abroad
* Who are we
* Our study destinations
* Student spotlight
* Important Facts
* Expenses and ROI
* Conclusion
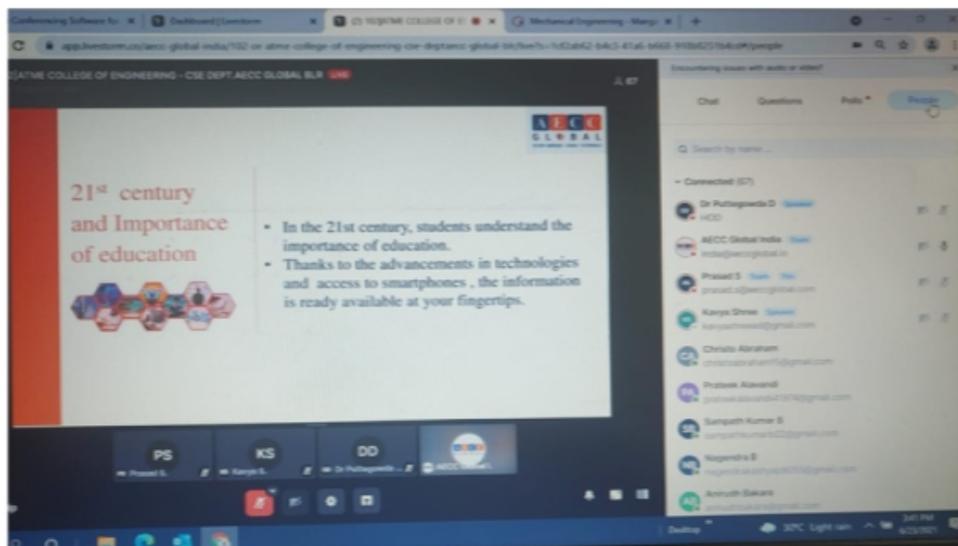
After the speaker finished, there was a Question-Answer session. A few students asked some questions and the speaker answered live itself, One question was regarding about the courses that are offered about are either thesis or research based, what is the difference and which one is better??.

After the Q&A session, The speaker Ms Nandini M thanked all the participants of the webinar session and Mrs. Kavyashree E D delivered a vote of thanks.

Funding Details

Sl. No.	Name of Faculty (Principal Investigator)	Name of the Funding Agency	Title of the Project	Sanctioned order no.	Sanctioned date	Amount Sanctioned
1	Rashmi K	KSCST	COVID 19 Measures: Face Mask Detection Along With Body Temperature Detection Using ML and IOT	Ref:7.1.01/SPP/10	7/04/2021	5,000
2	Sneha N P	KSCST	An Android App For Farmers To Sell Their Product At Better Rate	Ref:7.1.01/SPP/10	7/04/2021	3,500

T raining and Placement is a vital department in the college and is constantly striving to provide assistance to the students in their efforts to probe for employment. It also caters to the needs of various organizations to conduct the interviews. It plays an important role in counseling and guiding the students for their successful career placement. It arranges various technical and soft skills programs which augments the skills and increases the confidence of the students when facing the various tests and interviews conducted by the companies and to meet companies' expectations.

No of students Placed : 71

Average Package : 4.00LPA

CISCO Centre of Excellence

Academic Year	No. of Students Certified
2017-18	96
2018-19	79
2019-20	95
2020-21	110
Total	**380**

CISCO Certified faculty Members:

Mr. Anil Kumar B H,
Asst. Professor, CSE

Mr. Kiran B,
Asst. Professor, CSE
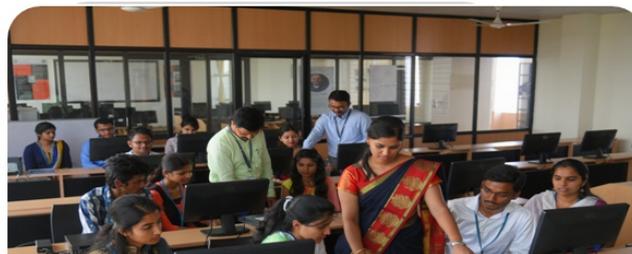
CISCO (CISCO Centre of Excellence)
CCNA Routing and Switching
IT Essentials
CCNA Security
Cyber Security
CCNP

