

# DAYANANDA SAGAR UNIVERSITY



## School of Engineering Department of Computer Science Engineering

REPORT ON

### Five days - Value added Course

On

### “Demystifying AI and ML”

24<sup>th</sup> Jan 2022 -29<sup>th</sup> Jan 2022

Time: 9:30 am – 4.40pm

**Faculty Coordinators:**

**Dr. Jayavrinda Vrindavanam**, Professor and Chairperson , Department of CSE(AI&ML)  
and

**Dr. Meenakshi Malhotra**, Associate Professor , Department of CSE.

**Target Audience** : 3<sup>rd</sup> year Computer Science Engineering Students

# Report on Day-1

**Day-1: 24/01/2022**

**Time: 9:30 am to 4:40 pm**

The day 1 of the programme (24/01/2022) started with an inaugural speech by Dr. Srinivas A, Dean School of Engineering and talk on the 'Introduction to workshop' by Dr. Girisha G S, Chairperson, Department of Computer science Engineering.

## **Resource Persons:**

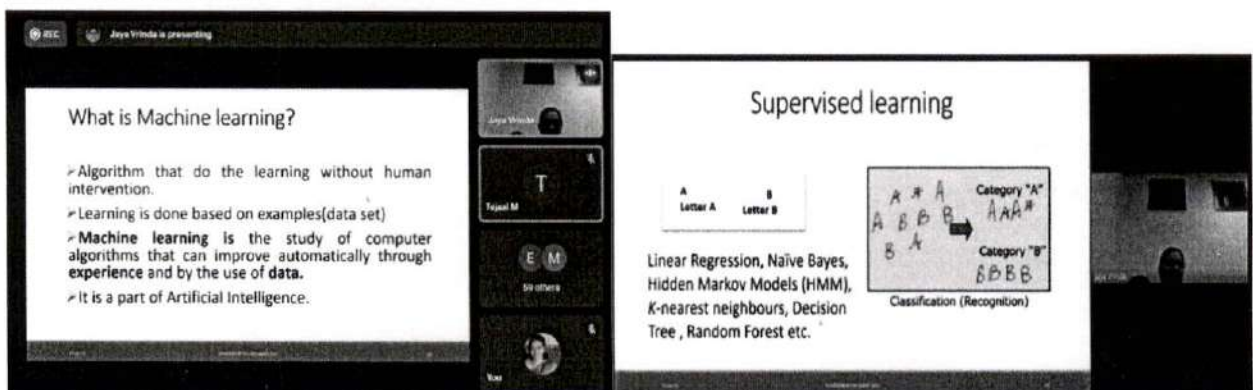
Dr. Jayavrinda Vrindavanam; Dr. Basavaraj N Hiremath; Dr. Meenakshi Malhotra and Prof. Arjun Krishnamurthy

The morning session began with the lecture sessions on various introductory topics such as 'Introduction to AI and ML, ML types and systems, Evolution of AI and ML and Python Libraries for AI and ML'. The objective of these 4 four sessions conducted on the day-1 was to make the participants to understand the basics of Artificial intelligent and machine learning, the types of Machine learning and Evolution of AI and ML. Python Libraries for AI and ML was also conducted to make the students understand Python Libraries for AI and ML to be used in subsequent days along with hands on training to all the participants.

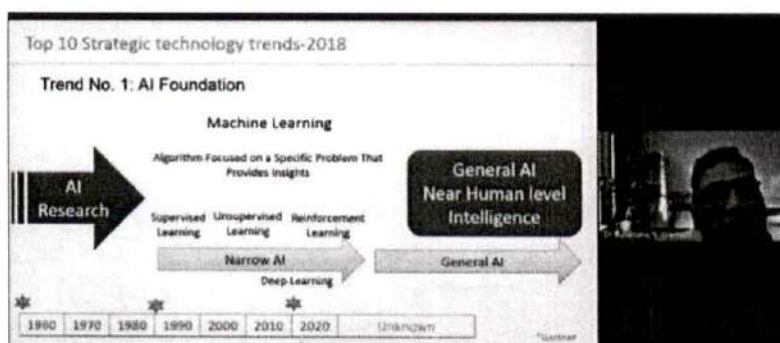
The participation was overwhelming with 74 participants attended during the day-1 of the workshop.

## **Workshop Photos:**

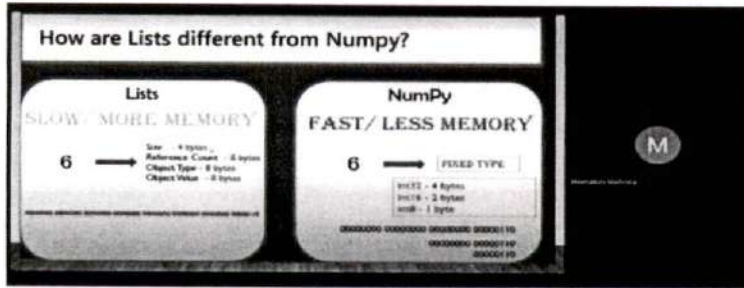
1. Forenoon session on "Introduction to AI and ML, ML types and systems." by Prof. Jayavrinda Vrindavanam



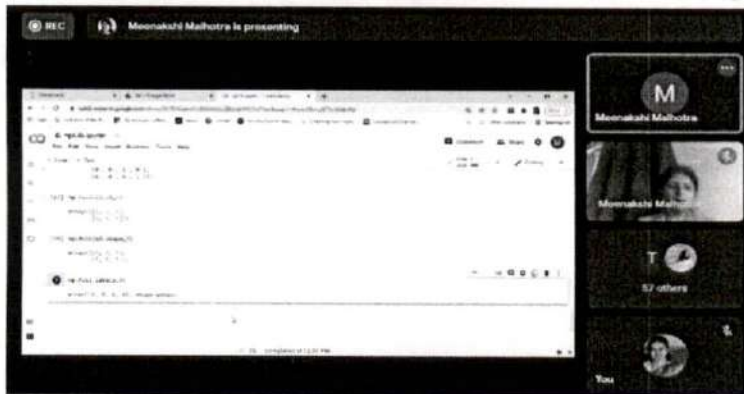
2. Forenoon session on "Evolution of AI and ML " Presentation by Prof. N. H. Basavaraj



3. Forenoon Session on “Python Libraries for AI and ML-Numpy by Prof. Meenakshi Malhotra



4. Afternoon Session on “Python Libraries for AI and ML- Pandas, matplotlib, NLPK by Prof. Meenakshi Malhotra & Prof Arjun Krishnamurthy



**Report on Day-2**

**Date:** 25/01/2022

**Time:** 9:30 am to 4:40 pm

**Resource Persons:**

Dr. Debanjali Bhattacharya and Dr. Pramod Kumar Naik

The day 2 of the programme (25/01/2022) had four sessions focused on topics associated to mathematical aspects laying foundation to Artificial Intelligence and Machine Learning.

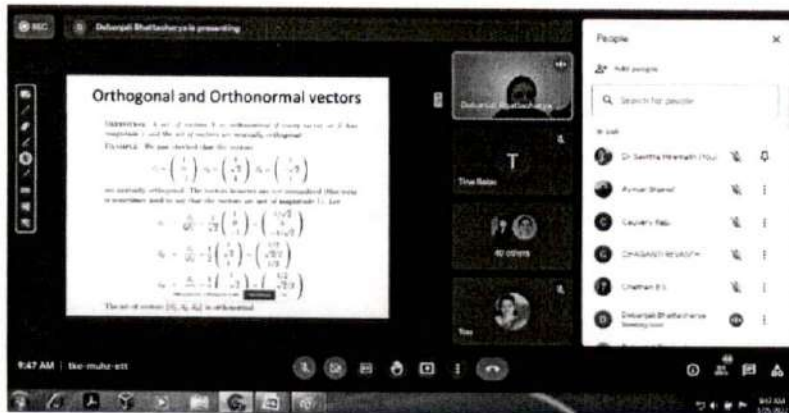
Mathematics plays an important role as it builds the foundation for programming for these two streams. And in this course, we've covered exactly that. We designed a complete course to help students to master the mathematical foundation required for writing programs and algorithms for AI and ML. The course had been designed in collaboration with industry experts to help breakdown the difficult mathematical concepts known into easier to understand concepts.

The morning session was addressed by Dr. Debanjali Bhattacharya, who gave a brief introductory and hands-on session pertaining to various important concepts focusing, “Mathematics for Machine Learning”. Topics like Orthogonal, orthonormal set of vectors, linear dependence, linear independence, solving systems of linear equations and so on. Google-colab was used for hands-on Session.

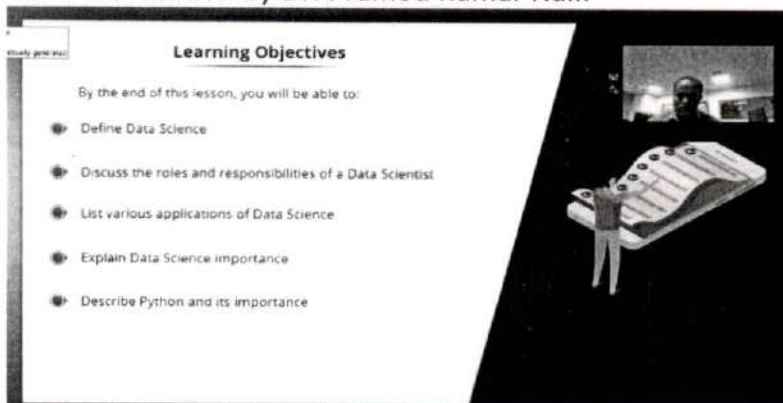
The subsequent session was addressed by Dr. Pramod Kumar Naik, who gave a brief introductory and hands on session “Statistics for AI and ML”. Python libraries like Numpy, Pandas, Seaborn, Matplotlib and Scikit Learn were explored. Google colab was used for hands-on Session. Last session of the day covered theory and hands-on session on linear regression.

## Workshop Photos:

### 1. Presentation by Dr. Debanjali Bhattacharya



### 2. Presentation by Dr. Pramod Kumar Naik



## Report on Day-3

**Date:** 27/01/2022

**Time:** 9:30 am to 4:40 pm

### **Resource Persons:**

Dr. Jayavrinda Vrindavanam , Chairperson, Department of AI and ML;

Dr. Rajesh T M & Dr. Renukadevi M.N, Dr. Jayita Saha Department of CSE, DSU

The objective of the workshop was to provide in-depth knowledge of the analysis design and demo of ML algorithms and applications.

At 9:30 AM, Dr. Jayavrinda started with process flow of ML project and explained in detail about different Machine learning algorithms.

Next session was taken over by Dr. Rajesh at 10:15. Sir started explaining about pattern recognition algorithms and applications in forensic crime detection. Sir explained 2 case studies with detailed analysis.

At 11.40 session was handled by Dr. Renukadevi M.N, her talk started with explanation of Why human action recognition, challenges, and applications. Later we moved to How is action related to behavior? And elucidating some examples on single and multiple action detection on video frames. Next, she moved on to detail analysis and single and multiple action detection in videos.

1. Converting videos to frames
2. Explanation of HOG feature descriptor step wise (all 8 steps –mathematical analysis)
3. Demo of multiple and single action in videos in mat lab

In the next part she progressed on to 2nd case study discussing on multiple action detection in

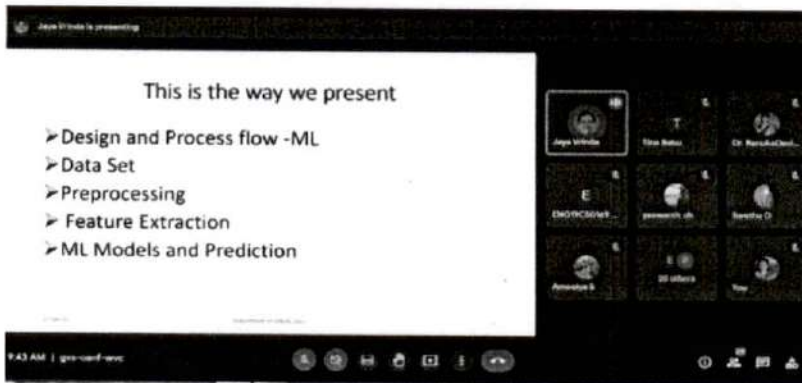
Hollywood movie dataset and real-time dataset.

Started with conversation on Machine learning and SVM classifier with an example in detail and showcasing the demo of multiple action detection in videos in mat lab

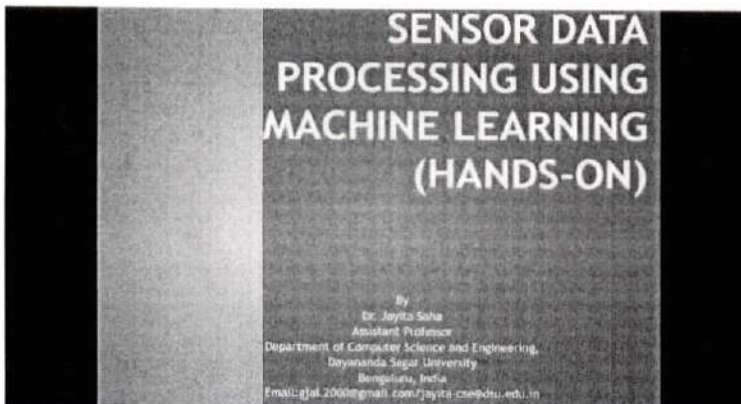
Next session started at 1:30 by Dr.Jayita Saha. Madam explained about pre-processing and feature extraction with some examples. Madam also discussed about Machine learning applications and sensor data.

