

# BAPATLA ENGINEERING COLLEGE::BAPATLA

## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### FACULTY ATTENDED EVENTS DETAILS

#### JULY MONTH ACHIEVEMENTS

**Gopinadh Alapati** published a paper title **A Systematic Analysis of Deep Learning and Machine Learning Methods for Identifying Apple Leaf Disease** at Fourth International Conference on Electronics and Sustainable Communication Systems (ICESC-2023) organized by Hindusthan Institute of Technology Coimbatore during 06-07-2023 to 08-07-2023.



**Vachaspati PSV** has participated in the 7 Day National Level Online Faculty Development Program on **ChatGPT & AI Tools for Educators, in-line with OBE** organized by St Joseph's College (Autonomous), Irinjalakuda in association with The Kerala State Higher Education Council from 19 July to 26 July 2023 and has successfully completed all the tasks, assignments and assessments of this online FDP and secured A grade



**Mani Deep Karumanchi** Participated in 30 Hours International Faculty Development Program on **Deep Learning for NLP and Computer Vision** organized by Chaitanya Bharathi Institute of Technology (CBIT) in Collaboration with ExcelR from 10<sup>th</sup> July 2023 to 28<sup>th</sup> July 2023.



**K. Siva Kumar** has successfully participated in **One Week National Level Online Faculty Development Program on Societal Applications of Machine Learning**, organized by Department of Computer Science and Engineering at Shri Vishnu Engineering College for Women, from 24-07-2023 to 28-07-2023.

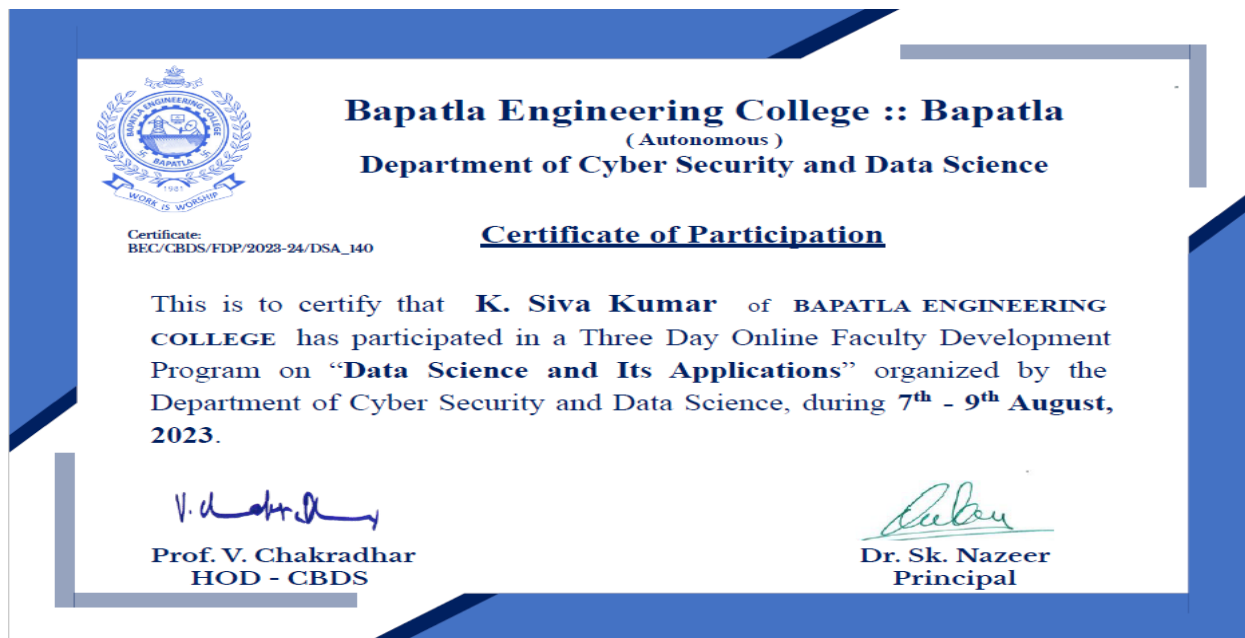


**Maddi Venkata Pavan Kumar** has successfully completed **30 Days Master class on Data Analytics** at Pantech e Learning Pvt.Ltd Chennai from 26-07-2023 to 26-08-2023