Student Toppers

4th Semester		
USN	STUDENT NAME	SGPA
4AD18CS072	SHASHANK K	10.00
4AD18CS013	BIBI JAVERIYA	9.04
4AD18CS054	PAVITHRA N	9.04

6th Semester		
USN	STUDENT NAME	SGPA
4AD17CS004	AHALYA P	10.00
4AD17CS086	SOWMYA M V	9.00
4AD17CS024	FAIZA FIRDAUS	9.00

8th Semester		
USN	STUDENT NAME	SGPA
4AD16CS035	MANASA M R	9.65
4AD17CS409	MOHAMMED ANAS	9.65
4AD17CS400	ABHISHEK GOWDA	9.40

Air Bubble Detection for Dialysis
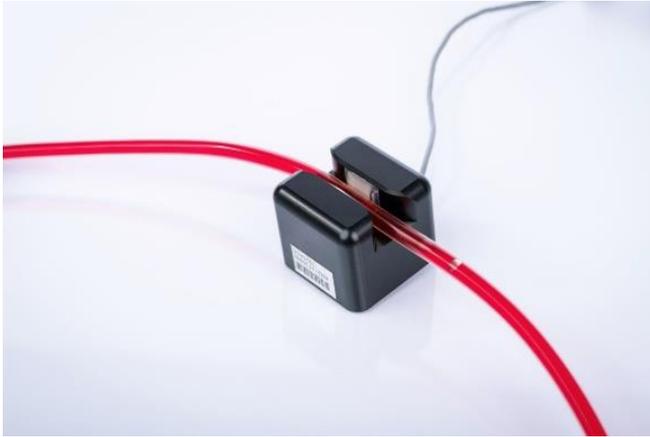
Hemodialysis is an essential and routine medical treatment for which safety has become a clinical priority. As every step carries the risk of human error and/or hardware failure, the process requires a chain of interventions. Dialysis machines combine a variety of sensors for the monitoring of pressure, flow and liquid level as well as for detecting leaks and air in tubing systems

SONOCKECK ABD air bubble sensors are widely used in dialysis machines for hemodialysis. They are applied for fast and safe air bubble detection in the venous path of the extracorporeal blood circulation. By squeezing the tube into the measuring channel of the sensor, simple tube handling is guaranteed. This enables dry coupling with no need for any additional closing mechanisms. The sophisticated sensor design also ensures easy single-handed operation and a smooth cleaning process. The sensor itself is integrated into the front panel of the machine and acts as the last safety component before returning the blood to the patient.

Ultimate Patient Safety by Use of Air Bubble Sensors

Based on quality regulations requiring overall patient safety, a simple and intuitive handling as well as a faultless operation at any time, SONOTEC engineers have developed the sophisticated SONOCHECK ABD05 sensor family. The sensor detects air bubbles reliably, but ignores harmless microbubbles. An additional optional optical sensor module acts as an initialization switch to start the actual dialysis treatment after the rinsing process.