### Workshop Photos:

1. Forenoon session by Prof. Jayavrinda Vrindavanam



2. Afternoon session by Prof. Jayita Saha



### Report on Day-4

**Date:** 28/01/2022

**Time:** 9:30 am to 4:40 pm

#### **Resource Persons:**

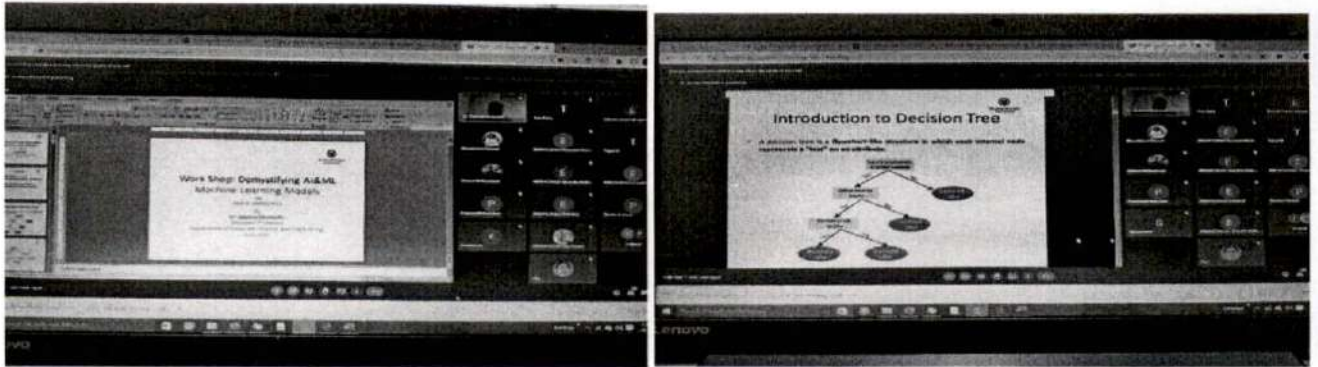
Dr. Savitha Hiremath; Dr. Tina Babu; Dr. Jayavrinda Vrindavanam; Dr. Meenakshi Malhotra

Day 4-morning sessions included implementation of Machine Learning Models and various methods of ML Model assessment that prepare students to execute projects. Hands-on sessions were conducted on both topics.

In the afternoon session, students were briefed on "Recent trends and Advances in AI and ML". The last session of the day was on AI and computational Cognitive systems that enlighten students on creating new ways to solve problems that are better than Humans.

## Workshop Photos:

### 1. Presentation by Dr. Savitha Hiremath



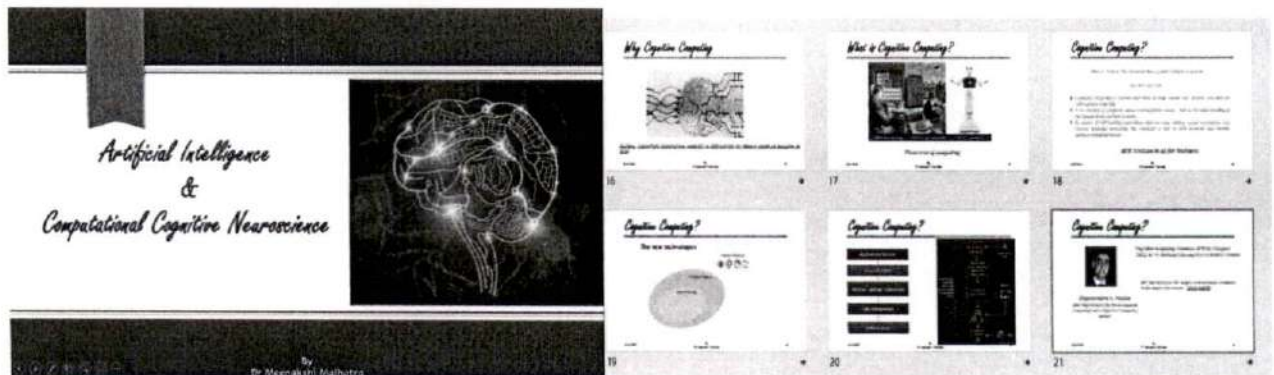
### 2. Presentation by Dr. Tina Babu



### 3. Presentation by Dr. Jaya Vrinda Vrindavanam



### 4. Presentation by Dr. Meenakshi Malhotra



## Report on Day-5

Date: 29/01/2022

Time: 9:30 am to 4:40 pm

### Resource Persons:

Mr. Sankar Dasagi [ External], Professor at NMIT | CTO at Wellnesys  
Prof. Arjun Krishnamurthy, and Dr. Kiran B Malagi, Department of CSE, DSU

The day 5 constituted 3 sessions including the invited guest lecture from Prof.Sankar Dasiga, Professor at NMIT and the CTO at Wellnesys, on "Use of ML in Industry".

Prof. Sankar had provided participants with the detailed description and differentiation between AI and ML, that is difficult to find in common textbooks along with real world examples on how AI can be used to solve problems.

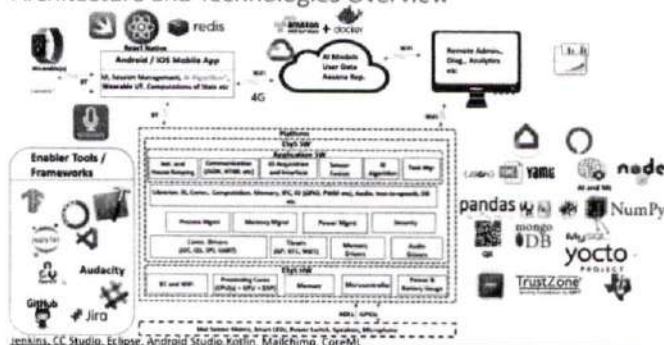
In the afternoon session, Prof. Arjun, unravelled some unique featured implementations of AI in real world. He introduced several AI tools explaining how they are built, concluding with project implementations of AI on medical Data.

The Last session was handled by Dr. Kiran who enlightened the students about "Machine learning for Cyber Security and Cloud computing".

### Workshop Photos:

#### 1. Presentation by Mr. Sankar Dasagi

Architecture and Technologies Overview



The intended outcome of the workshop was to make the Students well-versed with

- Understand the mathematics and statistics for ML
- Understand Python Libraries for AI and ML • Understand the machine Learning Models
- Demonstrate the Working of Machine Learning Techniques.
- Understand the Recent trends and Advances in AI and ML
- Explain the applications of Machine learning in different functional areas like Cyber Security, Cloud computing and cognitive computing

The workshop covered the following graduate attributes:

**PO1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems

**PO2 Problem analysis:** Identify, formulate, review literature and analyze mechanical engineering problems to design, conduct experiments, analyze data and interpret data.

**PO3: Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations

**PO4: Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

**PO5: Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

**PO12: Life-long learning: Recognize** the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

**DAYANANDA SAGAR UNIVERSITY**

**School of Engineering**



**Data Science Program**

**Department of Computer Science Engineering**

REPORT ON

**“Data Science Skills for Digital Tribe”**

**Five days - Value added Course**

During 24<sup>th</sup> -31<sup>st</sup> Jan 2022

Time: 10:00 am – 4.00pm

**Session Chair/Resource Persons:**

Dr. Shaila S G

Dr. Basavaraj N Hiremath

Dr. Kiran B Malagi

Dr. Rajesh T M

Dr. Revathi V

Dr. Pramod Naik

Dr. Renukadevi M N


Prof. Shivamma D

A handwritten signature in black ink, appearing to read 'S. Shaila S G'.

Chairman / HOD  
Computer Science Engg. Dept.  
Dayananda Sagar University  
School of Engineering  
Kudlu Gate, Hosur Main Road,  
BANGALORE - 560 068

Target Audience :2<sup>nd</sup> year Computer Science Engineering Students


The Dept. of CSE (Data Science) has successfully organized a 5 days value-added course on "**Data Science Skills for Digital Tribe**". The targeted audience was 2<sup>nd</sup> Year students of the Department of CSE. The course was organized in virtual mode. Around 100+ students were registered for the course. All students were trained on both theoretical and practical knowledge of the present technologies in the Data Science domain. At the end of the course an evaluation was carried out and the students have performed satisfactorily, feedback was taken from the students and it is found to be satisfactory.



## Dayananda Sagar University

Department of Computer Science and Engineering (Data Science)

Cordially invites you to the  
**Value added course**  
ON  
**DATA SCIENCE SKILLS for DIGITAL TRIBE**  
(24th-31st January, 2022)



**Libraries:**  
Scikit-learn  
Numpy

**32 Hours  
Course  
in  
Virtual  
Mode**

**BI Tools:  
in-Memory  
infuse-self service**

### Syllabus

- 24th  
January,  
2022

**Module 1: Introduction to Data Science & BI with DAV - 6hrs**
- 25th  
January,  
2022

**Module 2: Introduction to Modern tools and Libraries - 6hrs**
- 27th  
January,  
2022

**Module 3: Mathematics for Data Science & Data Pre-processing and Feature Extraction - 6hrs**
- 28th  
January,  
2022

**Module 4: Machine learning Algorithms & BI tools Self-Service Dashboards - 6hrs**
- 31st  
January,  
2022

**Case studies - 8hrs**

### Course Outcomes

- Outline the Roles of a Data Analysts and Scientists
- Apply Techniques and Tools for Data Transformation
- Understand the KDD through Data Mining concepts
- Apply Machine Learning Techniques
- Use Data Visualization and Optimization Tools and Techniques

Hurry up

**Targeted Audience:**  
4th Semester Students of CSE Department  
Total number of seats - 90 (First Come First Serve)

Registration Link : <https://forms.gle/tGtVChdmD3XK2QrS6>

**Resource Persons - Faculty of CSE Department**  
Dr. Girisha G S, Dr. Shaila S G, Dr. Kiran B. Malagi, Dr. Basavaraj N. Hiremath, Dr. Pramod Nalk,  
Dr. Rajesh T M, Dr. Renuka Devi, Dr. Revathi V, Prof. Shivamma, Prof. Pooja Pandey

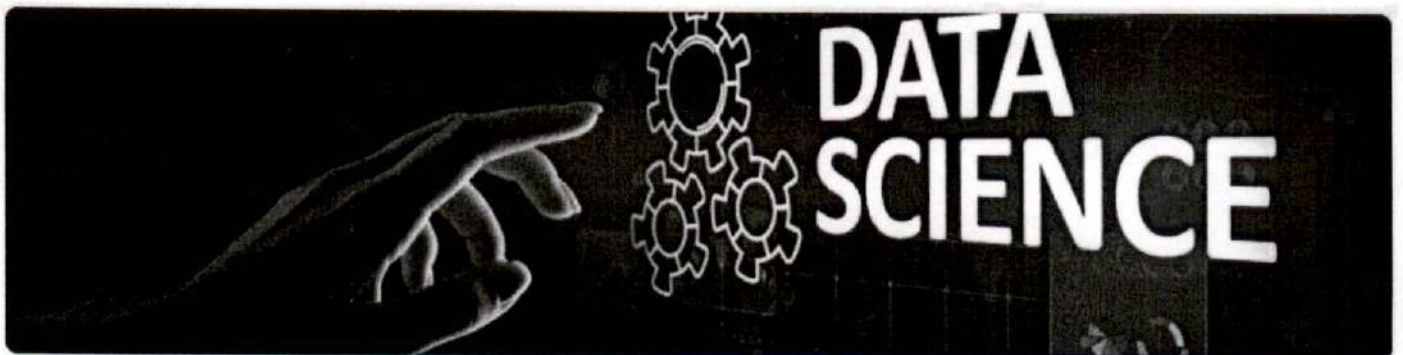
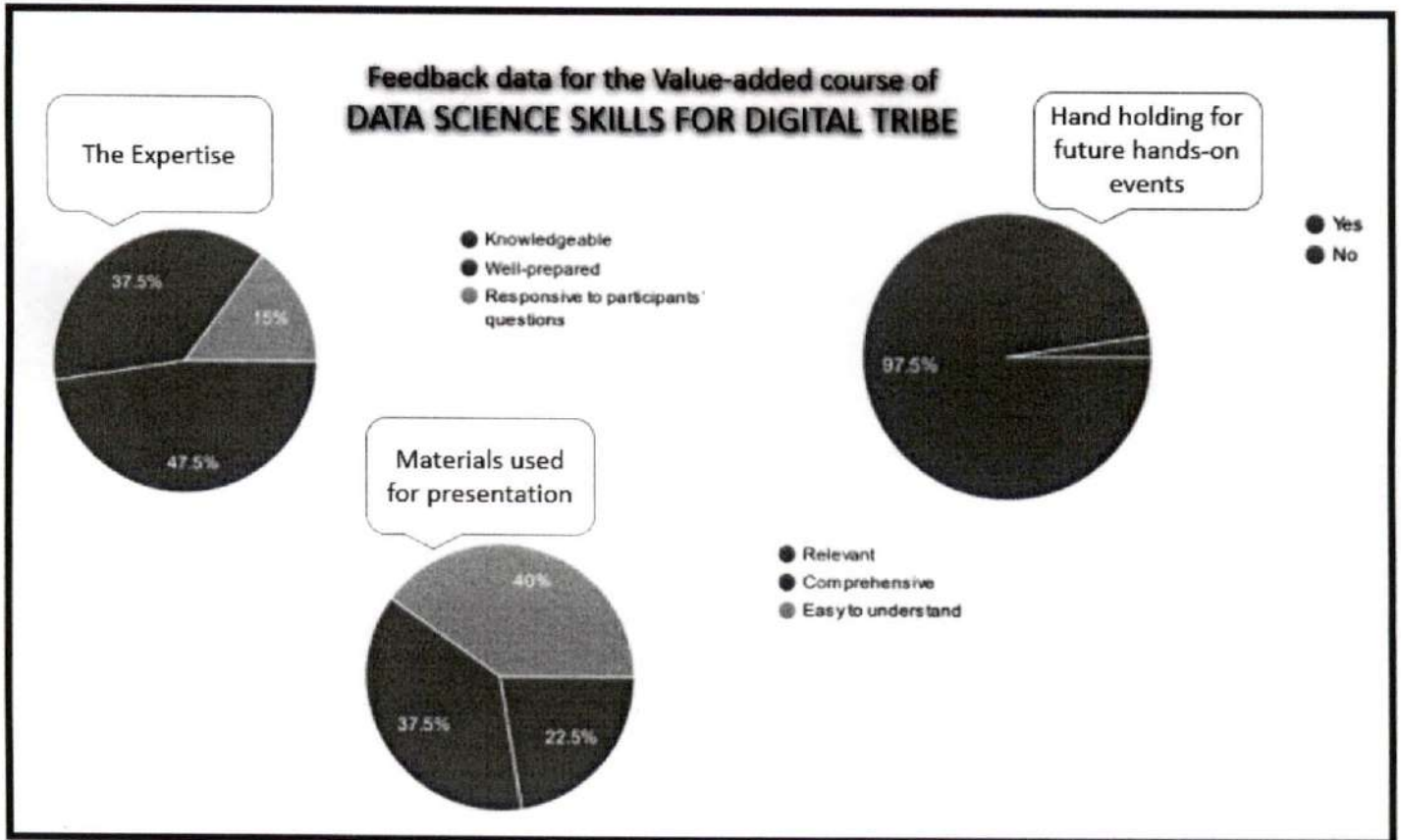
## Schedule



