



G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (For Women) (AUTONOMOUS)  
Shaikpet, Hyderabad – 500104  
DEPARTMENT OF INFORMATION TECHNOLOGY  
Insight AI – An AI ML Club

2023-2024

## REPORT

### National level Student Development Program on Artificial Intelligence & Machine Learning

Date of Program: 26-12-2023 to 30-12-2023

Collaborating Agency: ExcelR

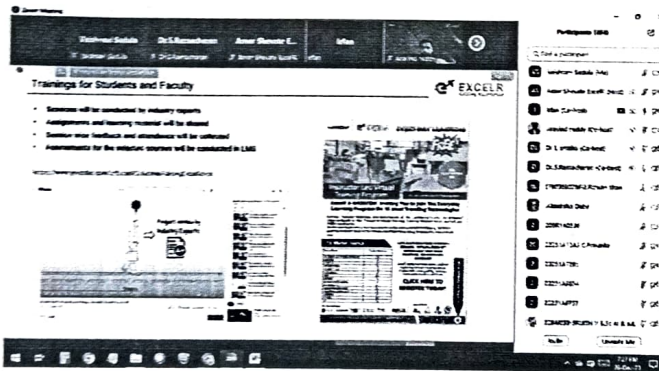
**About Resource Person:** Aravind Reddy.K is working as SME Data Science in Drreddy's Foundations. He has 8+ Years of industry and academic experience. He is working on various tools Data Science (PYTHON), ETL Tools with training experience in architecting applications with different ML algorithms, Artificial Intelligence, Machine Learning, and Deep Learning using Python, Azure ML, and IBM Watson studio

#### About the Program:

This program was conducted for 6 days in online mode from 7P.M to 9P.M. On the first day resource person gave introduction to Data Science and types of data. The second day topics were working with Data sets, Pandas library, visualization and hands on was conducted using Google colab. On the third day Machine Learning algorithms and Regression techniques with case studies were discussed. On the fourth day usage of ML algorithms for recommendation engines and Time series forecasting was discussed. On the fifth day resource person gave insights on Neural networks Unstructured data and how neural networks algorithms can work on unstructured data, Keras and Activation functions

Talk Link: <https://youtu.be/YLwb8KGGzDM>

**Outcomes:** Knowledge gained on pratical implemetation of AI algorithms and working with ML libraries available will help students in better understanding of subject, recruitment and mini/majorproject implementations.



Number of participants  
Benefited: 1736

**Overall Feedback:** The program was well received and 3171 participants from various disciplines across world have attended the SDP online and 1736 participants received certificates. Overall feedback of the FDP was Excellent with Avg Rating: 4.30 / 5. All participants appreciated the concepts, hands-on practical session, and suggested for increased duration of workshop.

Coordinators

Dr Supriya Vaddi  
Dr L.Smitha  
S.Vaishnavi

Dept HOD

Dr. S. Ramacharan  
24/1/24



**G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (For Women)  
(AUTONOMOUS)**

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**DEPARTMENT OF INFORMATION TECHNOLOGY**

**Chandamama Kathalu on 16-11-2023**

**Organized by the Department of Information Technology**

**About the Event:**

To bring back the moral and ethical values embedded in Chandamama Kathalu, an NGO named Swecha has released 'AI Chandamama Kathalu', said to be a first-of-its-kind AI built for storytelling. Launching the AI, Shobu Yarlagadda, founder of Arka Media Works, lauded thousands of people who took part in this initiative, charting a path towards Telugu AI.

Co-founder of Ozonetel Chaitanya, founder of Swecha Kiran Chandra and IIT-Madras professor Gaurav Raina formulated the idea to build an AI solution for stories.

Chandamama Kathalu were chosen as the source for data due to the moral values they instilled among children for generations. The stories, available in scanned PDFs, were digitised first. Through the Swecha community, over 10,000 students and faculty members from 30 engineering colleges helped proofread the Telugu text digitalised from old magazines. A total of 40,000 stories were converted this way.





Felicitation to K.Ganesh by Department of Information Technology Members-  
Dr.I.Ravi Prakash Reddy, Dean, Placements & Corporate Relations,  
Dr.S.Ramacharan, Professor & HoD-IT, Coordinators B.V.Prasad Babu.



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 **GPS Map Camera**

**Hyderabad, Telangana, India**  
MANAGEMENT BLOCK, G NARAYANAMMA INSTITUTE OF TECHNOLOGY AND  
SCIENCE, Ambedkar Nagar, Film Nagar, Hyderabad, Telangana 500033, India  
Lat 17.41073°  
Long 78.398824°  
16/11/23 12:41 PM GMT +05:30

 Google

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HOD IT

**G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE**  
(For Women)  
(AUTONOMOUS)  
**DEPARTMENT OF INFORMATION TECHNOLOGY**

**Event:- Algorondo Blockchain Club Inaguration in IT Dept, Gnits**  
**Date:- 11<sup>th</sup> August 2023**

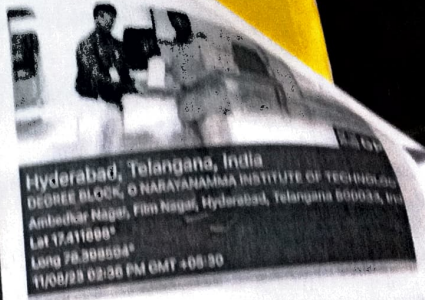
**Time:- 1:00pm-3:30pm**

**Algorand Blockchain Club** was launched by IT Department for B.Tech Students in association with ALGORABD Foundation. As part of this club inauguration Dr.I.Ravi Prakash Reddy Sir, Dean(Placements) and Dr.S.Ramacharan Sir, HOD IT addressed all the Final year Students and delivered them the importance of having hands on advanced technology like Blockchain.. As, 3 Faculty Coordinators and 11 Student coordinators out of which 1 Student coordinator was elected as GNITS Club lead too. In this regard a guest lecture was given on **"Introduction to Blockchain"** by **Mr.Akash Rao Mallareddy**, ALGOBHARATH Regional Ambassador on 11<sup>th</sup> Aug 2023 from 1:00pm to 3:40pm in IT Seminar Hall. **Mr. Akash sir** gave below insights:-