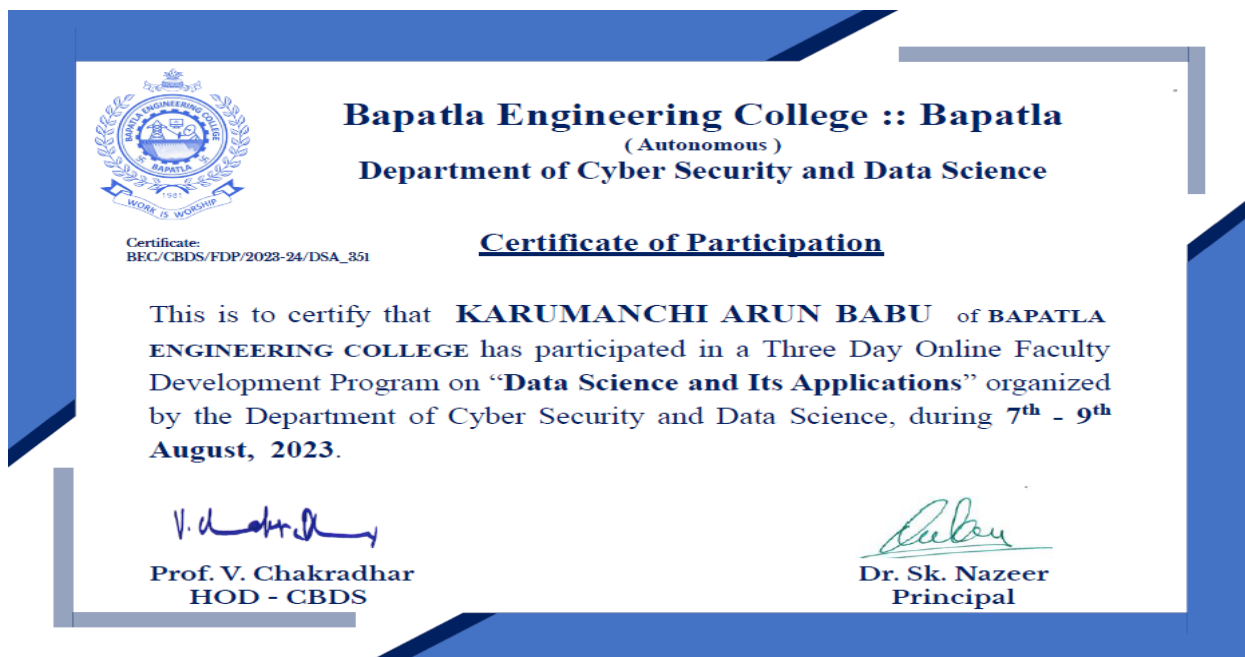


## AUGUST MONTH ACHIEVEMENTS

**K.Siva Kumar** has participated in a **Three Day Online Faculty Development Program on Data Science and Its Applications** organized by the Department of Cyber Security and Data Science at Bapatla Engineering College during 07-08-2023 to 09-08-2023.