**DAYANANDA SAGAR UNIVERSITY**  
 DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
 VALUE ADDED COURSE ON  
 DATA SCIENCE SKILLS FOR DIGITAL TRIBE  
**Program Schedule**

Date & Day	10:00 - 10:30	Session 01 (10:30 - 12:00)	12:00 - 12:15	Session 02 (12:15 - 01:15)	01:15 - 2:00	Session 03 (02:00 - 04:00)
24 Jan 2022 Monday	Inauguration	Introduction to Data Science Dr. Shaila S G	Tea Break	Introduction to BI Dr. Basavaraj N. Hiremath	Lunch Break	Demo on DAV Dr. Shaila S G & Dr. Basavaraj N. Hiremath
25 Jan 2022 Tuesday	Mathematics for Data Science Dr. Revathi V	Mathematics for Data Science Dr. Revathi V		Data Pre-processing and feature extraction Dr. Kiran B. Malagi		
27 Jan 2022 Thursday	Data Pre-processing and feature extraction Dr. Kiran B. Malagi	Introduction to modern tools and Libraries Dr. Pramod Naik & Prof. Pooja Pandey		Introduction to modern tools and Libraries Dr. Pramod Naik & Prof. Pooja Pandey		
28 Jan 2022 Friday	Machine learning Algorithms Dr. Rajesh	Machine learning Algorithms Dr. Renukadevi		BI tools self-service Dashboard Dr. Basavaraj N. Hiremath		
31 Jan 2022 Saturday	Forensic investigation (CS-1) studies using ML Approaches Dr. Rajesh & Dr. Renukadevi	BI - Retail Market (CS- 2) Dr. Basavaraj N. Hiremath		Netflix Recommender System (CS-3) Dr. Pramod Naik		

## Feedback



# Report

Day 1

Session 1 10:30 to 12:15

## 1. Introduction to Data Science Presentation by Dr. Shaila S G



Session 2 12:15 to 1:15

## 2. Introduction to Business Intelligence Presentation by Dr Basavaraj N Hiremath



### Session 3

2:00 to 3:00 PM

Demonstration Session on Data analytics and Visualization 2:00 to 3:00

Presentation by Dr. Shaila S G and Dr Basavaraj N Hiremath

**What is Scipy?**

- Scipy is an Open Source Python-based library, which is used in mathematics, scientific computing, Engineering, and technical computing.
- Scipy also pronounced as "Sigh Pi."
- Sub-packages of Scipy:
  - File input/output - `scipy.io`
  - Special Function - `scipy.special`
  - Linear Algebra Operation - `scipy.linalg`
  - Interpolation - `scipy.interpolate`
  - Optimization and fit - `scipy.optimize`
  - Statistics and random numbers - `scipy.stats`
  - Numerical integration - `scipy.integrate`
  - Fast Fourier transforms - `scipy.fftpack`
  - Signal Processing - `scipy.signal`
  - Image manipulation - `scipy.ndimage`

10:21

gsx-mcir-ace

REC

**WHAT IS DATA SCIENCE?**

- a multi-disciplinary field that uses scientific methods, processes, algorithms and systems to extract knowledge and insights from structured and unstructured data.

Dr. S G is presenting

Dr. S G

ENG2...

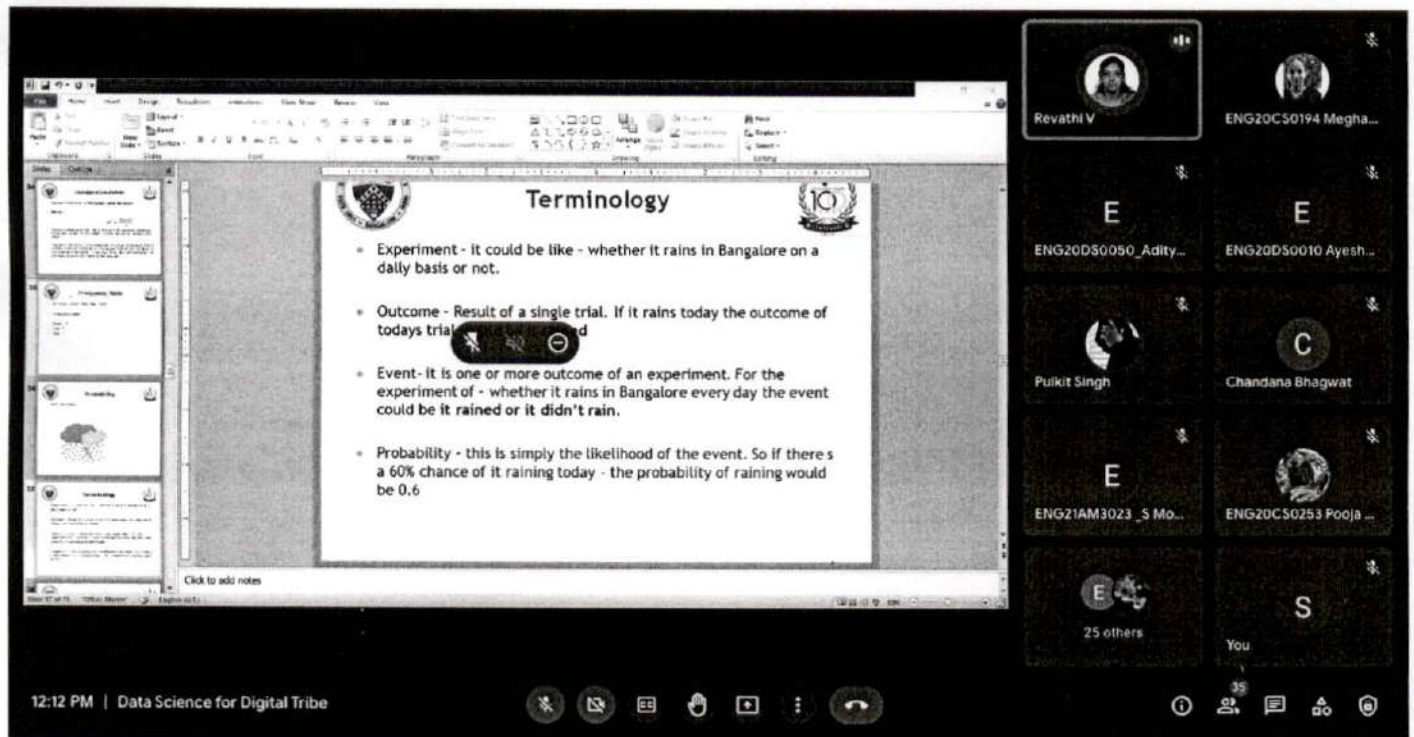
Monit...

Several participants left the meeting

## Day 2

Session 1 and 2 10:00 to 1:15

Mathematics for Data Science Presentation by Dr Revathi V 10:00 to 1:15



The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Terminology" with the following content:

- Experiment - It could be like - whether it rains in Bangalore on a dally basis or not.
- Outcome - Result of a single trial. If it rains today the outcome of todays trial is rained
- Event- It is one or more outcome of an experiment. For the experiment of - whether it rains in Bangalore every day the event could be it rained or it didn't rain.
- Probability - this is simply the likelihood of the event. So if there s a 60% chance of it raining today - the probability of raining would be 0.6

The slide also features logos of institutions on either side of the title. The Zoom interface includes a toolbar at the bottom with icons for mute, video, chat, and other functions. The bottom left corner shows the time "12:12 PM" and the text "Data Science for Digital Tribe". The right side of the screen displays a grid of participant avatars, including Revathi V, ENG20C50194 Megha..., ENG20DS0090\_Adity..., ENG20DS0010 Ayes..., Pulkit Singh, Chandana Bhagwat, ENG21AM3023\_S Mo..., ENG20C50253 Pooja..., 25 others, and You.

Session 3 2:00 to 4:00

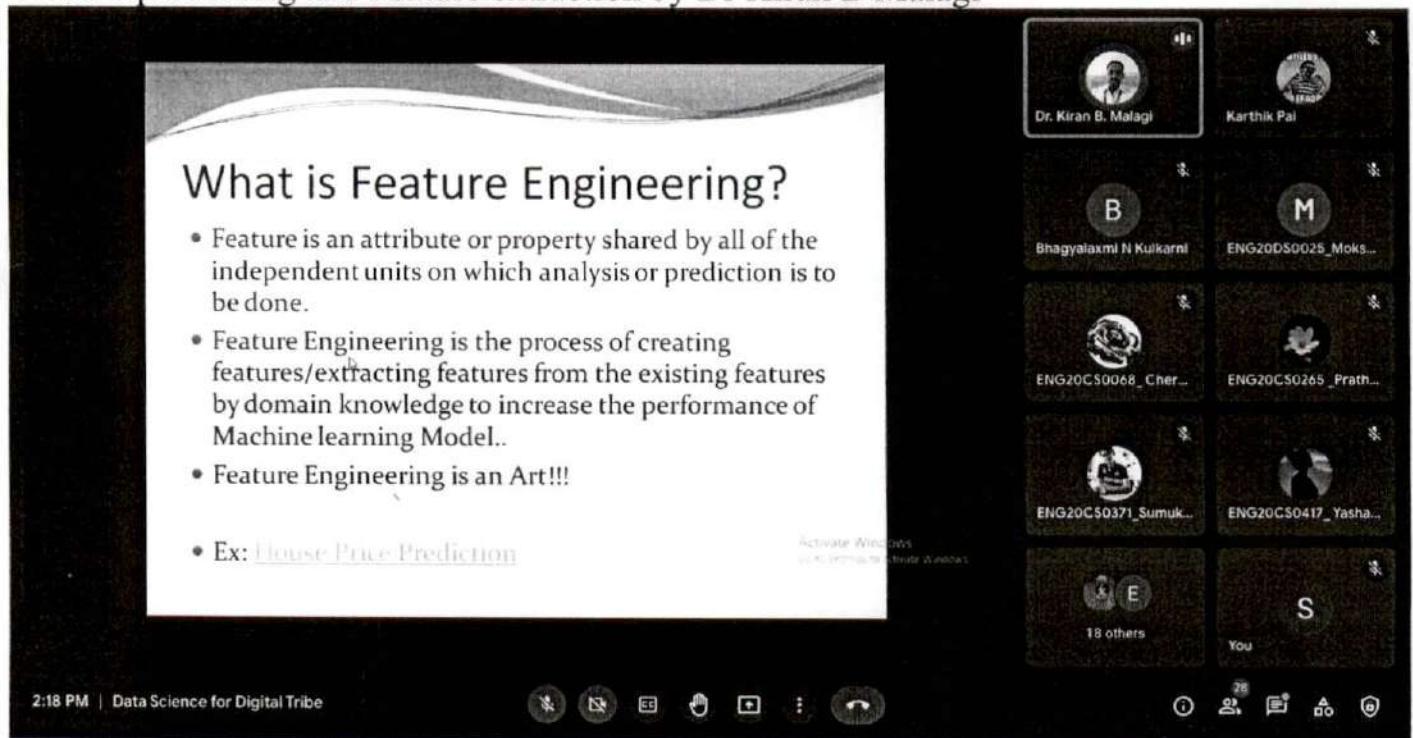
Data Preprocessing and Feature extraction by Dr Kiran B Malagi