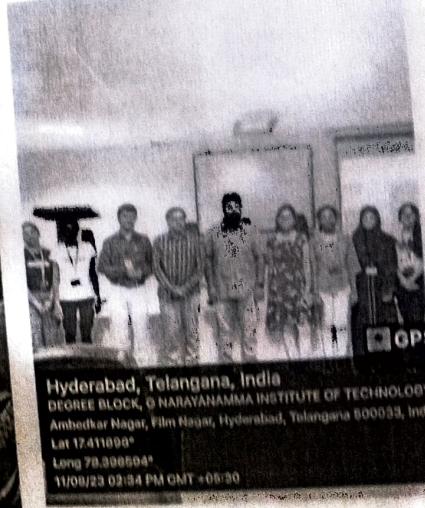
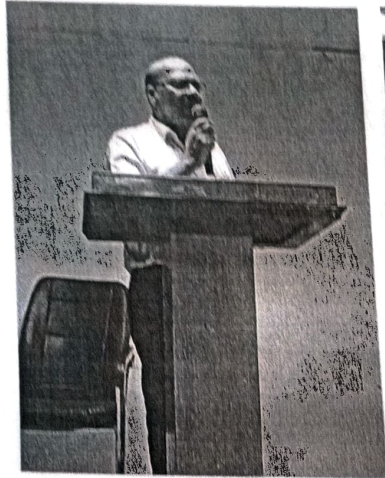
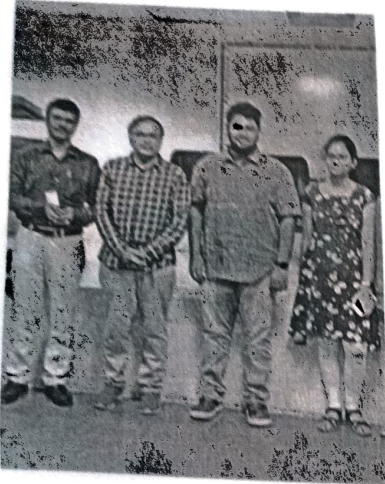
- MIT professor klivk it founder of Algorondo blockchain.
- Test net is used for testing and main net for production
- Algorondo launched in 2016 and works on carbon footprint, supply chain, music , healthcare, for tamper proof data.
- They are working with 3crore computers( 3million nodes) currently as part of Algorondo Blockchain.
- In Blockchain apps are called as Decentralised apps (Dapps)..no one controls the application and Smart contract executes when an event is triggered n can't be stopped in middle.
- Later info was given on Genesis block first block has 3fields, all zeros (temp hash I.e., for previous hash), data, current hash and other blocks how the data is contained.
- He ignited things on Web Browsers Web 1 read data, Web 2 social Web u can like n share anything and do read n write data, Web 3 combination of data security in Blockchain read, write n update data.,
- Brave browser is a blockchain Web browser, Gemini AI and Blockchain, Google Cloud vertex regarding images features were discussed. Eg:- Speech to text.
- Google Cloud tied up with Web 3 companies like polygon(Indian Blockchain)and it also opened opportunities for Blockchain.
- Each Blockchain uses different languages like Ethereum uses solidity, Algorond uses pyTel similar to python using flask framework. Algorond uses bther to develop framework. People can download those products.
- Comparision of block of transactions with respect to Bitcoin is done in 10 to 15mins and where as Algorond does in 2mins was done.
- Algorondo is a layer 1 company and uses milkmeda platform and where as Layer 2 has Virtual machines.
- Finally, insights on Rand, <https://messina.one/bridge>, <https://app.algomint.io/> and Travelx were given.

  
**Faculty Coordinators**

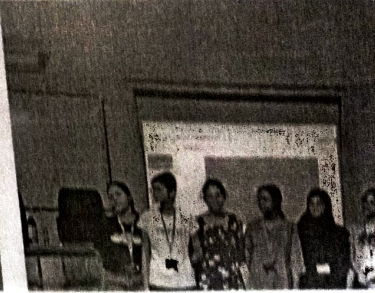
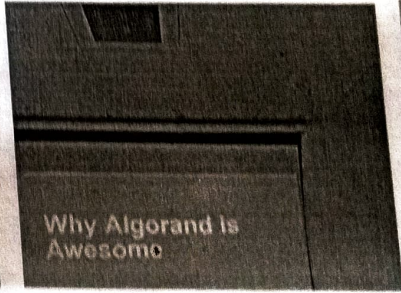
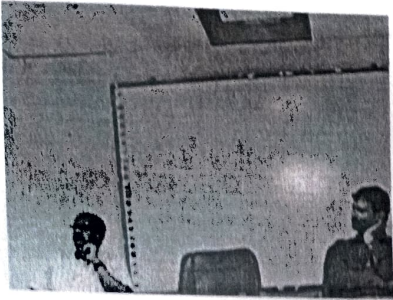
  
**HOD,IT**



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Long 78.398504°  
11/08/23 02:36 PM GMT +05:30



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11/08/23 02:34 PM GMT +05:30



G. Narayanamma Institute Of Technology & Science(For Women)

(Autonomous)