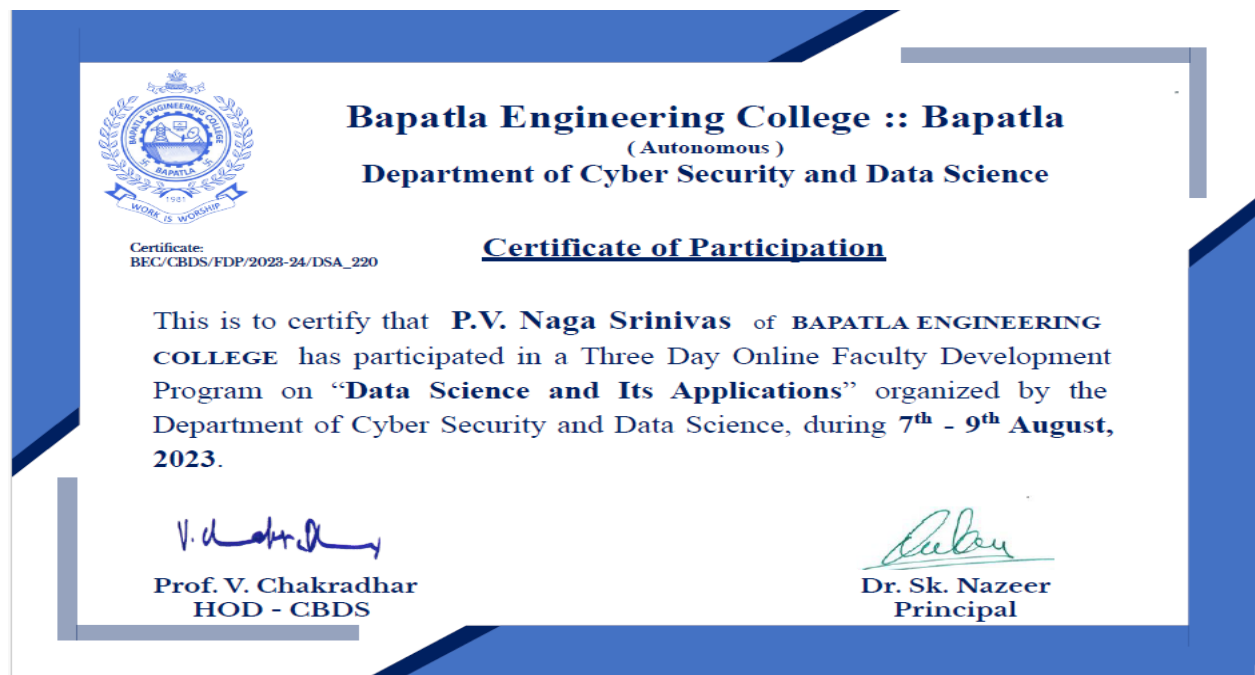


**K Arun Babu** has participated in a **Three Day Online Faculty Development Program on Data Science and Its Applications** organized by the Department of Cyber Security and Data Science at Bapatla Engineering College during 07-08-2023 to 09-08-2023.