Day 3

Session 1 10:00 to 12:00

Data Preprocessing and Feature extraction by Dr Kiran B Malagi



Session 2 12:15 to 1:15

Introduction to modern tools and Libraries by Dr Pramod Naik



Session 3 2:00 to 4:00

Introduction to modern tools and Libraries by Dr Pramod Naik & Prof pooja Pandey



Day 4

Session 1 10:00 to 12:00 and Session 2 12:15 to 1:15

Machine Learning Algorithms by Dr Rajesh T M

Day 4

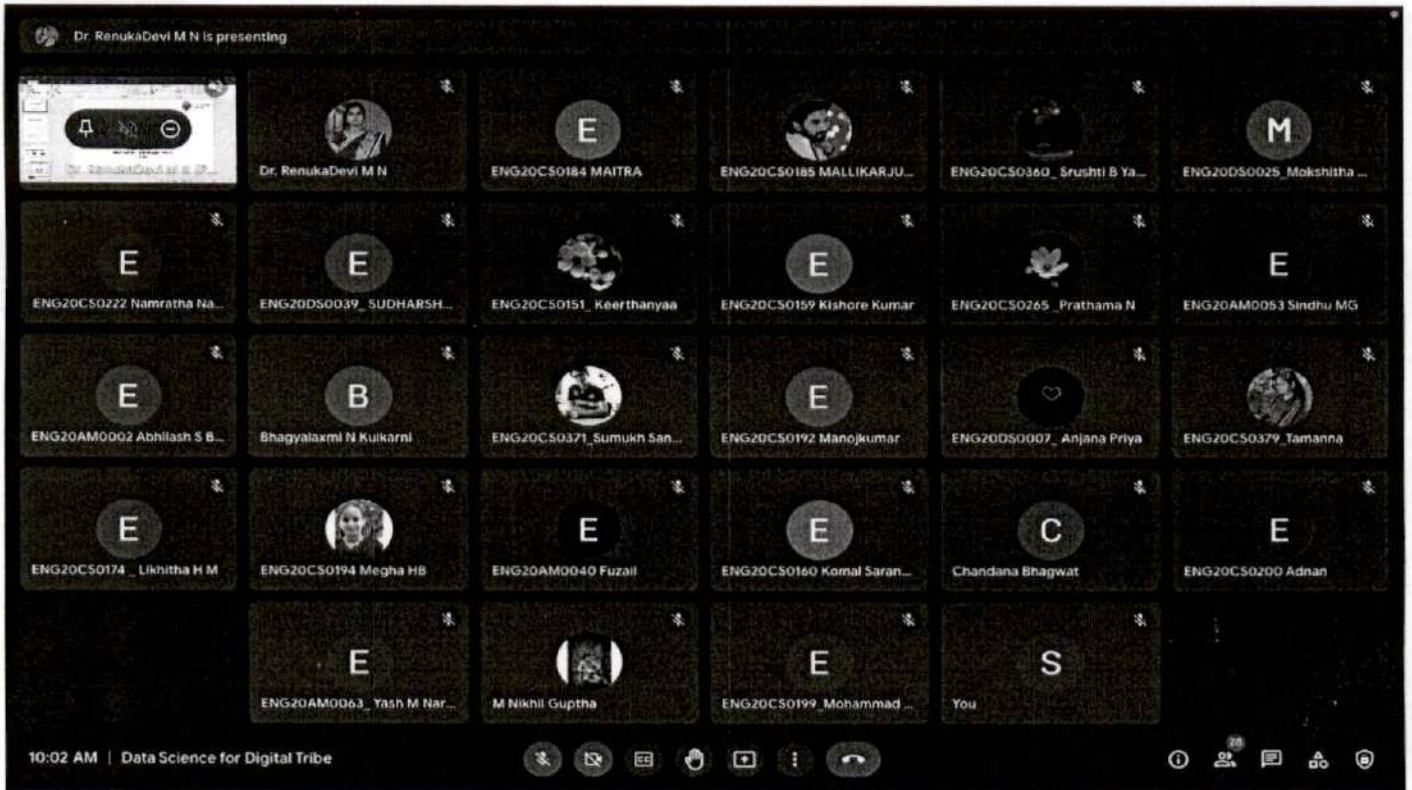
Session 3 2:00 to 12:00

Business tools and Self-service dashboards by Dr Basavaraj N Hiremath

Day 5

Session 1 10:00 to 12:00

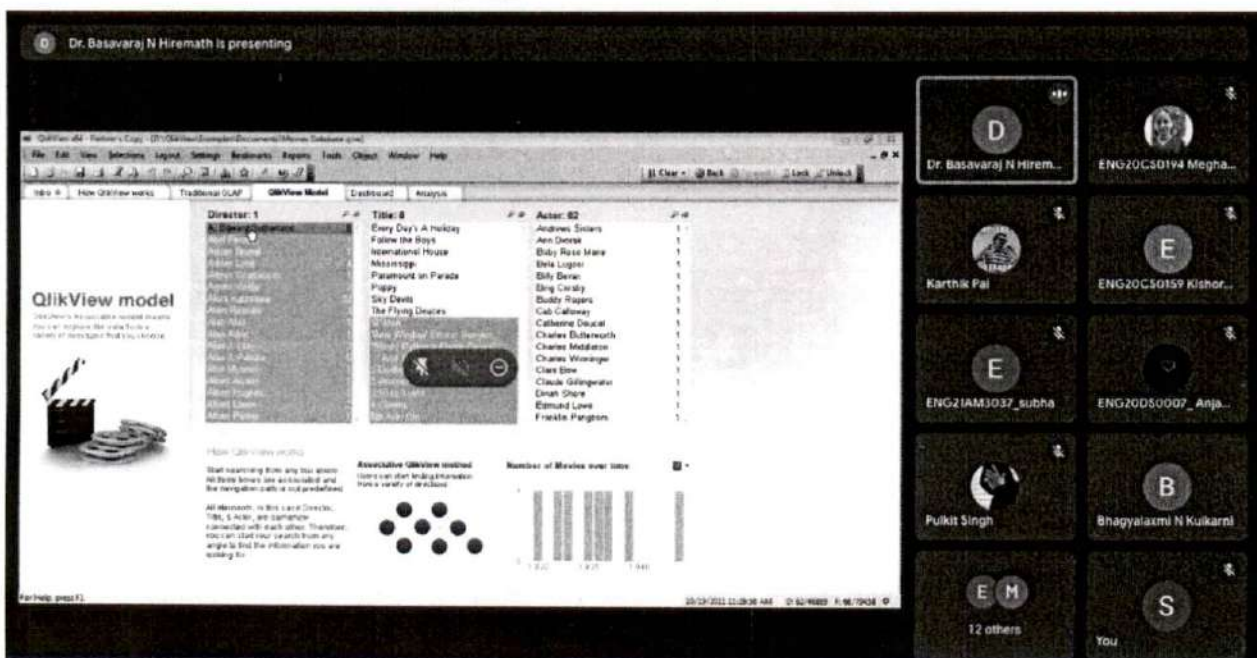
Forensic Investigation by Machine Learning approaches by Dr RenukaDevi M



Day 5

Session 2 12:15 to 1:15

BI - Retail Market Case study by Dr Basavaraj N Hiremath



# Day 5

Session 2 2:00 to 4:00

Netflix recommender system by Dr Pramod Naik

EDAFISHERIRIS.ipynb  
File Edit View Insert Runtime Tools Help Last edited on January 27

Comment Share

Code + Test

Connect Editing

```
import pandas as pd  
df = datasets.load_iris()  
  
df = pd.read_csv("../content/iris.csv")  
corr = df.corr()  
df.head()  
df.describe()
```

	Sepal.Length	Sepal.Width	Petal.Length	Petal.Width
count	150.000000	150.000000	150.000000	150.000000
mean	5.843333	3.057333	3.758000	1.199333
std	0.828066	0.435866	1.765298	0.762238
min	4.300000	2.000000	1.000000	0.100000
25%	5.100000	2.800000	1.600000	0.300000
50%	5.800000	3.000000	4.350000	1.300000
75%	6.400000	3.300000	5.100000	1.800000
max	7.900000	4.400000	6.900000	2.500000

```
df.describe()
```





# Dayananda Sagar University

Department of Computer Science and Engineering



Cordially invites you to the  
**Value added course**  
on

"Introduction to IOT and Arduino Programming"

**(18th-19th June 2022)**

## Syllabus

- **Module 1: Introduction to Networking and IoT**
- **Module 2: Architecture of Arduino, Sensors-Specifications, Interfacing sensors to Arduino**
- **Module 3: Introduction to Arduino IDE and Programming with Arduino & NodeMCU**
- **Module 4: Wi-Fi configuration for real-time operations using NodeMCU-ESP8266, Blynk App for cloud applications and Web Interface, Google Assistant**
- **Module 5: Projects**

## Course Outcomes

- **Understanding the IOT and its applications**
- **Understand the function of electronic sensors and components**
- **To familiarize Arduino as IDE, programming language & platform.**
- **To provide knowledge of Arduino boards and basic components**
- **Develop skills to design and implement various smart system application.**
- **To provide knowledge of different Smart System applications.**

## Targeted Audience:

**2nd Semester B Tech Students**

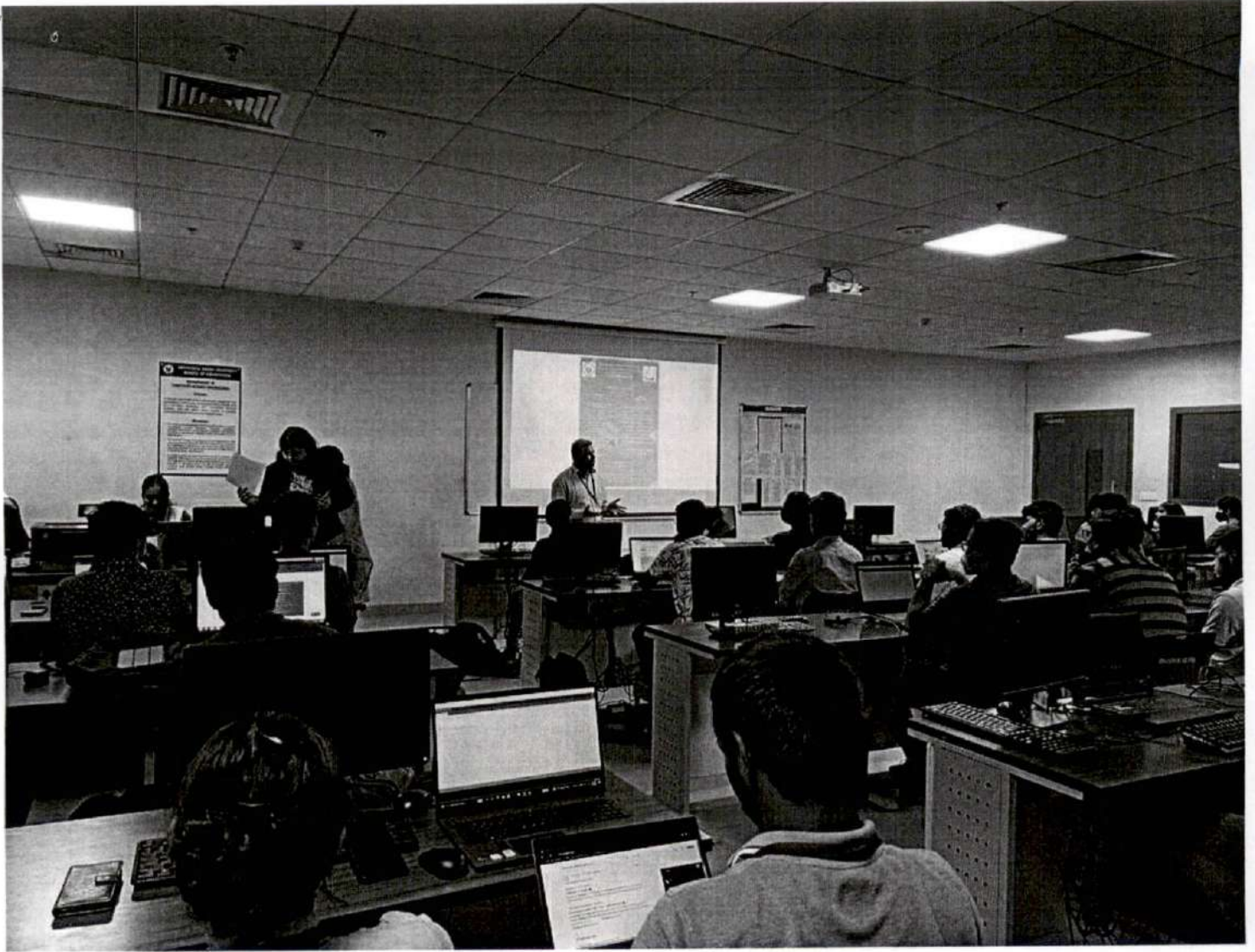
## Resource Persons - Faculty of CSE Department