Kaya P O
AP, CSE

KNOWLEDGE GROWING SYSTEM IN ARTIFICIAL INTELLIGENCE

Knowledgde-Growing System (KGS) has been there for a while since invented in 2009. Since some real-life problems have been approached by applying KGS and prospective results show the benefits of using it especially for cases in decision making and estimating or predicting the probability of occurrence of a phenomenon being observed by the system. It is also good to be applied to obtain second opinion or alternative decision for decision maker regarding a phenomenon being observed. The excellence of KGS is its mechanism which mimics how human thinks, in this case is how brain grows the knowledge based on the information it receives from the sensory organs. Thinking is a cognitive process which is not easy to be emulated to a system. Since many real-life computations and problems have been moving towards to KGS and prospective outcome which demonstrates the purposes of it, especially using it for the situation to handle extremely to make decisions and estimating the things or forecast the possibility on incidence has occurrence could be experiential through the expert system. Impact of Artificial Intelligence (AI)Service has been invented nearly 21 years ago although the great impact which tries hard to do or gain knowledge especially emulates human intelligence for to know how a human thinks and make the decisions aspects have been accepted from last decades. Because we could be know how human brain neurons are working i.e. computation AI, acts wisely means agent Approach, to store the knowledge regarding knowledge-based AI, to perform learning from past how could a human being process the information on the system based on the human interface system. In Digital planet the Artificial intelligence has been latest innovative tools particularly in-Oder to get essential knowledge is being captured, frequently shared, more cautiously developed and transferred to the accurate layout in the required association. AI can support to significantly makes a plain intelligent thought or idea of comprehension it couldn't a simple task . Especially a simple thought or idea to enable to emulate in human brain how fast extremely the knowledge growing over the time passes also the way if human thinking, which enables the human intellectual and intelligence has been effectively accomplishing various innovations in AI. Because this innovation bind to cognitive agent KGS which could make thinking plus acting regarding logically and rationally similar to the human being, A3S and OMA3S methods are used for significantly grows human knowledge, novel HIS along with SIDA cycle a particular part of HIS. This paper has been demonstrating that human could become too intellectual and intelligent through assembly some interactions with the computing world.

Lavanya M S
AP, CSE

5 SKILLS TO MASTER IN 2021 TO GET PLACED

1. Leadership Skills

When running own business or leading teams in a office, the best leader require a strong set of Leadership Qualities to help positively interact with the Employees. In today's fast moving business world with latter hierarchies, every professional needs good leadership skills. Good leadership skills comprise more than one or two traits. They are excellent communicators who express themselves equally well in writing and in person.

2. Problem solving skills

Problem solving abilities are essential in any job role .problem solving skills are all about using logic as well as imagination to make sense of the situation and come up with solution to the problem.

Problem solving abilities are connected to a lot of other skills like analytical skills, creative thinking, adaptability flexibility and teamwork

3. Technical Skills

A Technical Skill is ability to carry out a task associated with technical roles such as IT engineering, mechanics science or finance .Typical Technical Skills are programming, majority of Technical Skills require experience and extensive training to master.

Technical Skills are most important for graduates to differentiate themselves from other candidates. Technical Skills can help you work more efficiently and boost your confidence

4. Communication Skills :

Having strong Communication Skills aids in all aspects of life from professional life to personnel life .good Communication Skills are essential to allow others understand information accurately, quickly and in effective manner.

In contrast, poor communication skills lead to frequent misunderstanding and frustration

5. Creativity :

Creativity and innovation are key to generation o new ideas and methods of improving goods and services for customer satisfaction .They are key to the success of a business particularly when strategizing during planning and when designing new products and services. Professionals who can innovate and develop unique solutions with existing technologies are most sought.

Nagendra B
4AD19CS048

Top 5 Trending Technologies to Master in 2021

Technology is constantly updating at such a rapid pace that it seems it is might be faster than light! A technology or a programming language that is making the rounds this week may be obsolete by the next few days! As more and more funds are invested in research and development, computer scientists and professionals are constantly tweaking and improving existing technologies to get the most out of them. I have listed the top 5 trending technologies, which are expected to acquire a huge market in 2021.

1. 5G Technology

2. Internet of Behaviours (IoB)

3. Intelligent Process Automation(IPA)

4. Big Data Analytics

5. Human Augmentation

1) 5G TECHNOLOGY

♦ 5G Technology is the next generation of cellular networks and services. It is expected to provide at least 20GBPS downlink and 10GBPS uplink, which will make the 5G network to be at least 40 times faster than current 4G LTE. This will open doors for new services, network operations and customer experience for telecom operators. Currently, the market is led by Switzerland, closely followed by South Korea and the US.