Department Of Information Technology

Report on Advanced Robotics Workshop

Event Name : 2-day Hands-on workshop on Advanced Robotics

Date : 3<sup>rd</sup> May to 4<sup>th</sup> May, 2024

Coordinator : Mr B.V Prasad Babu, Mrs. Ch.Sravanthi

Resource Person : Mr. Deepak Mittal

Budget/expenditure : 38000

No of Participants : 76

Brief Description :

The two-day hands on workshop, "Advanced Robotics(CAD Modelling and 3D printing) Starting from Scratch (CAD Modelling)," hosted by the E-Yantra Club, GNITS, and the Atal Incubation Center GNITS, led by Mr. Deepak Mittal, Senior Project Scientist at IIT Delhi, offered participants a comprehensive exploration of CAD modelling using Fusion 360. Covering topics from software basics to advanced techniques, attendees gained practical experience in sketching, constraints, extrusion, assembly design, and motion studies.

Transitioning to offline mode on day two, participants engaged in hands-on activities, including designing on Fusion 360, 3D printing CAD models, and assembling laser-cut designs. The workshop culminated with a session on building a robotic arm, integrating electronics, and resolving individual queries. Overall, the workshop equipped participants with essential skills and knowledge to navigate the realm of advanced robotics and prototype development effectively.



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Coordinator

*[Handwritten signature]*  
HOD

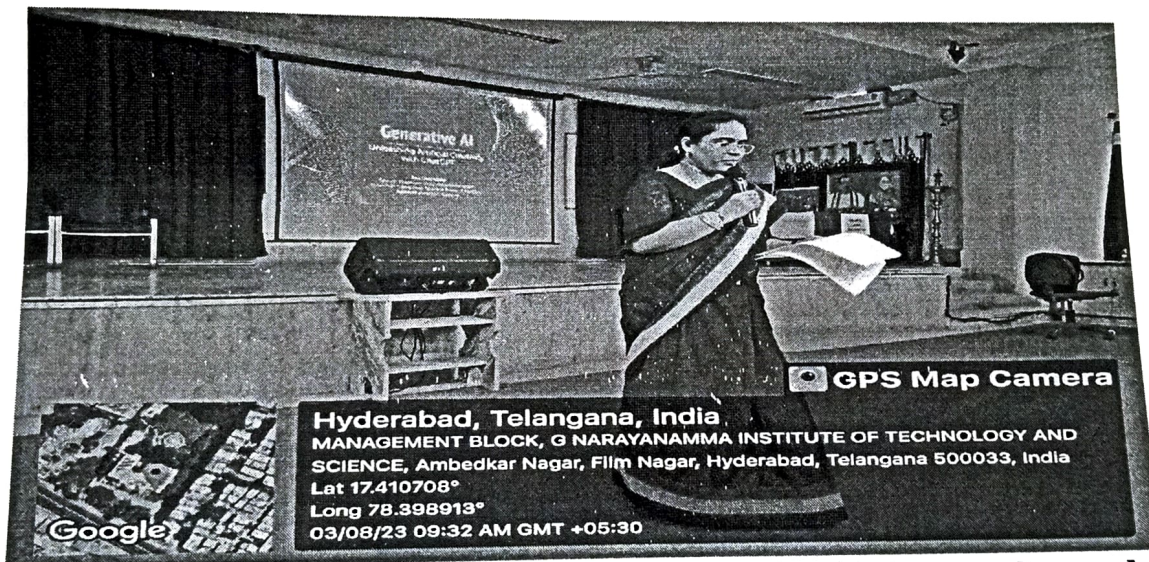
*Handwritten signatures: Ravi Prakash, Ravi Kumar*

## REPORT OF GUEST LECTURE ON "UNLEASHING ARTIFICIAL CREATIVITY WITH CHATGPT AND INNOVATION TO START UP"

Guest Lecture was conducted on 3<sup>rd</sup> August 2023 on "Unleashing Artificial Creativity with ChatGPT and Innovation to Startup". Resource Person was Mr. Ravi Kumar, Search Engineer at LinkedIn/Microsoft, M.Tech in Computer Science from IIT Kanpur Alumni: Amazon, Google.

A total of 323 participants registered and 200 participants finally attended from III<sup>rd</sup> year Students of IT, CST, CSE, CSM and CSD Branches.

The program progressed with Welcome address and Speaker introduction followed by the guest lecture by Mr. Ravi Kumar from 9:15am to 12:00pm. Dr. I. Ravi Prakash Reddy Sir, Dean (Placements), Dr. V. Sesha Bhargavi madam, Mrs. M. Sridevi madam & Mrs. Ramya Ponnada along with 3<sup>rd</sup> year students were present at the session.