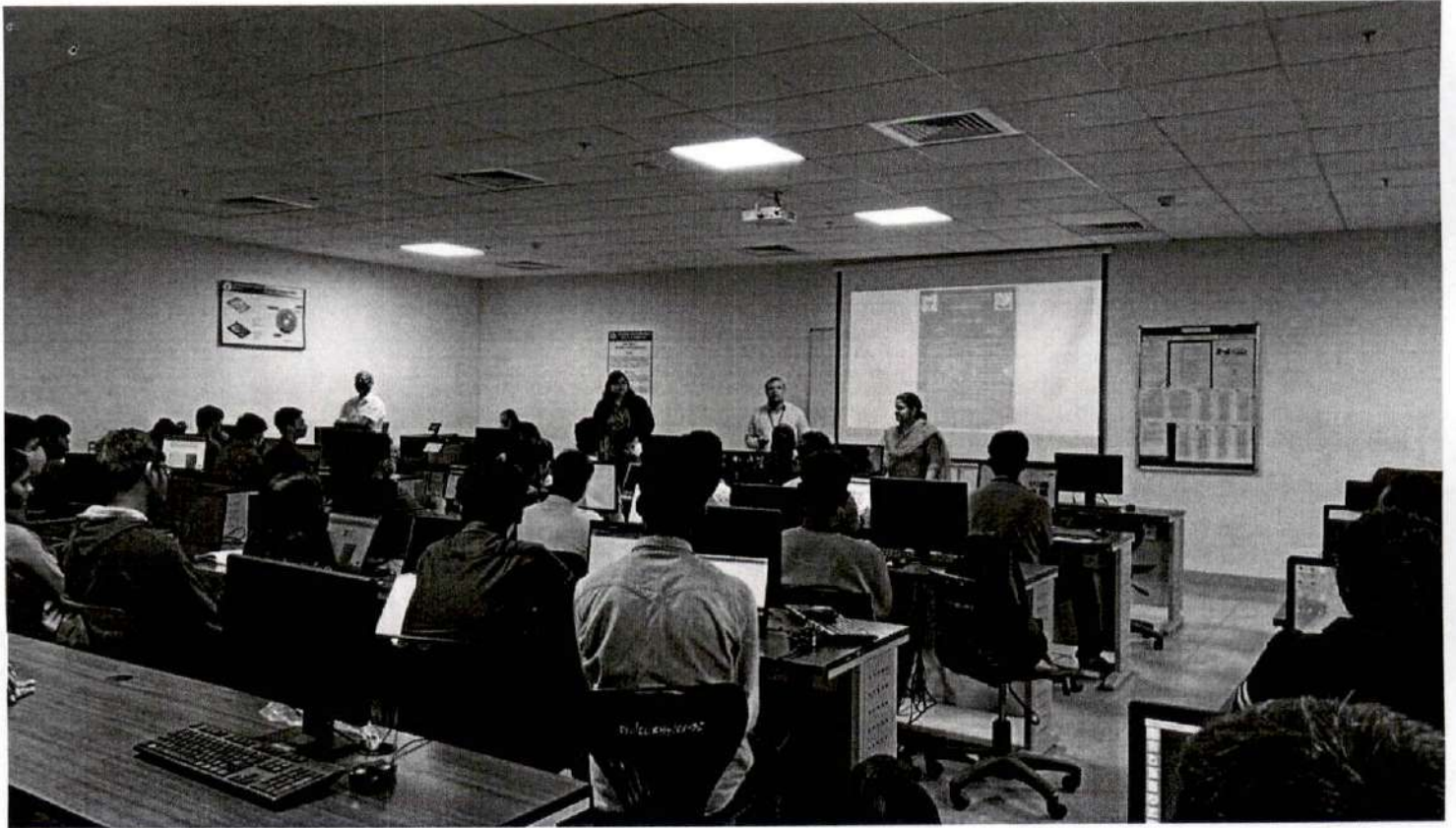
**Dr. Girisha G S, Prof. C V S N Reddy, Prof. Savita Vijay, Prof. Vaidehi Verma, Prof Shwetha G S, Prof. Kavya, Prof. Trupti, Prof. Manjula**

Chairman / HOD

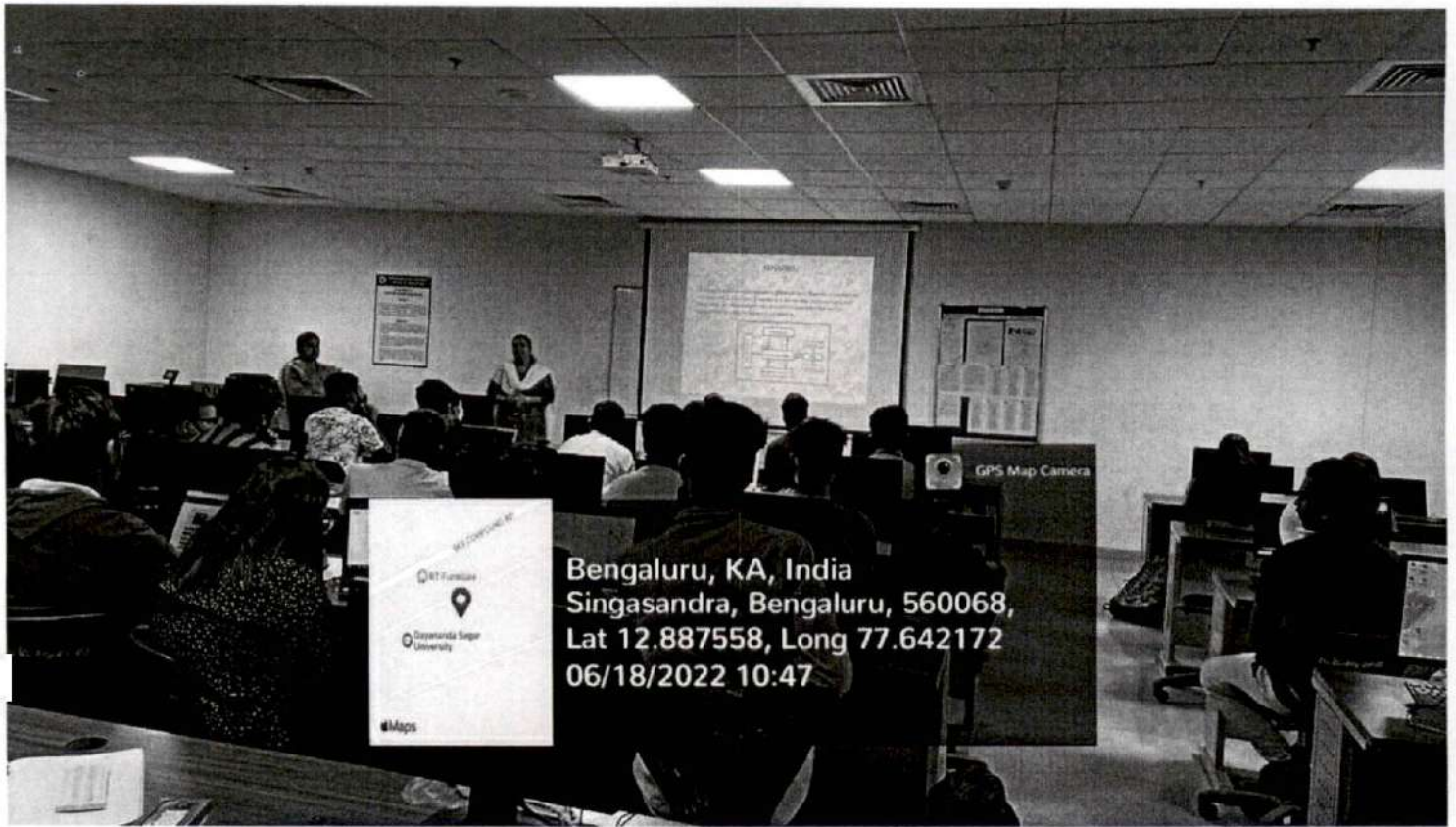
Computer Science Engg. Dept  
Dayananda Sagar University  
School of Engineering

*G. Girisha*  
22/6/22









Bengaluru, KA, India  
Singasandra, Bengaluru, 560068,  
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# DAYANANDA SAGAR UNIVERSITY



## School of Engineering Department of Computer Science Engineering(AI&ML)

Report on

Five Days Value Added Course

On

**“Deciphering ML & DL”**

Date: 04/07/2022 to 08/07/2022

Time: 9:30 am to 04:40 pm

Online: Google Meet Platform

Target Audience: 4<sup>th</sup> Sem CSE Students and CSE(AI&ML) Students

### **Faculty Coordinators**

- 1) Dr.Jayavrinda Vrindavanam, Professor and Chairperson , Department of CSE (AI & ML)
- 2) Dr. Tina Babu, Assistant Professor, CSE
- 3) Prof. Roshni M Balakrishnan, Assistant Professor, CSE (AI & ML)

## Report On Day 1

Day 1: 04/07/2022

Time: 9.30 am to 4:40 pm

The day 1 of the programme (4/07/2022) started with the 'Introduction to workshop' by Dr. Jayavrinda Vrindavanam, Professor and Chairperson, Department of CSE(AI&ML).

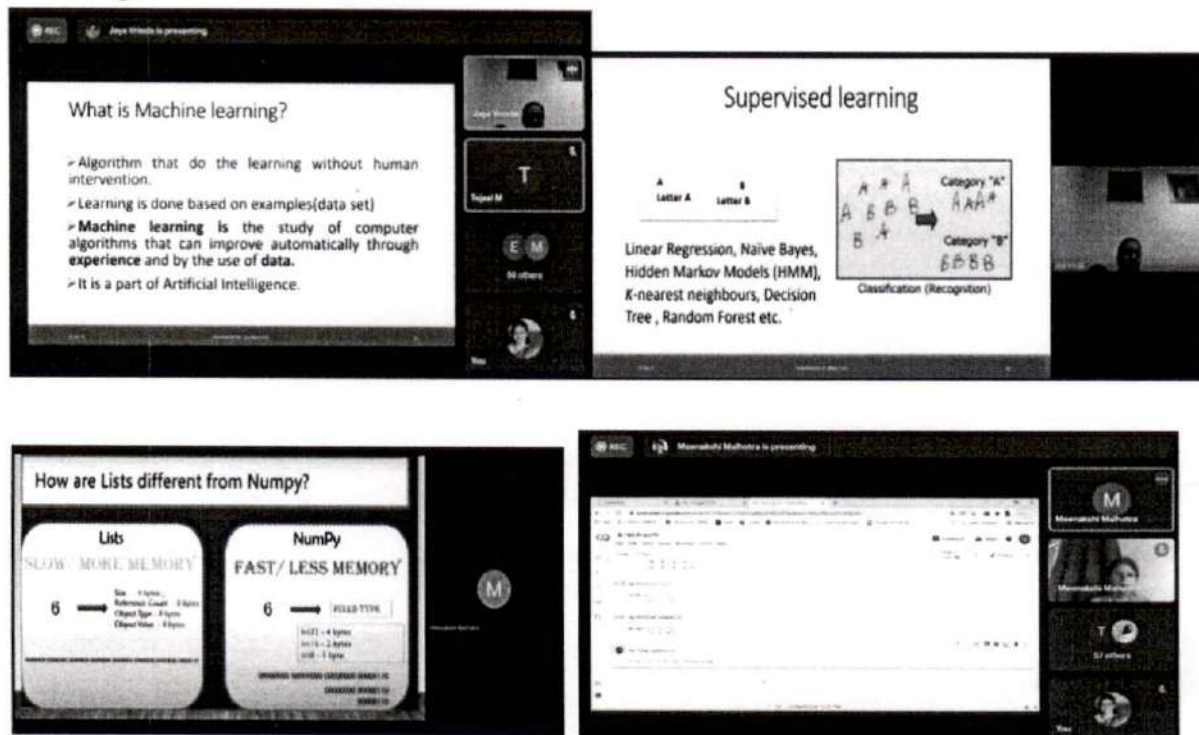
### **Resource Persons:**

Dr. Jayavrinda Vrindavanam, Dr. Meenakshi Malhotra and Dr. Debanjali Bhattacharya

The morning session began with the lecture sessions on various introductory topics such as 'Introduction to AI and ML, ML types and systems and Python Libraries for ML'. The objective of these three sessions conducted on the day-1 was to make the participants to understand the basics of Artificial intelligent and Machine Learning, the types of Machine learning and Python Libraries for ML were also conducted to make the students understand Python Libraries for AI and ML to be used in subsequent days along with hands on training to all the participants.

Mathematics plays an important role as it builds the foundation for programming for these two streams. And in this course, we've covered exactly that. We designed a complete course to help students to master the mathematical foundation required for writing programs and algorithms for ML and DL.

### Workshop Photos:



## Report On Day 2

Day 2: 05/07/2022

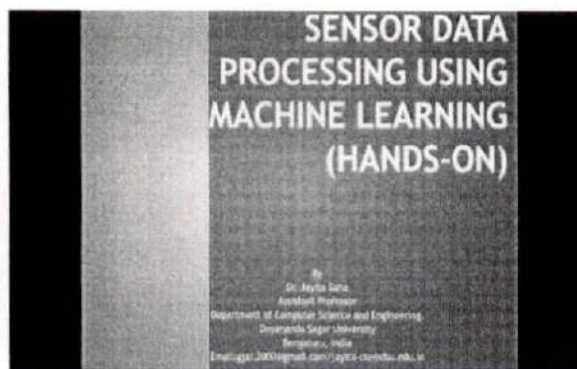
Time: 9.30 am to 4:40 pm

### **Resource Persons:**

Dr. Pramod Kumar Naik, Dr. Revathi, Dr. Jayita Saha

Session was addressed by Dr. Pramod Kumar Naik, who gave a brief introductory and hands on session "Statistics for AI and ML". Python libraries like Numpy, Pandas, Seaborn, Matplotlib and Scikit Learn were explored. Google colab was used for hands-on Session. Last session of the day covered theory and hands-on session on linear regression, KNN etc.

Next session started at 1:30 by Dr. Revathi explained about the process flow diagram and feature extraction of Machine Learning and Dr. Jayita Saha. Madam explained about pre-processing and feature extraction with some examples. Madam also discussed about Machine learning applications and sensor data.