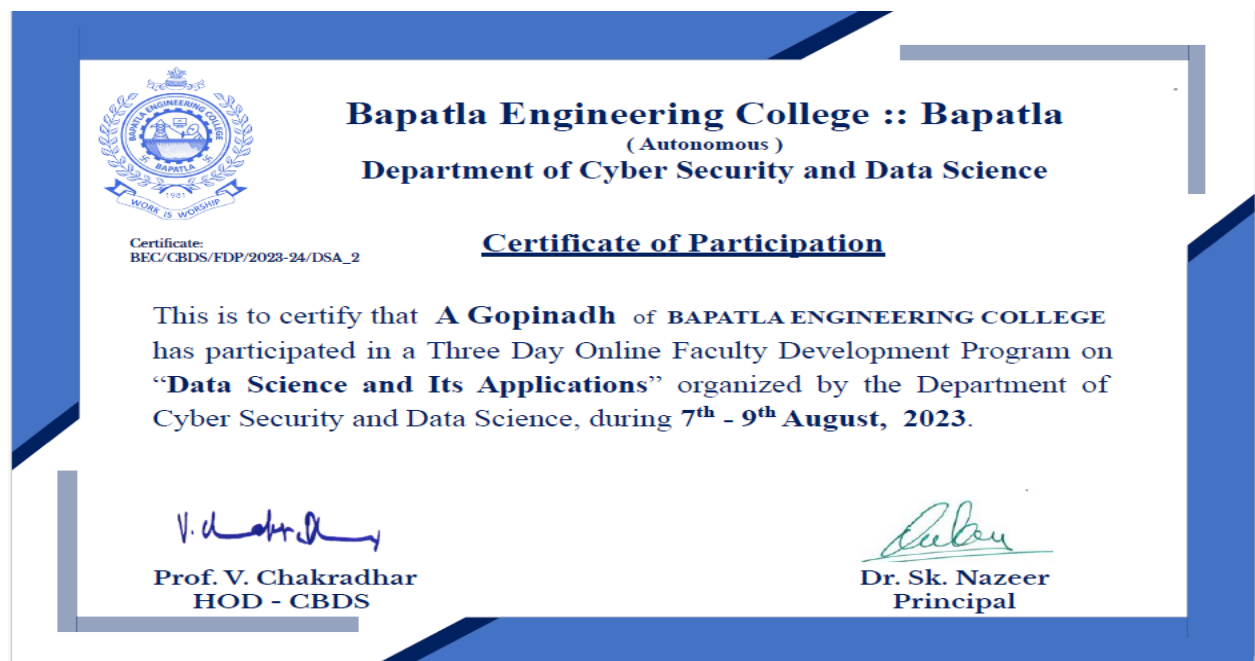




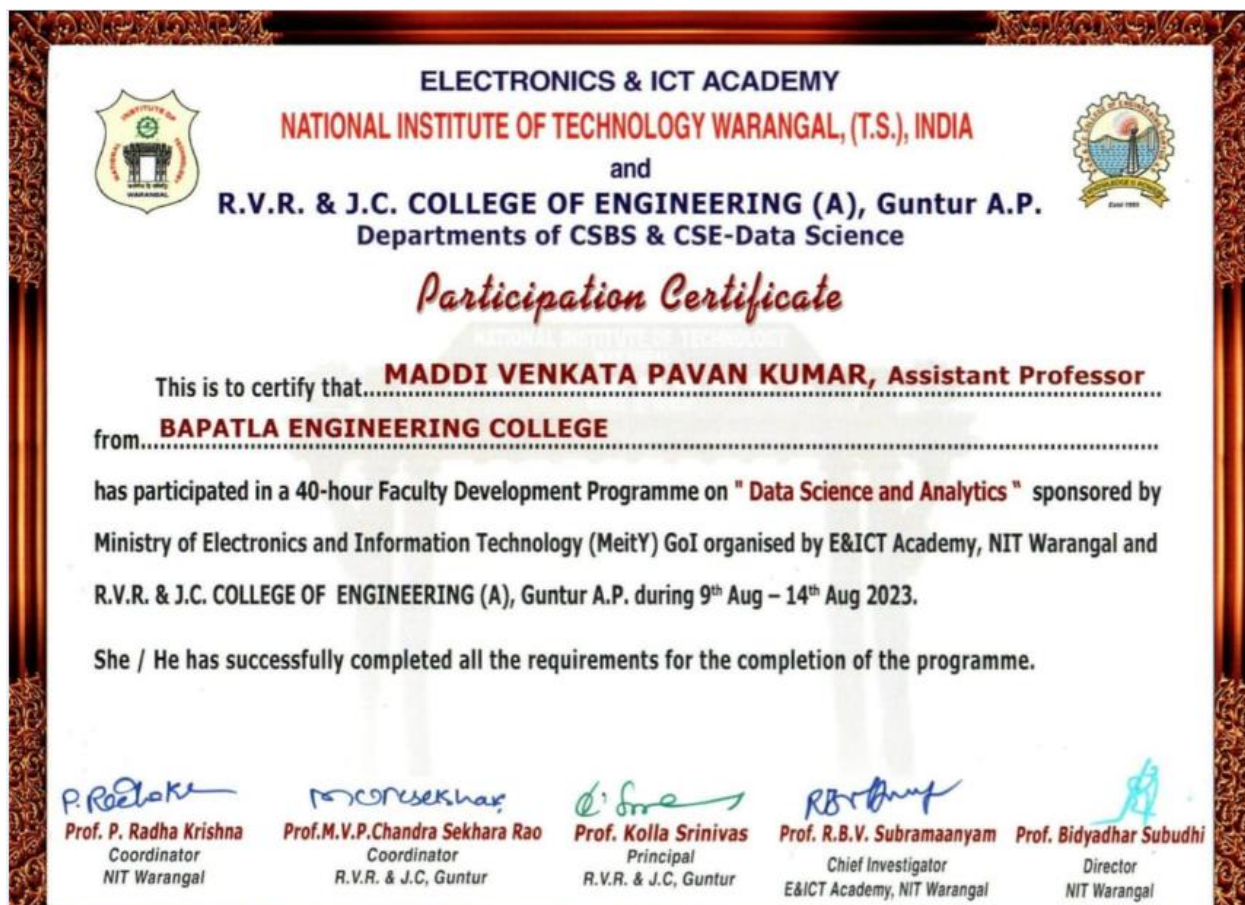
**P.V. Naga Srinivas** has participated in a **Three Day Online Faculty Development Program** on **Data Science and Its Applications** organized by the Department of Cyber Security and Data Science at Bapatla Engineering College during 07-08-2023 to 09-08-2023.



**A Gopinadh** has participated in a **Three Day Online Faculty Development Program** on **Data Science and Its Applications** organized by the Department of Cyber Security and Data Science at Bapatla Engineering College during 07-08-2023 to 09-08-2023.



**Maddi Venkata Pavan Kumar** attended 40 Hours Online FDP on “**Data Science and Analytics**” organized by E&ICT Academy from 09<sup>th</sup> Aug 2023 to 14<sup>th</sup> Aug 2023.