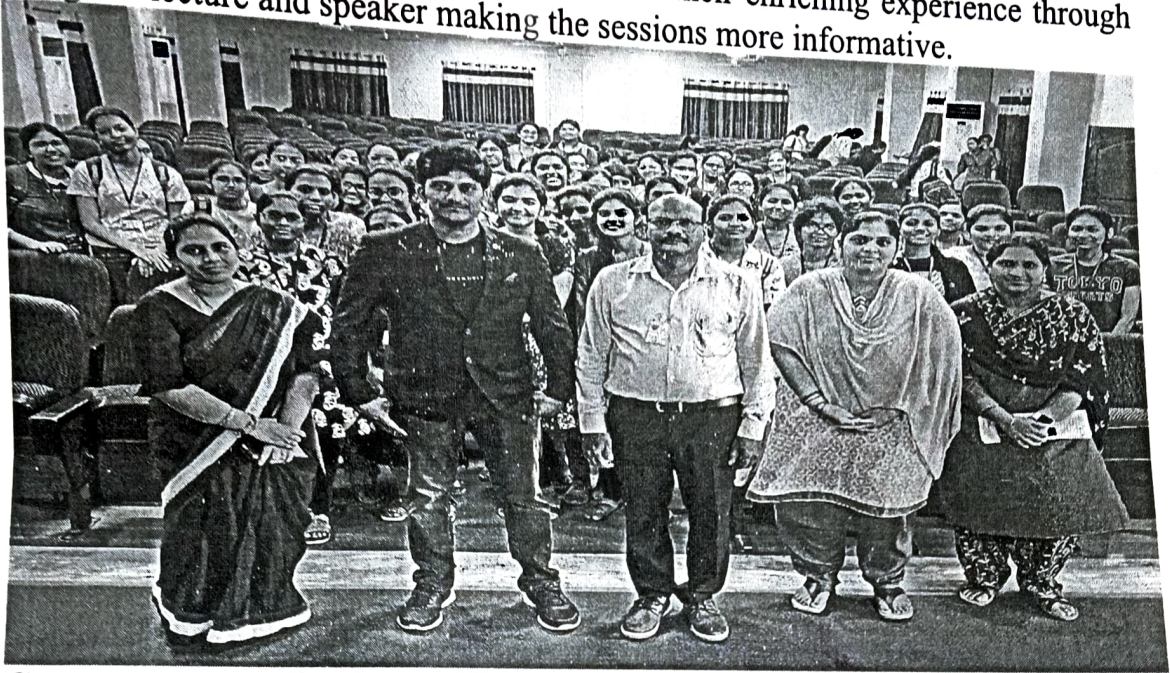
**Welcome Address and Guest Introduction done by Mrs. Ramya Ponnada**

Mr. Ravi Kumar is working as Search Engineer at LinkedIn/Microsoft, and he is also an investor of 10 startup early and late stage startup companies. He also worked with Microsoft, Google, Amazon and Innovative Silicon Valley Startups. At LinkedIn, Ravi played a pivotal role in enhancing mobile development, shaping infrastructure and contributing to the growth of LinkedIn's search engineering. Currently, he is actively involved in leveraging ChatGPT and GenAI technologies to revolutionize LinkedIn member searches. His contribution have redefined professional connections on the platform.



Second session was on "Innovation to Startup" where the speaker discussed 10 steps process for initiating and getting succeeding a start up by giving examples of how the now giant companies started initially.

On the final note of the session, Vote of thanks was proposed by Dr.I.Ravi Prakash Reddy Sir, Dean(placements) and Mrs.Ramya Ponnada for which Speaker, her co-faculty members Dr.V.Sesha Bhargavi Madam, Mrs.M.Sridevi Madam and the participants were present to shower their sincere thanks to the speaker. Most of the participants spoke about their enriching experience through this guest lecture and speaker making the sessions more informative.



**Group Pic:- Mr.Ravi Kumar(Speaker),Dr.I.Ravi Prakash Reddy Sir,Dean(Placements), Dr.V.Sesha Bhargavi Madam,Mrs.M.Sridevi Madam and Mr.Ramya Ponnada and few Students keen to take pic with Speaker.**

G. Narayanamma Institute of Technology & Science (For Women)  
(Autonomous)

Department of Information Technology  
2023-2024

Report

## Session on "Importance of Cyber security"

Date of program: 09-08-2023

Collaborating Agency: Data Security council of India (DSCI)

**About Resource Persons:** Dr. Sriram Birudavolu- CEO, Cyber Security Centre of Excellence, Telangana. Dr. Sriram holds a Ph.D. in open Innovation in Information and communication Technology. He also published a book titled "Business Innovation and ICT strategies". He worked with many reputed tech companies like Oracle, Verisign, Siemens and HP.

Ms.Harshitha- Assistant Manager, Data Security council of India (DSCI).

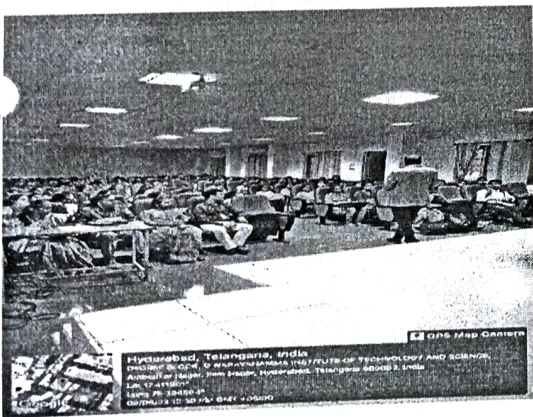
Ms.Renu- Academic Head, Data Security council of India (DSCI).

### About the Program :

Department of IT signed a MoU with Data Security Council of India on this occasion a session was conducted for III B.Tech students on "Importance of cyber security". Ms.Harshitha started the session with an introduction to DSCI ,its activities and achievements. Ms Renu discussed about various career opportunities available in area of cyber security, The Indo –Dutch cyber security workshop for students. She also discussed about various tools used for cyber security.

Dr. Sriram addressed the students he provided students with case studies providing insight into the importance of cyber security.


**Outcomes:** Participants acquired knowledge on importance of cyber security, various opportunities in the field of cyber security, Learning platforms available for cyber security.