## Report On Day 3

Day 3: 06/07/2022

Time: 9.30 am to 4:40 pm

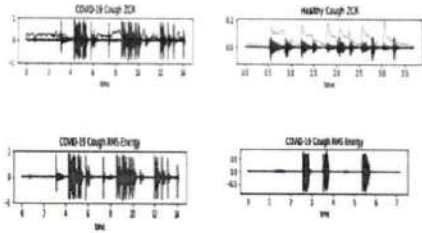
### **Resource Persons:**

Dr. Savitha Hiremath, Dr. Tina Babu, Dr. Jayavrinda Vrindavanam, Dr. Arun Raman

Day 3-morning sessions included implementation of Machine Learning Models and various methods of ML Model assessment that prepare students to execute projects. Hands-on sessions were conducted on both topics. In the afternoon session, students were briefed on "Recent trends and Advances in AI and ML". The last session of the day was on Fundamentals of Sequential Decision making: DFA → NDFA → Markov Chain → Markov Decision Processes that enlighten students on creating new ways to solve problems that are better than Humans.



Zero-crossing rate is a measure of the number of times in each time interval/frame the amplitude of the speech signals passes through a value of zero. As seen in the figure, we can visually compare Zero Crossing Rate between Covid-19 and healthy individuals.



### The Hype Cycle of AI and ML - Gartner



### How does ML work - Image Description for the Visually Impaired

Image	Predicted Caption	Reference Caption
Image 1	The red dress is large, but not as wide as the blue one.	Red dress with large white collar
Image 2	A large blue building and a brown one.	A large building of brown
Image 3	A picture of three red vegetables on top.	A picture of three red vegetables
Image 4	A herd of trees next to blue garden.	A picture of trees and blue garden
Image 5	Two hills in snow peak.	Two snow-capped hills in the ground
Image 6	Two a computer and with keyboard.	Two a computer and with keyboard

Source: <https://arxiv.org/abs/2010.04101>

## Report On Day 4

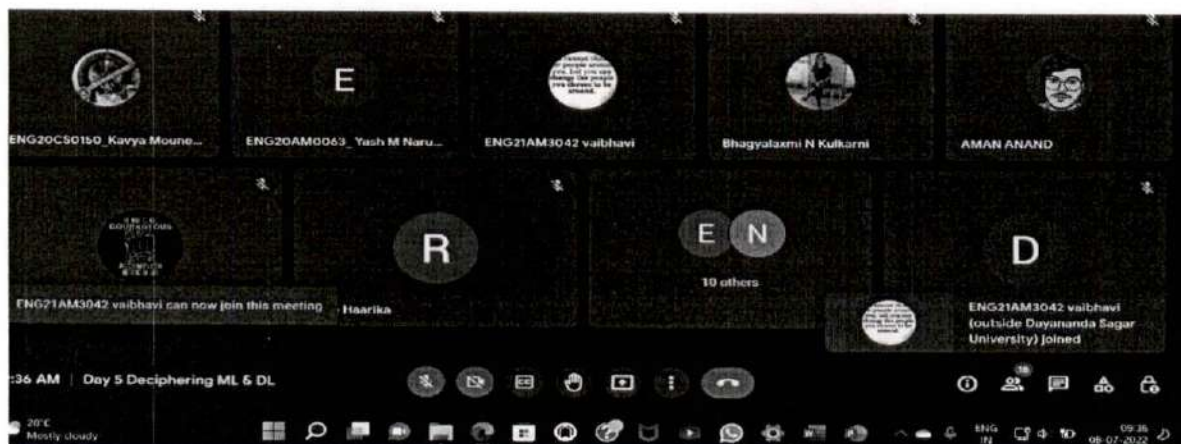
Day 4: 07/07/2022

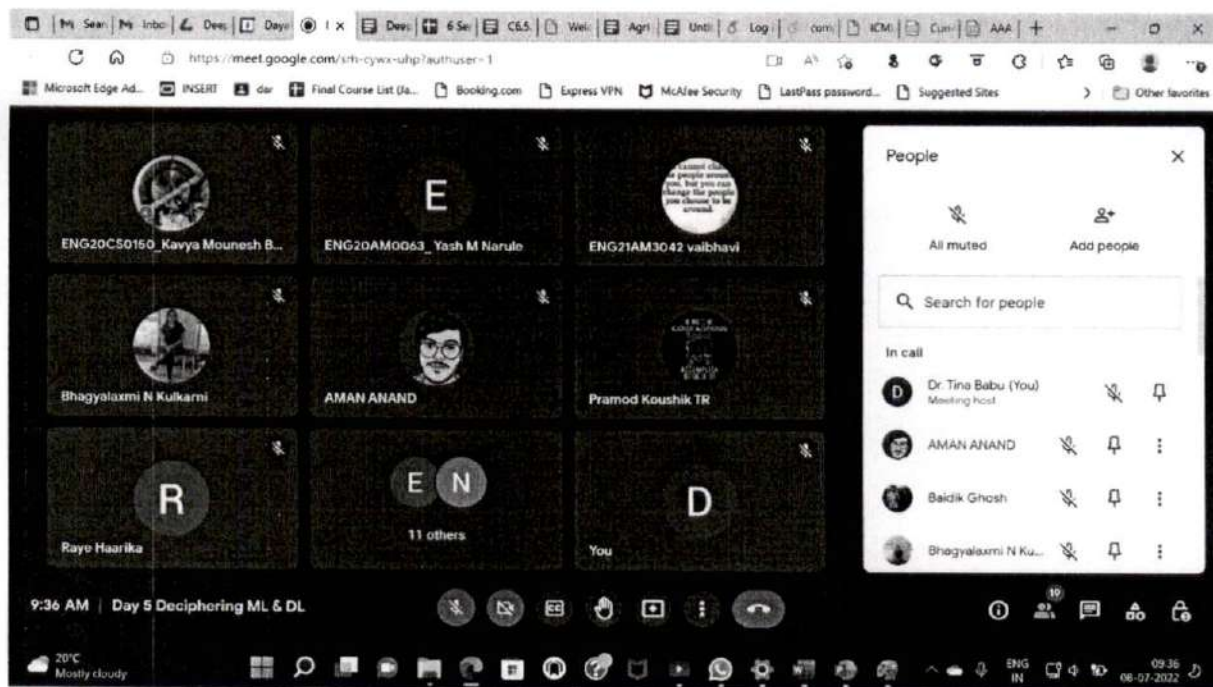
Time: 9.30 am to 4:40 pm

### Resource Persons:

Dr. Sindhu Menon, Dr. Tina Babu

Introduction to Neural Networks was given by Dr. Sindhu Menon. She also discussed the feedforward and feed backward networks. She has also given the hands on for the same. Later Dr. Tina Babu, has given Introduction to the Convolutional Neural Network and the python coding for the same





## Report On Day 5

Day 4: 08/07/2022

Time: 9.30 am to 3:30 pm

### Resource Persons:

Dr. Arun Raman, Dr. Monika Goyal, Prof. Arjun Krishnamurthy

Reinforcement Learning Introduction and Applications was given by Dr. Arun Raman. Regarding the applications of deep learning in healthcare was taken by Dr. Monika Goyal. In the afternoon session, Prof. Arjun explained some unique featured implementations of ML and DL in the real world. He introduced several ML and DL tools and project implementations.

### Day -1

**04/07/2022 (MONDAY)**

Time	Program Topic	Resource Person
9:30am – 9:40am	Introduction to the workshop	Dr. Jayavrinda Vrindavanam
9.40am –10.40am	Introduction to AI and ML, ML types and systems.	Dr. Jayavrinda Vrindavanam
10.40am-11.20am	Python Libraries for AI and ML-Hands on	Dr. Meenakshi Malhotra
11:20am-11:30am	<b>BREAK</b>	
11:30am-12.30pm	Python Libraries for AI and ML-Hands on	Dr. Meenakshi Malhotra

12:30pm-1:30pm	<b>LUNCH BREAK</b>	
1.30pm-4.40pm	Mathematics for AI and ML-Lecture and Hands on	Dr. Debanjali Bhattacharya

**Day-2  
05/07/2022 (TUESDAY)**

Time	Program Topic	Resource Person
9.30am-11.30am	Statistics for AI and ML Lecture and Hands-on	Dr. Pramod Kumar Naik
11:30am-11:40am	<b>BREAK</b>	
11.40am-12.40pm	Logistics and Linear Regression, SVM Lecture and Hands-on	Dr. Pramod Kumar Naik
12:40pm-1:30pm	<b>LUNCH BREAK</b>	
1.30pm-2.15pm	Design and process flow of ML project	Dr. Revathi
2.15pm-3.00pm	Pre-processing and Feature Extraction	Dr. Jayita Saha
3:00pm-3:10pm	<b>BREAK</b>	
3:10pm-4.40pm	ML Applications using sensor data.	Dr. Jayita Saha

**Day-3  
06/07/2022-(Wednesday)**

Time	Program Topic	Resource Person
9.15am-10.15am	Hands on session on ML models and Applications	Dr. Savitha Hiremath
10.15am-11.30am	ML Model Assessment-ROC and AUC and Regularization	Dr. Tina Babu
11:30am-11:40am	<b>BREAK</b>	
11:40am-12:40pm	Recent trends and Advances in AI and ML	Dr. Jayavrinda Vrindavanam
12:40pm-1:30pm	<b>LUNCH BREAK</b>	
1.30pm-3.00pm	Fundamentals of Sequential Decision making: DFA→NDFA→Markov Chain→Markov Decision Processes	Dr.Arun Raman
3:00pm-3:10pm	<b>BREAK</b>	

3:10pm -4.40pm	Markov Decision Processes→Reinforcement Learning	Dr.Arun Raman
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**Day-4**  
**07/07/2022(Thursday)**

Time	Topic	Resource Person
9.30am-11.00am	Introduction to Neural Networks	Dr. Sindhu Menon
11:00am-11:10am	<b>BREAK</b>	
11:10am-12:40pm	Introduction to Forward pass and Backpropagation Algorithm.  Theory and Hands-on	Dr. Sindhu Menon
12:40pm-1:30pm	<b>LUNCH BREAK</b>	
1.30pm-4.40pm	Convolutional Neural Networks-Theory and hands-on	Dr. Tina Babu

**Day-5**  
**08/07/2022-(Friday)**

Time	Topic	Resource Person
9.30am-11.30am	Reinforcement Learning Applications	Dr.Arun Raman
11:30am-11:40am	<b>BREAK</b>	
11:40am-1:10pm	Applications of Deep Learning in Healthcare	Dr. Monika Goyal
1:10pm-2:00pm	<b>LUNCH BREAK</b>	
2:00pm-3:30pm	Applications of Deep learning-NLP	Prof. Arjun Krishnamurthy

**The workshop covered the following graduate attributes:**

PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2 Problem analysis: Identify, formulate, review literature and analyze mechanical engineering problems to design, conduct experiments, analyze data and interpret data.

PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO12: Life-long learning: Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



Dayananda Sagar University  
SOE, Bengaluru – 560068



Department of Electronics and Communication Engineering

**Schedule of Blended learning One week Hands-0n workshop on  
"Analog and Embedded System Design"**

25<sup>th</sup> April 2022 Day 1 (3.00PM to 3.30PM)

**Inauguration of the workshop by dignitaries**

25<sup>th</sup> April 2022 Day 1 (3.30 PM to 6.30 PM):

Introduction to open source designs , Familiarisation of the TI Analog design tool( TINA)

Familiarisation of the resources/tools available in TINA

Variety of supply sources

Variety of Meters ( DMM, Scope etc)

Variety of Analysis available ( DC, AC, Transient analysis)

All kind of electronics components available in the library

Plenty of circuit diagrams softcopy schematics provided (Lot of Learning materials). Of the provided schematics, below are taught, rest all home work for participants.

25<sup>th</sup> April 2022 Day 1 (7.00PM to 9 PM)

Generating the circuit schematics

Connecting meters like Ammeters, DMM, voltmeters, Scope for measurements

Selecting the analysis (DC, AC, Transient etc)

Adding the mathematical models , Analising the input and output waveforms.

Generating necessary/ needed plots for data analytics

Simulation of the circuits to begin with R, RL, RC, RLC circuits DC and AC analysis

26<sup>th</sup> April 2022 Day 2 (3.00PM to6.00PM)

**Both HANDS ON and simulation session parallely**

Simulation of the below listed circuits

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School of Engineering,  
Dayananda Sagar University,  
Kudlu Gate, Hosur Main Road,  
Bengaluru - 560 068

OPAMP circuits and analysis,  
Inverting and non inverting amplifiers and its applications  
Oscillator circuits and analysis

26<sup>th</sup> April 2022 Day 2 (6.30PM to 9 PM)

**Both HANDS ON and simulation session parallely**

OPAMP circuits continued...