♦ **Companies investing in 5G:** Samsung, Huawei, Intel, Deloitte, Nokia, Ericsson, Qualcomm
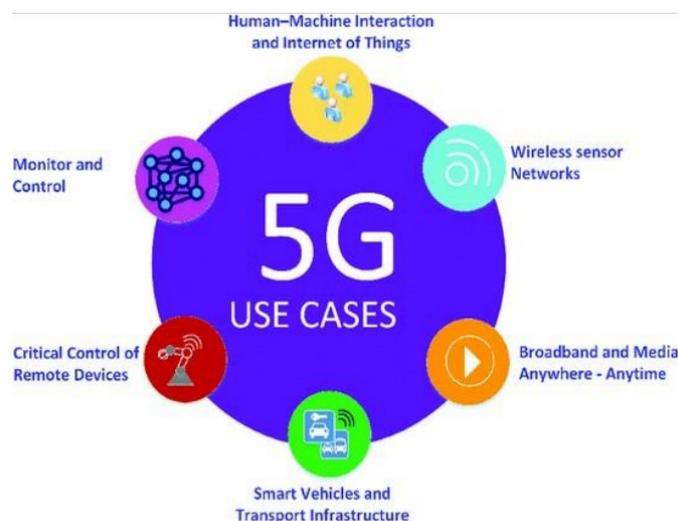
2) INTERNET OF BEHAVIOUR (IOB)

♦ The collection and use of data to drive behaviours is called the Internet of Behaviors (IoB). An example of it is industrial sites having employed computer vision to determine if employees were complying with mask protocol and then collecting this behavioural data to be analyzed by theorganizations to influence people to follow government protocols at work.

♦ IoB can gather, combine and process data from many sources including:

- Citizen data processed by public-sector
- Commercial customer data
- Government agencies
- Social media
- Public domain
- Location tracking.

♦ **Companies investing in IoB:** AWS, Cisco, SAP, Microsoft, HP, IBM, Dell, Cloudera.

Benefits of IoB

Analyze customer buying habits across platforms

Study previously unobtainable data about how customers interact with devices and products

Gain deeper insights into where a customer is in hte buying journey

Provide real-time point-of-sale notifications and target ads

Quickly resolve issues to close sales and keep customers happy

3) INTELLIGENT PROCESS AUTOMATION

▸ Robotic Process Automation is basically the idea that 'Anything that can be automated, should be automated'. This year, we've discovered something even more fascinating – Intelligent Process Automation. IPA, in a nutshell, allows bots to benefit from the abilities of Artificial Intelligence, Big Data, Machine Learning, meaning they can learn and improve over time. This helps these intelligent bots evolve from the 'If-this-then-that' rule. As the adoption of Automation is expected to grow, investment in IPA is estimated to reach $232B by 2025.

▸ **Companies investing in IPA:** KPMG, AWS, Microsoft.

4) BIG DATA ANALYTICS

▸ Big Data Analytics has been there in the market for quite some time now. More and more businesses are adopting it to go beyond the traditional ways of data storage and processing. New trends such as X-Analytics are being used to find solutions to challenges, including climate change, disease prevention and wildlife protection.

▸ Big Data also gives us interesting trends like Decision Intelligence which provides a framework to help data engineers to design, model, execute and monitor decision models and processes in the context of business outcomes and behaviour. In fact, by 2023, more than 33% of large organizations will have analysts practising decision intelligence.

▸ **Companies investing in Big Data Analytics:** Amazon, Netflix, Starbucks, Spotify, Google, Adobe.

5) HUMAN AUGMENTATION

▸ Humans have continually experimented with technology to enhance life as they know it. This
▸ curiosity has now entered another territory – Human Augmentation which basically means taking the help of technologies like Artificial Intelligence and Internet of Things, to not only enhance our daily lives but also to take human intelligence to the next level.

▸ Currently, the studies have been racing towards helping people with disabilities with bionics and prosthetic augmentation and curing sickness by experimenting with genes. But the promise is to end the existing physical disabilities or prevent injuries from happening at all.

▸ It can also provide opportunities for other creative functions. For example, companies like Neuralink aim to build an incredibly powerful brain-machine interface, with the power to process magnanimous amounts of data.

▸ **Companies investing in Human Augmentation:** Neuralink, Google, Samsung, Ekso.

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