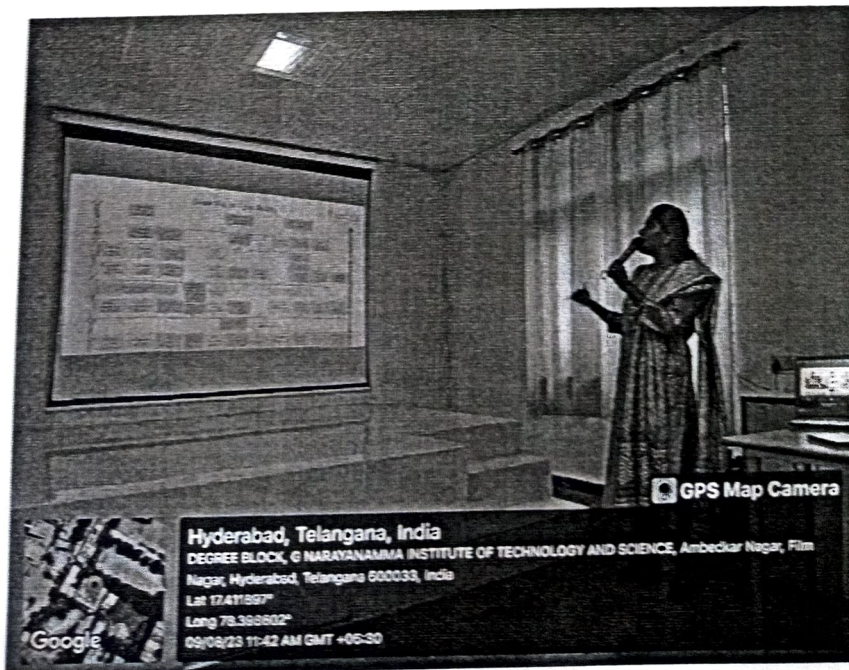
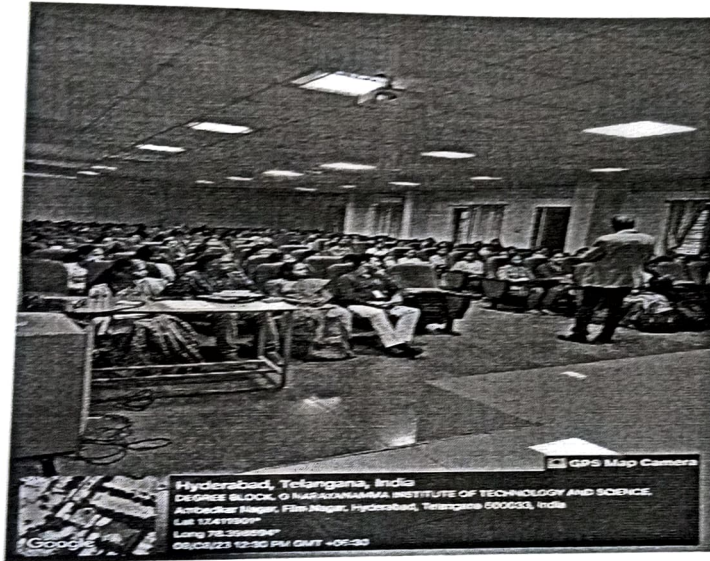
Number of participants: 165

Overall Feedback: The program was well received by students. Participants valued the concepts provided by resource persons. The overall feedback on the session was good.

  
Workshop Coordinator

  
HOD-IT  
(Dr S. Ramacharan)

DEPARTMENT OF IT





# CSI STUDENT CHAPTER

## G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE

(AUTONOMOUS)  
(FOR WOMEN)

DEPARTMENT OF INFORMATION TECHNOLOGY

### A Report on 'GUEST LECTURE: FUTURE PROOFING TECH CAREERS'

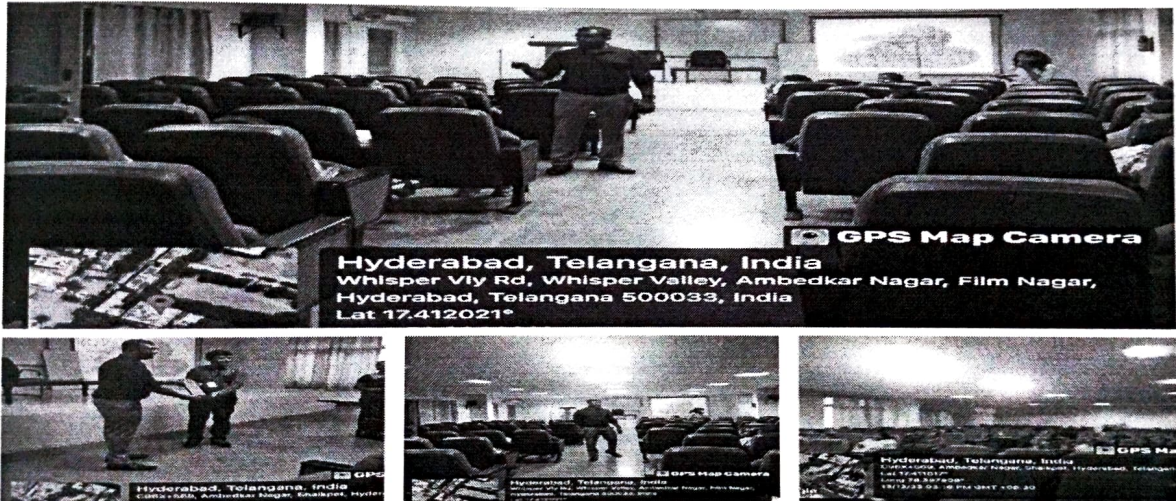
**Event Date** : 13 DEC 2023

**Speaker(s)** : Dr SURYA PRAVEEN, General Manager, VFX multinational company- Rotomaker

**Participants**: II year students of IT,CST,CSE,CSE(AI&ML,Datascience)

**Key points:**

- Engaging and insightful session organised by the IT Department at Gnits.
- Explored strategies for future-proofing tech careers in the dynamic field of computer science.
- In depth discussions on job risks and opportunities in the ever evolving tech landscape.