Differentiator, Integrator and analysis

RC phase shift Oscillator

Analog multiplication circuit (simulation only) and analysis

Adder and subtractor

Bridges (Wheatstone's bridge)

Concepts of simple Battery RE-CHARGING circuits

Show case **Pulse Oximeter** and **ONE TOUCH GLUCOMETER** gadget and explain how it is designed, importance of analog applications

27<sup>th</sup> April 2022 DAY 3: 3.00 PM to 9:00 PM

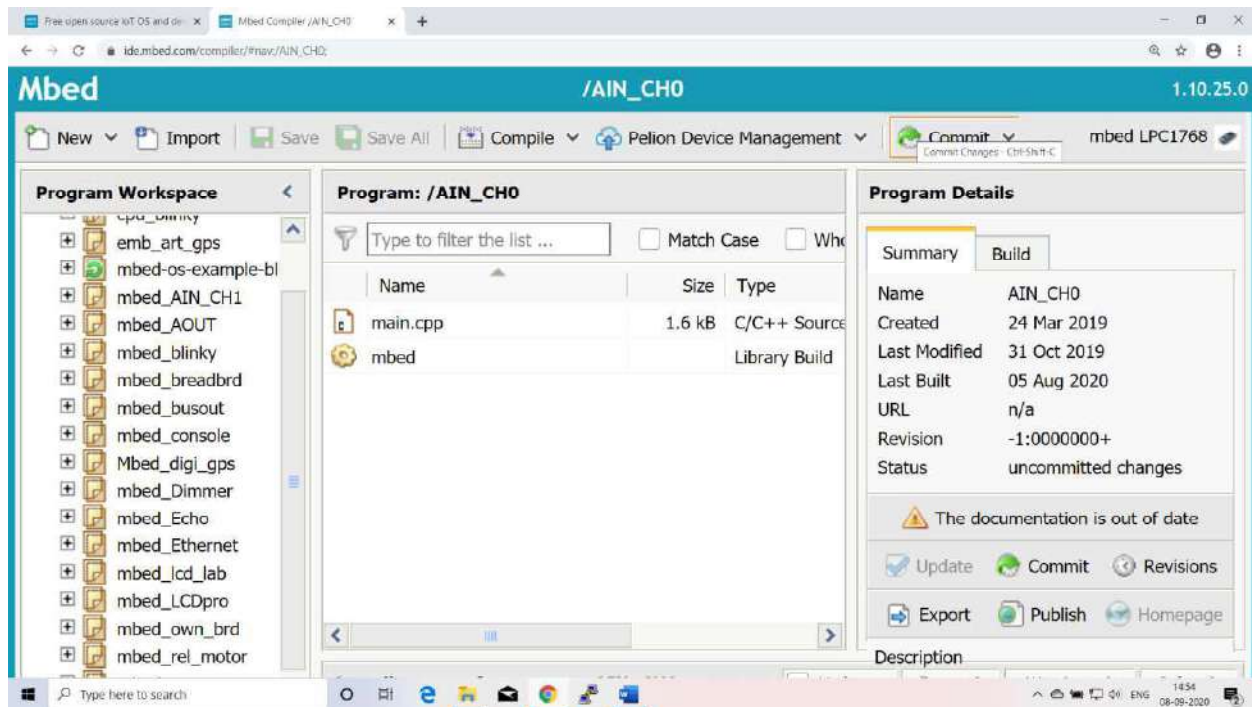
**ES and IOT SENSORS Introductions**

1. Introduction to ARM University program and registration
2. Introduction to Open source Embedded Systems
3. Introduction to the ARM Architecture
4. Understanding the eval kit, both hardware and software
5. Introduction to plenty of multiple vendor platforms (NXP, SiLabs, ST Micro etc)
6. Introduction to plenty of multiple vendor IOT Sensors (hundreds of sensors )
7. Introduction to few RF modules (Zbee, BT, LoRaWan, Wifi, GPS etc)
8. Introduction to Program downloading methods ( Flash Magic, DAP link, Ulink etc)
9. Participants will view the code, compile, download to the eval kit and see the working on the board
10. General purpose IO interfaces, Blink LED to start with and then perform all the below listed experiments
11. General purpose IO interfaces, Blink LED to start with and then perform the below listed experiments
12. View the captured scope waveforms or sensor outputs, wherever necessary,

Note: all the experiments listed below are hands on/viewable on line

28<sup>th</sup> April 2022 DAY 4, 3.00 PM to 9.00PM

### Software testing and verification on the board- Multiple platforms



13. Keil uVision , project loading and debugging methods

14. Assembly level programming details, debugging using Keil uvision

15. Introduction to **ARDUINO** and **TI's TIVA** platforms and their customised development platforms.

29<sup>th</sup> April 2022 DAY 5 (3.00 PM to 9.00PM)

### Advanced experiments

16. ANALOG interface : Understand the importance of ANALOG to digital conversion techniques , its importance, real world problems,

17. ADC Interface : All kinds of sensors Interface with application examples ( Temp, Sound, Light, UltraSound, buzzer and many more)

18. DAC Interface :All kinds of drives, governors/controllers interfaces, waveform generations for specific drives (Sine, Saw,Ramp, trapezoidal etc)
19. USB Interface, Serial port interface, understanding the communication protocols, throughput
20. RS232 Board to Board communication, Board to PC communications
21. I2C Board to Board Communications
22. SPI Board to Board Communications
23. Details of Module interfaces like Xbee, GPS etc

**DYNAMIC Upload of all kinds of IOT Sensor DATA to EXCEL spread sheets to support any kind of Medical, Industrial, agricultural etc applications**



**Dayananda Sagar University**  
SCHOOL OF ENGINEERING, KUDLU GATE, HOSUR MAIN ROAD  
BANGALORE-560068  
**Department of Electronics and communication engineering**

Workshop Report

Date: 02-05-2022

Department of Electronics and communication Engineering in association with BITES conducted An **One week Hands-On workshop on "Analog and Embedded System Design"** for the students of 6<sup>th</sup> semester ECE between **25<sup>th</sup> -29<sup>th</sup> April 2022**.

**Resource Person:** The resource person of the workshop was **Prof. Sargur M Narasimhan** who has 30+ years of experience in Industry, Research, teaching, enterprising activities and project management. His experience includes research in commercial, industrial as well as military projects, design, development, manufacturing, testing conformal verification and field support. Some of the industries he has worked with are ITI, Dooravani Nagar Bangalore, ST Electronics Singapore, Saragur systems Singapore, Orthodyne Electronics, USA. He is also Resource Person in (CCE) Centre for Continuing Education at IISc.

**Participation details:** Totally we had 81 registered participants from various streams of electives who practically built circuits and enjoyed all the hands-on sessions. They were provided with software tool installations, Hardware board training and various study material support for Exercise projects to work with in the future. Towards the conclusion of the workshop, the participants gave very good feedback with an average rating of "4.5/5".

**Photo Gallery:**



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SOE, Bengaluru – 560068



Department of Electronics and Communication Engineering

**Schedule of Blended learning One week Hands-On workshop on  
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**Both HANDS ON and simulation session parallelly**

Simulation of the below listed circuits

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BANGALORE-560068



Kanmani B S  
Workshop Co-ordinator,  
Dept. of ECE, SOE, DSU



# Virtual Lab Schedule

## 17th January-31st January 2022

17th January 2022  
Virtual Labs for Electrical Engineering,  
Anna Merine George, Asst Professor,  
Dept of ECE, SOE, DSU  
Time: 5:00-8:00 PM  
Participants: All faculty & Students

18th January 2022  
Time: 5:00-6:30 PM  
Virtual Lab for Computer Science Engineering,  
Dr. V. Revathi, Dept of CSE, SOE, DSU  
Time: 6:30-8:00 PM  
Virtual Lab for Aerospace Engineering  
Mr. Srinath R & Karthik S.T, Dept of AE, SOE, DSU  
Participants: All faculty & Students

19th January 2022  
Demonstration of Virtual Lab Experiments  
Mr. Chetan Dhiman , IIT Roorkee  
Time: 5:00-8:00 PM  
Participants First Year students

20th January 2022  
Time: 5:00-6:30 PM  
Virtual Lab for Electronics Engineers  
Dr. Pushpa P V, Dept of ECE, SOE, DSU  
Time: 6:30-8:00 PM  
Virtual Lab for Aerospace Engineering  
Mr. Sripad Kulkarni, Dept of AE, SOE, DSU  
Participants: All faculty & Students

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Dayananda Sagar University,  
Kudlu Gate, Hosur Main Road,  
Bengaluru - 560 088



# Virtual Lab Schedule

## 17th January-31st January 2022

**21st January 2022**  
Demonstration of Virtual Lab Experiments  
Mr. Amit Sharma, IIT Roorkee  
Time: 5:00-8:00 PM  
Participants First Year students

**24th January 2022**  
Demonstration of Virtual Lab Experiments  
Mr. Chetan Dhiman, IIT Roorkee  
Time: 5:00-8:00 PM  
Participants First Year students

**25th January 2022**  
Demonstration of Virtual Lab Experiments  
Mr. Jasbir Singh, IIT Roorkee  
Time: 5:00-8:00 PM  
Participants First Year students

**27th January 2022**  
Demonstration of Virtual Lab Experiments  
Mr. Rajeev Kumar, IIT Roorkee  
Time: 5:00-8 :00 PM  
Participants First Year students

**28th January 2022**  
Demonstration of Virtual Lab Experiments  
Mr. Amit Sharma, IIT Roorkee  
Time: 5:00-8:00 PM  
Participants First Year students

**31st January 2022**  
Demonstration of Virtual Lab Experiments  
Mr. Rajeev Kumar, IIT Roorkee  
Time: 5:00-8:00 PM  
Participants First Year students



## Dayananda Sagar University

School of Engineering, Kudlu Gate,  
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Bengaluru - 560068

Department of Electronics and Communication Engineering

### Industrial Automation Lab

#### Schedule

Day	Time	Schedule
1	9:00 to 12.30	Introduction of Automation
1	1:30 to 4:30 PM	Hydrauluaics Pneumatics Introduction
2	9:00 to 12.30	Hands on Hydraulics lab
2	1:30 to 4:30 PM	Hands on Hydraulics lab
3	9:00 to 12.30	Hands on Pneumatics lab
3	1:30 to 4:30 PM	Hands on Pneumatics lab
4	9:00 to 12.30	Introduction to PLC
4	1:30 to 4:30 PM	Hands on PLC

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### Chief Patrons

Dr. D. Hemachandra Sagar,  
Chancellor

Dr. Premachandra Sagar, Pro-  
Chancellor

### Patrons

Shri. Galiswamy, Secretary, DSI

Dr. A.N.N Murthy, Vice -

Chancellor

Prof. R. Janardhan, Pro - Vice  
Chancellor

Dr. Puttamadappa, Registrar  
Conveners

Dr. A Srinivas, Dean, SOE

Dr. Vaibhav A M, Chairman - ECE

Participants will get a chance to do various real time IoT applications using various hardware available. Hardwares like ESP 8266 modules and various sensors.

Peer to Peer learning Day - Learn from your other fellow participants about the projects they are working on and vice versa.

### Program Benefits:

- Emulate real time IoT application sequence
- Work on safety and automation tasks in daily life
- Conceptualize and develop products using IoT
- Develop confidence of presenting their project/Product
- Implement concepts of UI, data handling and control instructions

### Overview

Understand IoT landscape and all emerging areas to develop projects related to smart city

Understand and build IoT applications

Implement concepts of UI, data handling and control instructions

### Topics

Day 1: Hardware Interfacing and Offline Coding

Understanding the PIN diagram of ESP and its libraries

Configuring an ESP with sensors

Coding using Arduino IDE

Data Acquisition and Transfer using Blynk

Day 2: Integrating Hardware and Cloud Platform

Learn the working of IFTTT (eg Google Assistant)

Interface ESP with Ubidots(IOT Cloud)

Learn about MIT APP Inventor

MIT App Inventor Interface with Real time Data IoT Protocols

Day 3: Hands-on Project Presentation

## Workshop

on

# INTERNET OF THINGS (IOT)

5th, 6th & 7th February 2019

Resource Persons:

Mr. Abhinav Karan

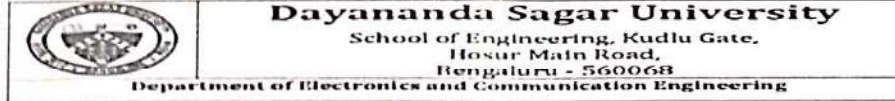
Mr. Chandrakant Singh

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School of Engineering  
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Kudlu Gate, Hosur Road,  
Bengaluru - 560068



Dayananda Sagar  
University Bengaluru



## Internet of Things (IOT)

Schedule

Day	Time	Topics covered
1	8:00 am to 10:00 AM	Introduction to IoT
	10:00AM to 10:15 AM	Short Break
	10:15 to 1:00 PM	Hardware Interfacing and offline coding
	1:00 PM to 2:00 PM	Lunch Break
	2:00 PM to 3:30 PM	Understanding the PINdiagram of ESP and itslibraries
	3:30 to 3:45 PM	Short Break
	3:45 Pm to 6:00 PM	Configuring an ESP withsensors
2	8:00 am to 10:00 AM	Coding using Arduino IDE
	10:00AM to 10:15 AM	Short Break
	10:15 to 1:00 PM	Data Acquisition andTransfer using Blynk
	1:00 PM to 2:00 PM	Lunch Break
	2:00 PM to 3:30 PM	Introduction to Integrating Hardwareand Cloud Platform Learn the working of IFTTT(eg Google Assistant)
	3:30 to 3:45 PM	Short Break
	3:45 Pm to 6:00 PM	Interface ESP withUbidots(IOT Cloud)
3	8:00 am to 10:00 AM	Learn about MIT APPInventor MIT App Inventor Interfacewith Real time Database usingIoT Protocols
	10:00AM to 10:15 AM	Short Break
	10:15 to 1:00 PM	Hands-on Lab and Project Presentation
	1:00 PM to 2:00 PM	Lunch Break
	2:00 PM to 3:30 PM	Hands-on Lab and Project Presentation
	3:30 to 3:45 PM	Short Break
	3:45 Pm to 6:00 PM	Hands-on Lab and Project Presentation

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Bengaluru - 560068

**Department of Electronics and Communication Engineering**

## Course outcomes

1. Able to understand the basic framework of an IoT echo system
2. Able to understand and utilize various opensource IoT platforms for IoT based application development.
3. Able to Conceptualize and Develop products using IoT

**Chief Patrons**

**Dr. D. Hemachandra Sagar,**  
Chancellor

**Dr. Premachandra Sagar,** Pro-  
Chancellor

**Patrons**

**Shri. Galiswamy,** Secretary, DSI

**Dr. A.N.N Murthy,** Vice -

Chancellor

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Chancellor

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**Dr. H.L Vishwanth,** Chairman -  
ICE