**K. Siva Kumar** has filed a patent Title of the invention : **An Integrated Approach to Environmentally Friendly Smart Cities With their Convergent AI, IOT, and Big Data Technologies and Solutions** with Application No. **202341036833 A** and published on 18/08/2023.

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202341036833 A

(19) INDIA

(22) Date of filing of Application :28/05/2023

(43) Publication Date : 18/08/2023

(54) Title of the invention : AN INTEGRATED APPROACH TO ENVIRONMENTALLY FRIENDLY SMART CITIES WITH THEIR CONVERGENT AI, IOT, AND BIG DATA TECHNOLOGIES AND SOLUTIONS

(51) International classification : A61K 393950, G06N 030200, G06Q 100400, H04W 043800, H04W 120600  
(86) International Application No : PCT/  
Filing Date : 01/01/1900  
(87) International Publication No : NA  
(61) Patent of Addition to Application Number : NA  
Filing Date : NA  
(62) Divisional to Application Number : NA  
Filing Date : NA

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**4)Pranshu Saxena**  
**5)K. Siva Kumar**  
**6)Dr.Maz Aliab Khan**  
**7)Thakur Sonali Madhav**  
**8)Akane Vinod N**  
**9)Dr Dwaitha Jagadish**  
**10)Ashwini Kumar Saini**  
**11)Anthony Savio Hermilio da Piedade Fernandes**  
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(57) Abstract

The invention relates to an integrated approach to environmentally friendly smart cities with their convergent AI, IOT, and Big Data Technologies and Solutions. The concept of smart cities has gained significant attention in recent years as a promising solution for addressing the complex challenges of urbanization and environmental sustainability. The present disclosure explores the integration and convergence of various technologies, including Artificial Intelligence (AI), Internet of Things (IoT), and Big Data, in the context of developing environmentally friendly smart cities. The integration of AI, IoT, and Big Data technologies enables cities to gather real-time data from a multitude of sources, including sensors, devices, and digital platforms. This data-driven approach empowers city authorities to make informed decisions, optimize resource utilization, and improve the overall quality of life for residents. The integration of AI, IoT, and Big Data technologies presents a promising approach towards developing environmentally friendly smart cities. By leveraging these convergent technologies, cities can harness the power of data-driven insights to optimize resource utilization, reduce environmental impact, and enhance the overall sustainability of urban areas.

No. of Pages : 12 No. of Claims : 5

**K. Siva Kumar** has filed a patent Title of the invention : **Power train using multiple power sources using IOT Based Notification** with Application No. **202341040903 A** and published on 18/08/2023.