**Number of participants:** 90

**Feedback:** Speaker's knowledge has undoubtedly inspired our students and provided them with a roadmap for their future careers.

  
CSI Coordinator(s)

Ms.K.Sridevi  
Ms.G.Divya

  
HOD IT

Dr.S.Ramacharan



**G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (For Women)**  
**(AUTONOMOUS)**

**Shaikpet, Hyderabad – 500104**

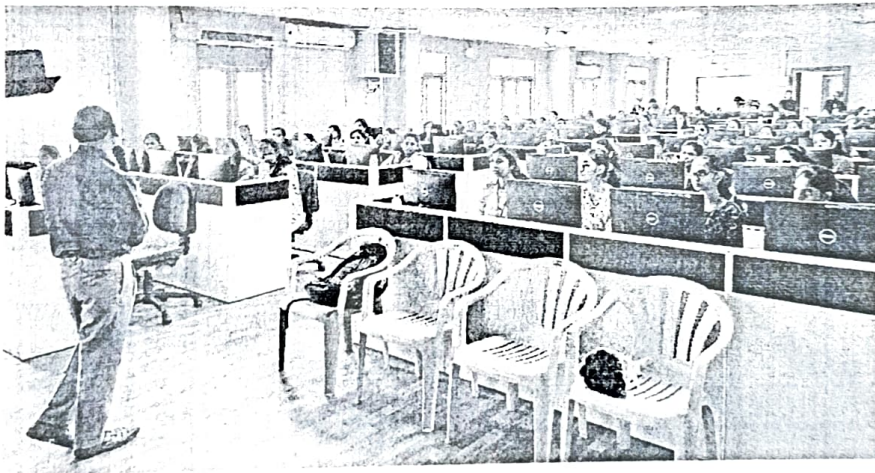
**DEPARTMENT OF INFORMATION TECHNOLOGY**

**Insights into Machine Learning Models and Data Science in real time applications with Hands-on On 11-12-2023**

**Organized by the Department of Information Technology**

### **About the workshop:**

Pre conference of IT department on "Insight into Machine Learning models and Data science in real time applications with Hands-on" conducted on December 11th, 2023 by Dr K Durga Prasad Remote Data Scientist AILT USA. The workshop covered essential aspects of ML algorithms, including creating master models using datasets, App Developing, App Testing on browser, and studying real-time industry applications.



This workshop covered essential topics in Machine Learning algorithms, master model creation with datasets, dive into app development, and discover effective browser testing methods. The workshop culminates in a real-time industry case study, providing valuable insights for practical application. Don't miss this opportunity to enhance your skills and stay ahead in the everevolving tech landscape!. More than 107 students are participated for this Preconference



Resource Person Dr.K.Durga Prasad with Faculty Members and Participants.



Felicitation to Dr.K.Durga Prasad by Department of Information Technology Members- Dr.I.Ravi Prakash Reddy, Dean, Placements & Corporate Relations, Dr.S.Ramacharan, Professor & HoD-IT, Preconference Coordinators Dr.V.Supriya, B.V.Prasad Babu, G.Divya .

A red handwritten signature, likely of the person who provided the caption for the second photograph.



# CSI STUDENT CHAPTER



## G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (AUTONOMOUS) (FOR WOMEN) DEPARTMENT OF INFORMATION TECHNOLOGY

### A Report on 'GUEST LECTURE: INSIGHTS OF DATA SCIENCE'

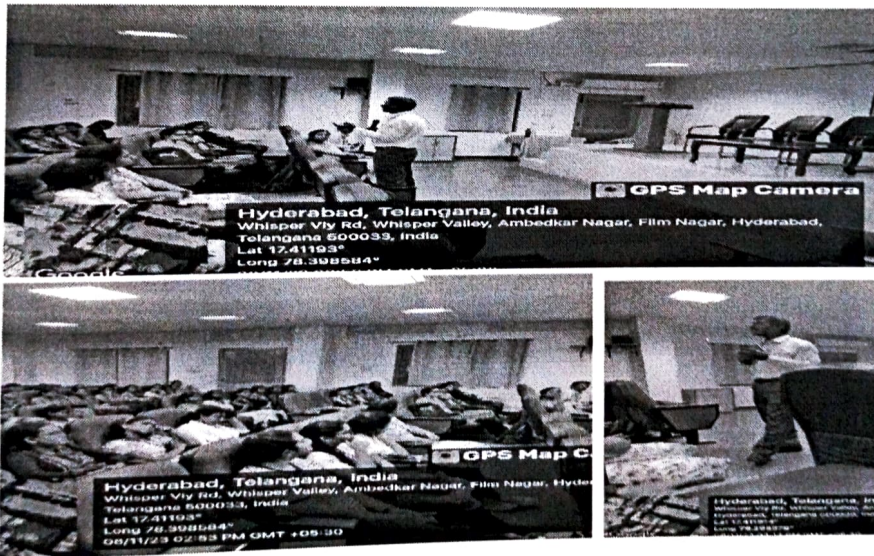
**Event Date** : 8 NOV 2023

**Speaker(s)** : Dr.A.V.Krishna Prasad , Secretary for CSI , HYD

**Participants**: II,III year IT and CST students.

#### Key points:

- The Guest lecture is on the topic of what is data science and why is it important?
- The guest was very energetic throughout the lecture and delivered insights on data science. He was interactive throughout the session.
- This lecture was very useful for a student and his words are very inspiring for our young minds of gnits.
- His lecture made students think that being an IT student we have many other opportunities rather than being a software engineer.
- It was a 2 hours lecture and the students were very interested to be a part of this lecture.
- At the end of the event, a memento was given to the guest as a remainder for his wonderful speech at GNITS.