(12) PATENT APPLICATION PUBLICATION		(21) Application No.202341040903 A	
(19) INDIA			
(22) Date of filing of Application :15/06/2023		(43) Publication Date : 18/08/2023	
(54) Title of the invention : Power train using multiple power sources using IOT Based Notification			
		(71)Name of Applicant : 1)Dr. Kavitha H Address of Applicant :Associate Professor, Department of Information Science and Engineering, Siddaganga Institute of Technology, BH Road, Tumakuru, Karnataka, India 572103 ----- 2)Dr. Sreekanth Rallapalli 3)Dr. Amit Swamy 4)Mrs. B. Swathi 5)B. Md. Irfan 6)K.Siva Kumar 7)Mr. Sangareddy B Kurtakoti 8)P.P.M.Prasad Name of Applicant : NA Address of Applicant : NA (72)Name of Inventor : 1)Dr. Kavitha H Address of Applicant :Associate Professor, Department of Information Science and Engineering, Siddaganga Institute of Technology, BH Road, Tumakuru, Karnataka, India 572103 ----- 2)Dr. Sreekanth Rallapalli Address of Applicant :Professor, Department of MCA, Nitte Meenakshi Institute of Technology, Bengaluru, Karnataka, India 560097 ----- 3)Dr. Amit Swamy Address of Applicant :Department Chair, Mechanical and Industrial Engineering, Liwa (Emirates) College of Technology, Abu Dhabi, United Arab Emirates ----- 4)Mrs. B. Swathi Address of Applicant :Assistant Professor, Department of CS & AI, SR University, Warangal, Telangana, India, 506001 ----- 5)B. Md. Irfan Address of Applicant :System Analyst, Department of Information Technology, Nalsar University of Law, Hyderabad, Telangana 500101, India ----- 6)K.Siva Kumar Address of Applicant :Assistant Professor, Department of Computer Science & Engineering, Bapatla Engineering College, Bapatla, Andhra Pradesh, India, Pincode:522102 ----- 7)Mr. Sangareddy B Kurtakoti Address of Applicant :Assistant Professor, Department of Computer Science and Engineering, Adichunchanagiri Institute of Technology, Chikkamagaluru, Karnataka, India 577102 ----- 8)P.P.M.Prasad Address of Applicant :M.Tech (Ph.D), Department of Electronics and Communication, Bapatla Engineering College, Bapatla, Andhra Pradesh, India ----- -----	
(51) International classification	:B60L 093000, H02J 070000, H02J 090600, H04L 671000, H04W 120600		
(86) International Application No	:PCT// :01/01/1900		
Filing Date			
(87) International Publication No : NA			
(61) Patent of Addition to Application Number	:NA		
Filing Date	:NA		
(62) Divisional to Application Number	:NA		
Filing Date	:NA		
(57) Abstract : The proposed invention introduces a power train system that utilizes multiple power sources and incorporates IoT-based notification technology. This innovative approach aims to enhance energy efficiency, improve performance, and increase driver awareness and safety. By integrating various power sources such as internal combustion engines, electric motors, hybrid systems, or alternative energy sources, the power train system optimizes power distribution based on driving conditions and specific requirements. The IoT-based notification system continuously monitors and analyzes data from sensors, power sources, environmental conditions, and driver behavior. Real-time notifications and recommendations are generated to optimize power management, improve fuel economy, and enhance overall performance. The integration of IoT technology allows for seamless communication and data exchange between the power train system and a central control unit. The proposed invention not only addresses the limitations of traditional power trains but also promotes sustainability and intelligent transportation. By providing real-time notifications and enhancing driver awareness, this invention contributes to a greener, more efficient, and safer future of transportation.			

**Mani Deep Karumanchi**, published a paper title ” **An Improved Integrity-Based Hybrid Multi-User Data Access Control for Cloud Heterogeneous Supply Chain Databases**” Published in **International Journal on Recent and Innovation Trends in Computing and Communication** (IJRITCC) ISSN: 2321-8169 Volume: 11 Issue: 9s and Date of Publication: Aug-2023.



# An Improved Integrity-Based Hybrid Multi-User Data Access Control for Cloud Heterogeneous Supply Chain Databases

Mani Deep Karumanchi<sup>1</sup>, J. I. Sheeba<sup>2</sup>, S. Pradeep Devaneyan<sup>3</sup>, Lakshminarasana Kodavali<sup>4</sup>

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**Abstract**— Cloud-based supply chain applications play a vital role in the multi-user data security framework for heterogeneous data types. The majority of the existing security models work effectively on small to medium-sized datasets with a homogenous data structure. In contrast, Supply Chain Management (SCM) systems in the real world utilize heterogeneous databases. The heterogeneous databases include a massive quantity of raw SCM data and a scanned image of a purchase quotation. In addition, as the size of the database grows, it becomes more challenging to provide data security on multi-user SCM databases. Multi-user datatypes are heterogeneous in structure, and it is complex to apply integrity and confidentiality models due to high computational time and resources. Traditional multi-user integrity algorithms are difficult to process heterogeneous datatypes due to computational time and variation in hash bit size. Conventional attribute-based encryption models such as "Key-policy attribute-based encryption" (KP-ABE), "Ciphertext-Policy Attribute-Based Encryption" (CP-ABE) etc., are used to provide strong data confidentiality on large textual data. Providing security for heterogeneous databases in a multi-user SCM system requires a significant computational runtime for these conventional models. An enhanced integrity-based multi-user access control security model is created for heterogeneous databases in the cloud infrastructure to address the problems with heterogeneous SCM databases. A non-linear integrity model is developed to provide strong integrity verification in the multi-user communication process. A multi-user based access control model is implemented by integrating the multi-user hash values in the encoding and decoding process. Practical results proved that the multi-user non-linear integrity-based multi-access control framework has better runtime and hash bit variation compared to the conventional models on large cloud-based SCM databases.

**Keywords**- Heterogeneous Supply Chain Data; Attribute-Based Encryption (ABE); Dictionary Encoding; Integrity Algorithm; Cloud Computing.