**Number of participants:** 156

**Feedback:** Students enjoyed the session on data science. They gained knowledge on how data can be segregated in real time scenario. The feedback received was Good.

**CSI Coordinator(s)**

Ms. K. SRIDEVI

Ms. G. DIVYA

HOD IT



**G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (For Women)**

**(AUTONOMOUS)**

**Shaikpet, Hyderabad – 500104**

**2022-2023**

**REPORT**

**SPACE APP INDIA and co-organized by SUMVN Hackathon**

**Date of Program:** 29-08-2023 and 30-08-23

**Collaborating Agency:** SPACE APP INDIA and co-organized by SUMVN

**Number of Participants:** 53 Teams

**About the Program:**

The students of GNITS threw themselves in one of the world's largest space tech hackathons, 'NASA International Space Apps Challenge 2023'. This 24-hour hackathon was organized by SPACE APP INDIA and co-organized by SUMVN at G. Narayanamma Institute of Technology and Science(for women).

The Boot camp was conducted on 14th of August, 2023 where the students were guided with regard to the hackathon and all of the queries raised by the students were answered. The 24 hours hackathon was conducted on 29<sup>th</sup> and 30<sup>th</sup> of August, 2023 with the energetic participation of 53 teams. Students were given time to work on their ideas and then came up the mentoring sessions through which the students were given assistance to their doubts. After three rounds of scrutinization and validation of ideas the winners were declared and all the students were appreciated for their brilliant ideas and efforts.

**Outcomes:** 18 Problem Statements were identified and implemented.



**Overall Feedback:**

Overall hackathon organized and mentoring is excellent. Students participated to gain the knowledge. Students get benefited by this exposure. This remarkable event would have been impossible without the efforts of our principal, faculty and the organisers.

HOD-IT  
Dr. S.Ramacharan,

*30/08/23*



**G.NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE**  
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(FOR WOMEN)

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**VALUE ADDED COURSE REPORT**

Department	Information Technology
Head of Department	<b>Dr.S. Ramacharan, Professor &amp; Head IT</b>
Name of the Workshop	A 3-day Bootcamp on, “Cyber Security & Ethical Hacking” followed by Hackathon on 3 <sup>rd</sup> day. Association with Supraja Technologies.
Date of the Workshop	9th - 11th Oct 2023
Time	08.30AM - 6.30 PM
Venue	E-Classroom IT, F-Block (4th Floor)
Faculty Coordinator(s)	<b>CS Club Faculty Coordinators</b> M.Sridevi, Asst.Prof, IT M.Deepthi, Asst.Prof, IT D. Vandana, Asst.Prof, IT K.Jayasree, Asst.Prof, IT D.Sreelakshmi, Asst.Prof, CST
Student Coordinator(s)	<b>Student Committee</b> Poojitha, IIIyr, IT K. Asheeta Reddy, IIIyr, IT Ch. Tejaswini, IIIyr, IT G Yashaswi Sri, IIIyr, IT A. Sathwika, IIIyr, CST B. Shivani, IYr, IT B. Samrithi Reddy, IYr, IT C. Athulya, IYr, IT D. Sneha, IYr, IT A. Vishnupriya, IYr,CST S. Praneetha, IYr, CST
Resource Persons	Mr. Santosh Chaluvadi, CEO at Supraja Technologies, Mr. Siddharth, Junior Security Analyst Mr. Kumar, Junior Security Analyst (Team)
No. of Participants	120

Description	<p>The speaker for workshop has been warm welcomed to the session on behalf of GNITS, Head of the Department, Faculty Co-Ordinator's, and students. Head of IT department <b>Dr.S. Ramacharan, Professor &amp; Head IT</b>, sir has given abrief introduction about the resource persons and about the VAC. Mr.Santosh given introduction about what is Cyber Security and Ethical Hacking and shared their experience on it with students and discussed about the Internship opportunities available at Supraja Technologies that will be offered based on performance of students in Hackathon.</p> <p>Mr.Siddharth, Junior Security Analyst started session with basic terminologies of cyber security and ethical hacking. He also discussed the phases of ethical hacking and taken hands-on practice in open sources where we can check if our data is secure or not (Tafcop – Govt. Portal etc.) and gave awareness on how to protect our data from cyber-attacks (Proton Mail, ESET etc.). At the end of day resource person clarified all the queries of students.</p>
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Faculty  
Coordinator

  
HOD-IT

# G. NARAYANAMMA INSTITUTE OF TECHNOLOGY & SCIENCE (AUTONOMOUS) (FOR WOMEN)



## CSI STUDENT CHAPTER

DEPARTMENT OF INFORMATION TECHNOLOGY

### A Report for VAC on 'Application Development based on SDLC using Web Technologies'



Event Date : 14/03/2024 to 16/03/2024

Date: 19/03/2024

Speaker(s) : Mr. Sharath Kumar, ExcelR Trainer, ExcelR Edtech Pvt Ltd-HYD

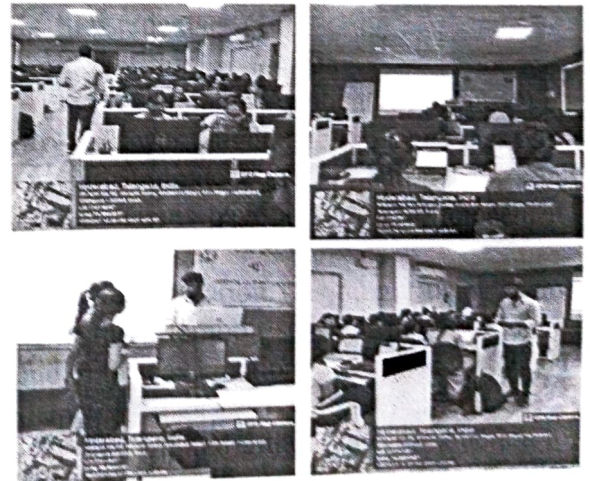
Participants : II year II sem IT, CST, CSE, CSM, CSD students.

#### Key Points:

The main objective of this workshop is to Develop an Application using Web Technologies. On the first day, the creation of the frontend was taught, and the languages used were HTML, CSS and JavaScript. An assignment was given to develop frontend for any non-local organization at the end of the day. Most of the students have actively participated to complete the assignment.

On the second day, databases creation and Backend creation was taught using many applications like mongodb, react app, node js etc. In the afternoon session, the connection between backend and frontend was taught. By the end of the day creation of backend was given as an assignment for the online bookstore management.

On the last day, Deployment, version control with git and github and introduction to authentication was taught. By the end of the workshop, A memento was presented to the amazing speaker, Mr. Sharath Kumar in the remembrance of this excellence work in workshop, followed by a photo session. An assignment of creating a complete Application using web technologies was given as the part of the Hackathon with a deadline of 19 mar 2024.



Number of participants: 134

**Feedback:** Students enjoyed the VAC on App development. They gained knowledge on how an application is created and how it works. The feedback received was Good.

CSI Coordinator(s)

Mrs. K. SRIDEVI

Mrs. G. DIVYA

*Divya*

HOD IT

*20/03/24*

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**Information Technology**

**A.Y.: 2023-2024**

**Algorand Blockchain Club**

**REPORT**

**Title: Insight session on “Web 3 job Opportunities & Smart Contract Development and Indexing using the Graph”**

**Resource Persons:** Ms. Sruthi Manthena, Developer Advocate at The Graph & Developer Relations Engineer at FiDi

**Date of Program:** 01/11/2023

**Number of Participants:**

**About the Program:**

The objective of the session was to give exposure to students in building up skillset in web3 and blockchain technology and thus grab job opportunities in the same. The Insight session on, “Web 3 job Opportunities & Smart Contract Development and Indexing using the Graph” is started with warm welcoming the resource person Ms. Sruthi Manthena. Dr. S. Ramacharan HOD of IT department overviewed the importance of Blockchain in upcoming days and opportunities.

Following topics are Covered in session:

1. Introduction to blockchain technology
2. What is bitcoin
3. Types of blockchain
4. Polygon
5. DAP
6. Smart Contract
7. Web3
8. Applications of blockchain technology
9. Use of blockchain the graph in the Graph
10. Hands on

Along with this topics Ms. Sruthi highlighted the opportunities with this technology. Ms. Sruthi also shared her personal experience with student. At the end of session faculty of IT department Dr. V. Supriya felicitated the resource person by giving memento.

**Outcomes:** Participants acquire knowledge on web3 and blockchain technology and thus grab job opportunities in blockchain technology.

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**Shaikpet, Hyderabad – 500104**

**Information Technology**

**A.Y.: 2023-2024**

**Algorand Blockchain Club**

**Overall Feedback:**

Overall session organized and conducted effectively. Students participated to gain the knowledge. Students get benefited by learning new technologies and how to use web3 for blockchain technology.

**Photos:**



**Faculty Coordinators**  
Mr. C. Sudhakar Reddy, IT Dept  
Mrs. T. Aparna, IT Dept  
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## REPORT

# Introduction to Web3 and Sharduem Blockchain Technology

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**Organiser:** V. Sumanth

**Number of Participants:** 40

### 1. Introduction:

This aims to explore and analyze the concepts and implementations of Web3 and Sharduem Blockchain technology. Both concepts hold great promise in shaping the future of the decentralized web and enabling improved scalability in blockchain networks.



### 2. Background:

**2.1 Web3:** Web3 refers to the third generation of the internet, where the decentralized web becomes a reality. It is based on the principles of blockchain technology, enabling peer-to-peer interactions without relying on central intermediaries. Web3 allows users to have full control

## **4. Findings:**

**4.1 Web3:-** Web3 enables a range of exciting applications, including decentralized finance (DeFi), Non-Fungible Tokens (NFTs), decentralized identity (DID), and decentralized exchanges (DEXs).

- One of the core technologies enabling Web3 is the InterPlanetary File System (IPFS), which provides a distributed file storage system to enable the sharing and retrieval of data.

- Other key technologies associated with Web3 include decentralized autonomous organizations (DAOs), smart contracts, and cryptographic tokens.

- Challenges associated with Web3 include user adoption, legal and regulatory frameworks, scalability, and privacy concerns.

## **4.2 Sharding Blockchain Technology:**

- Sharding technology divides the blockchain network into smaller shards, each independently processing a subset of transactions while maintaining overall consensus.

- It aims to solve the scalability problem by enabling parallel processing, resulting in higher throughput and faster confirmation times.

- Sharding requires sophisticated techniques for cross-shard communication, shard selection, and data storage to ensure consistency and security.

- Potential challenges include maintaining decentralization, ensuring security during shard transitions, and designing efficient consensus protocols.

## 5. Conclusion:

Web3 and Sharduem Blockchain technology have the potential to revolutionize the way we interact and transact online. Web3 provides a decentralized and secure environment for a range of applications, while Sharduem tackles scalability challenges faced by conventional blockchain networks. Both technologies have their unique benefits and challenges, and further research and development are needed to fully realize their potential.

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