## I. INTRODUCTION

Cloud computing involves one or more servers computing for other servers connected over the Internet [1]. The pay-per-use model used by cloud providers means that anyone who wants to use their IT services must pay only if they actually use them [2]. Processing power is one of the services offered, as is infrastructure for various web applications, including their development, testing, and hosting, as is the case with Amazon

EC2 and Google AppEngine [3-4]. Despite its positive reputation, cloud computing has a number of serious privacy and security concerns that prevent its use in sensitive settings. All of these privacy and security issues are problems that an organization moving to a cloud computing model must deal with [5]. It is due to the implementation of virtualization and multi-tenancy concepts, as well as the dynamic data initialization, heterogeneity, and distributed nature of the cloud. Additionally,

**K.Siva Kumar** has participated in **One Week National Level Faculty Development Program on Cloud Infrastructure AWS** organized by Department of CSE JNTUK University College of Engineering Narasaraopet in Collaboration with Brainovision Solutions India Private Limited and All India Council for Technical Education (AICTE) during 21-08-2023 to 25-08-2023.



**Dr.D.Kishore Babu** has participated in **One Week National Level Faculty Development Program on Cloud Infrastructure AWS** organized by Department of CSE JNTUK University College of Engineering Narasaraopet in Collaboration with Brainovision Solutions India Private Limited and All India Council for Technical Education (AICTE) during 21-08-2023 to 25-08-2023.





**Sundeeep Saradhi Kanthety** has participated in **One Week National Level Faculty Development Program on Cloud Infrastructure AWS** organized by **KG Reddy College of Engineering and Technology** in Collaboration with **Brainovision Solutions India Private Limited** and **All India Council for Technical Education (AICTE)** during **21-08-2023 to 25-08-2023**.



**Mani Deep Karumanchi** has participated in **One Week National Level Faculty Development Program on Cloud Infrastructure AWS** organized by **KG Reddy College of Engineering and Technology** in Collaboration with **Brainovision Solutions India Private Limited** and **All India Council for Technical Education (AICTE)** during **21-08-2023 to 25-08-2023**.




**K.Siva Kumar** has participated in a **Three Day Online Faculty Development Program** on **Outcome Based Education** organized by IQAC, Meerut Institute of Technology in Collaboration with ICT Academy during 24-08-2023 to 26-08-2023.





## SEPTEMBER MONTH ACHIEVEMENTS

**K.Siva Kumar** has successfully completing the 8 Weeks NPTEL COURSE "**Foundations and Applications of Machine Learning (Bengali)**" from Jul to Sep-2023.



# NPTEL Online Certification

(Funded by the MoE, Govt. of India)

This certificate is awarded to  
**SIVA KUMAR KOTAMRAJU**  
for successfully completing the course


**Foundations and Applications of Machine Learning (Bengali)**

with a consolidated score of **52** %


Online Assignments	18.58/25	Proctored Exam	32.99/75
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Total number of candidates certified in this course: **9**


**Jul-Sep 2023**  
(8 week course)



*Haimanti Banerji*  
**Prof. Haimanti Banerji**  
Coordinator, NPTEL  
IIT Kharagpur




Indian Institute of Technology Kharagpur



FREE ONLINE EDUCATION  
**swayam**  
THINKED NEVER, DOING NEVER

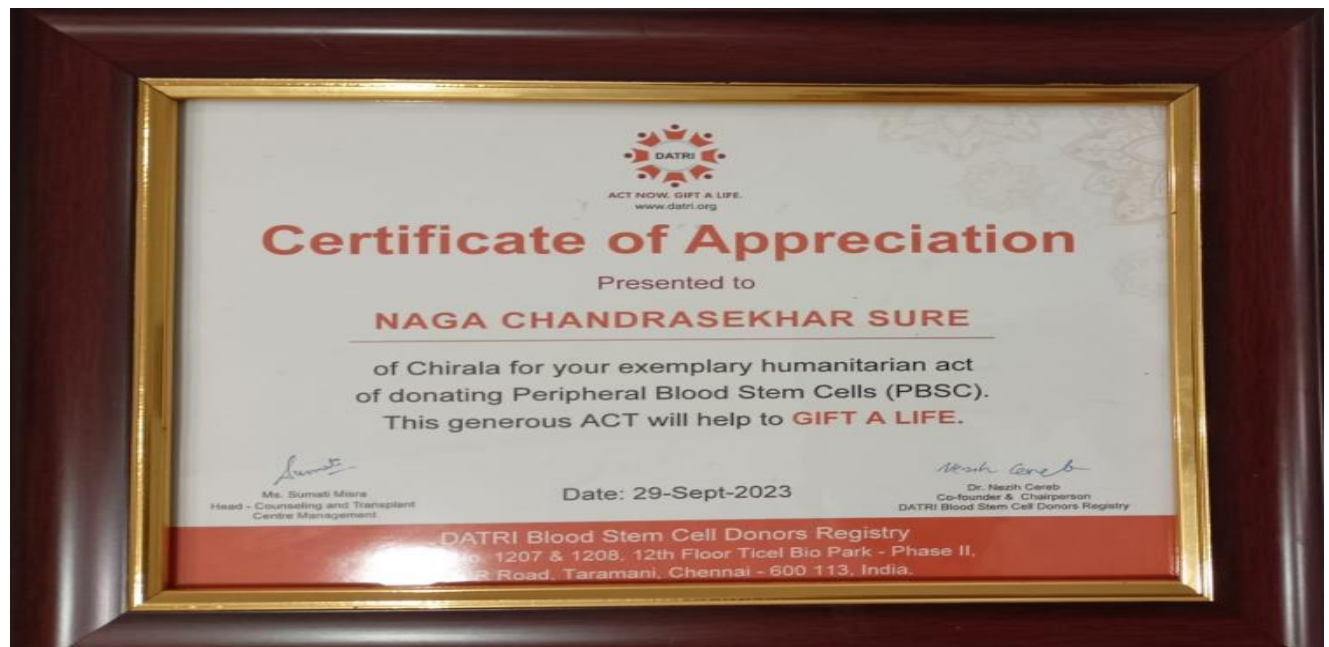
Roll No: NPTEL23CS73S44030106

To verify the certificate



No. of credits recommended: 2 or 3

**S Naga Chandrasekhar** humanitarian act of donating **Peripheral blood stem cell (PBSC)** on 29-09-2023.



**BAPATLA ENGINEERING COLLEGE::BAPATLA**  
**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**  
**Workshops/Webinars/FDP/Training Programs Conducted by Dept. of CSE**  
**July - September 2023**

<b>S.No</b>	<b>Name of the Event</b>	<b>Title</b>	<b>Resource Persons</b>	<b>Organizers/Co-ordinator</b>
1	Orientation	Faculty Orientation Program on C Programming	Dr. N. Sudhakar, Mr. M. Rajesh Babu, Dr. T.Nagarjuna, Mr.SundeepSaradhi	Dept of CSE

**FACULTY ORIENTATION PROGRAM on C-Programming** Organized by Department of Computer Science and Engineering from 24-07-2023 to 28-07-2023.



## **Bapatla Engineering College** (Autonomous)

### **Chief Patrons:**

Sri. M.Srinivasa Rao  
-President  
Sri. D.Rama Mohan Rao  
-Vice-President-I  
Sri. G.Dileep Kumar  
-Vice-President-II  
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- Principal

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Dr. P.Pardhasaradhi  
- Professor & HOD, CSE

### **Resource Persons:**

Dr. N.Sudhakar, CSE  
Dr. M.Rajesh Babu, CSE  
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## **Faculty Orientation Program on C – Programming**

24<sup>th</sup> – 28<sup>th</sup> July, 2023

**Organized by**  
**Department of Computer Science and Engineering**

**Venue:** Conference Hall, Research Park

The objective of this program is to train and enable the faculty members from non-computer science branches so that they can teach C-Programming to undergraduate students. The program aims at teaching the skills of problem solving by formulating the solutions to real world problems algorithmically and implementing the solutions in C language. This methodology helps the faculty members to code in other programming languages as well. The program includes both theory and lab sessions. The participants are expected to bring their laptops.

The course contents include: Problem Solving with Computer, Elements of C, Input and Output, Operators and Expressions, Control Statements, Arrays, Functions, Structures and Unions, Pointers and File Handling.

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# BAPATLA ENGINEERING COLLEGE - BAPATLA

(AUTONOMOUS)

A Five Day Faculty Orientation Program on

## **C - Programming**

Date : 24<sup>th</sup> to 28<sup>th</sup>, July 2023

Venue : Conference Hall, Research Park

Organized By

*Department of Computer Science & Engineering*