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Interface ESP with Ubidots(IOT Cloud)

Learn about MIT APP Inventor

MIT App Inventor Interface with Real time Database using IoT Protocols

Day 3: Hands-on Lab and Project Presentation

**Workshop**

**on**

**INTERNET OF THINGS (IOT)**

9th, 10th & 12th March 2018

**Resource Persons:**

**Mr. Abhinav Karan**

**Mr. Chandrakant Singh**

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ELECTRONICS & COMMUNICATION  
ENGINEERING  
KUDLU GATE, HOSUR MAIN ROAD,  
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**Dayananda Sagar**  
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Department of Electronics and Communication Engineering

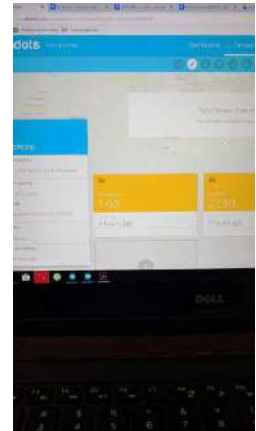
### Internet of Things (IOT)

Schedule

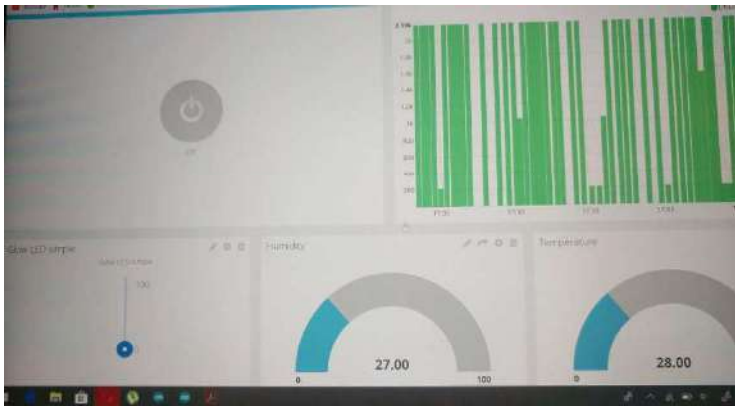
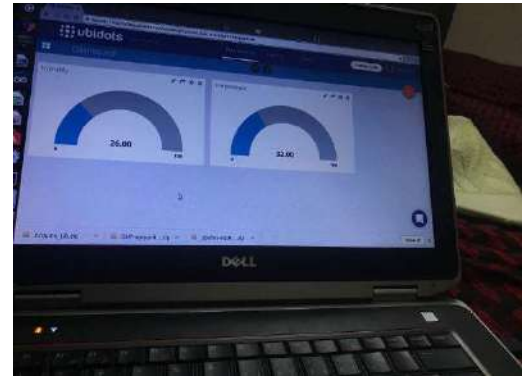
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	3:30 to 3:45 PM	Short Break
	3:45 Pm to 6:00 PM	Interface ESP withUbidots(IOT Cloud)
3	8:00 am to 10:00 AM	Learn about MIT APPinventor MIT App Inventor Interfacewith Real time Database usingIoT Protocols
	10:00AM to 10:15 AM	Short Break
	10:15 to 1:00 PM	Hands-on Lab and Project Presentation
	1:00 PM to 2:00 PM	Lunch Break
	2:00 PM to 3:30 PM	Hands-on Lab and Project Presentation
	3:30 to 3:45 PM	Short Break
	3:45 Pm to 6:00 PM	Hands-on Lab and Project Presentation

**Chairman,**

Dept. of Electronics and Communication Engineering  
School of Engineering,  
Dayananda Sagar University,  
Kudlu Gate, Hosur Main Road,  
Bengaluru - 560 068







## Workshops & Hackathon Organized/Planned

Sl.No.	Event	Date	Resource person	Number of Participants
1	50 Hours of Masterclass Series Workshop on Android App Development	14 Feb 2020 ~ 8 Mar 2020	<ul style="list-style-type: none"><li>Mr.Vikarm, Software Engg. Bosch</li></ul>	21

# Android App Development





# Dayananda Sagar University

Department of Computer Science and Technology



## Report on Value added course-2022

Title: Value added course on Git and Git Hub 101

We CST department SoE DSU had planned value added course for CST students (4<sup>th</sup>,6<sup>th</sup> semester) one week course from 21-07-2022 to 27-07-2022 on GIT and GIT hub.

Main objective of course **Git & GitHub 101** includes Understanding around Version Control, Diff / Patch, Git as local repo, GitHub as remote repo, Collaborative development including CI / CD / DevOps & Workflow / Actions.

Brochure shared with the students of CST and registration is made to get the count of students.



**Dayananda Sagar University**  
Department of Computer Science & Technology

cordially invites you to the  
Value added course  
On  
"Git & GitHub 101"  
For 5<sup>th</sup> & 7<sup>th</sup> Sem CST students  
Date: 21<sup>st</sup> & 22<sup>nd</sup> July 2022  
Mode of conduction: Online

**COURSE OBJECTIVES**

- How to set up local repository and configuration files using a popular version control system (VCS) called Git.
- How to manage account with GitHub and how you create your own remote repositories in other cloud based environment.

**COURSE OUTCOMES**

- Students will be able to manage their code effectively and collaborate with the world.
- Students will be able to use their GitHub effectively as a developer.

**\*\* The top 3 projects will be suitably rewarded after the final examination\*\***

**Faculty Incharge:**  
Prof. Hrishya Aranganahalli  
Prof. Sachin Pillai

**Student Incharge:**  
Ananya Rohini

**Coordinators:**  
1. Dr. A. Srinivas (Assistant Prof.)  
2. Dr. M. Srinivas (Assistant Prof.)

*M. Srinivas*  
**Chairperson**  
Dept. of Computer Science & Technology  
School of Engineering  
Dayananda Sagar University  
Kudlu Gate, Hosur Main Road,  
Bengaluru-560 114.



# Dayananda Sagar University

Department of Computer Science and Technology



## Registration link


[https://docs.google.com/spreadsheets/d/1-UuE4w0FqqriHlwta1NR6gPtjd64V7iDJcGA1bcVxB0/edit?usp=sharing\\_eil\\_m&ts=62d8095d](https://docs.google.com/spreadsheets/d/1-UuE4w0FqqriHlwta1NR6gPtjd64V7iDJcGA1bcVxB0/edit?usp=sharing_eil_m&ts=62d8095d)

46 students enrolled to course through the registration.

Mode of conduct was through online from 9:00am – 12 noon and from 2:00pm to 4:00pm.

Resource person : Prof Baskar Venugopalan

- Masters degree from IIT, Madras.
- 30 years of IT experience and 15 years of Senior Leadership Roles with major Technology services companies includes Fortune 500 servicing across industries around innovation, Advanced Technology development & strategy, Consulting, Delivery, business development and account management across globe.
- Experienced in building good relationships at the CXO level as a Strategic Advisor.
- Good in arriving at business and Technology digital transformation strategy and as a good team builder accomplishing the same
- Contributed extensively in building innovation culture leading to Ideas - PoC – Product / Offering
- Trusted Advisor in establishing Solution Labs / COE with innovation capabilities
- Expert in leveraging distributed team(s) in solving customer's business problems with an effective ROI, resulting in delighted customers and the Partner Organization.
- Over Three Decades of qualified experience includes roles performed as Account CTO, vCTO Lead, Innovation & Incubation Lead, Director / Advisor to partner(s), Practice(s) Lead, Delivery Unit head, Industry Solutions Group Head, Division Head and R&D Engineer.

  
**Chairperson**  
Dept. of Computer Science & Technology  
School of Engineering  
Dayananda Sagar University  
Kudlu Gate, Hosur Main Road,  
Bengaluru - 560 114.

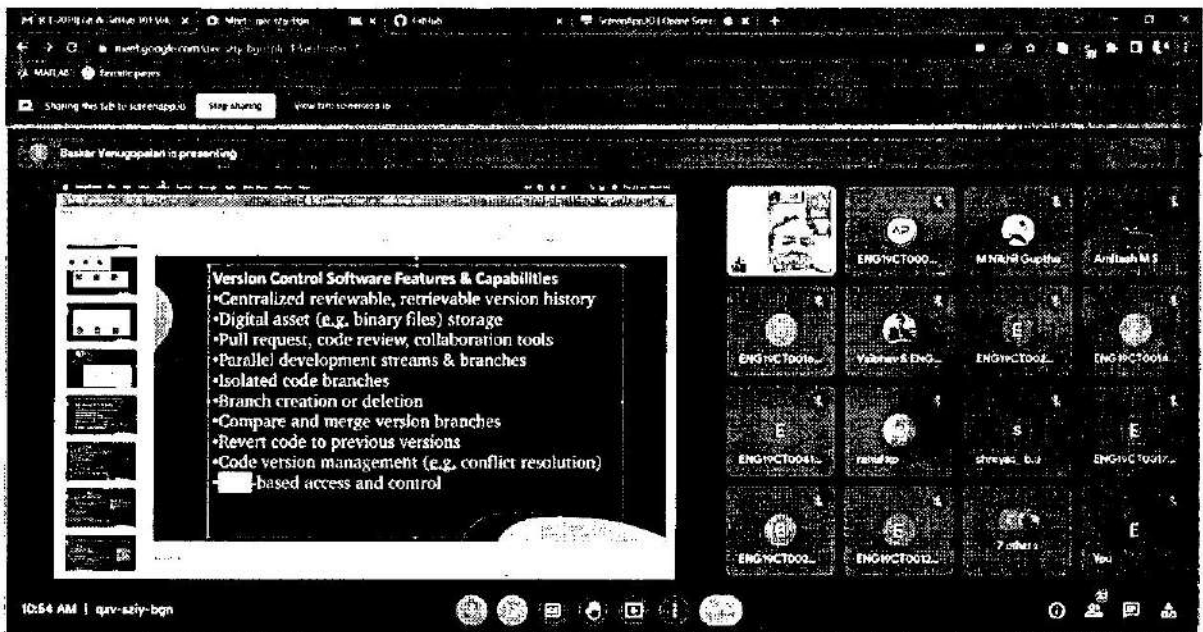
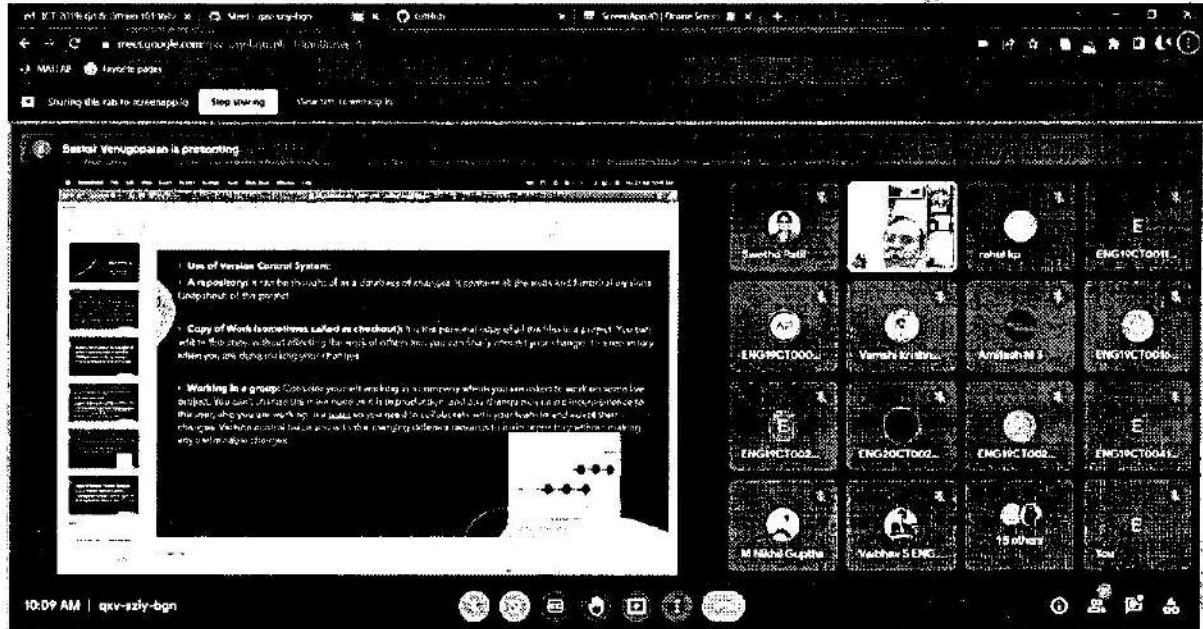


**Session Proof:**



*M. Speer*

**Chairperson**  
Dept. of Computer Science & Technology  
School of Engineering  
Dayananda Sagar University  
Kudlu Gate, Hosur Main Road,  
Bengaluru-560 114.



Videos uploaded to google drive



**Dayananda Sagar University**

Department of Computer Science and Technology



<https://drive.google.com/drive/folders/15YlhowiOl46A4MdZOU110vGZS35C1ux3P?usp=sharing>

Course effectiveness and students understanding is captured by have quiz after each session

Quiz 1 <https://forms.gle/JF4v3R4MUKYvFvBC>

Quiz 2 <https://forms.gle/M8cEY9tjAEgYvdmN7>

Students got a good understanding around Version Control, Diff / Patch, Git as local repo, GitHub as remote repo, Collaborative development including CI / CD / DevOps & Workflow / Actions.

### **Feedback**

*“Requiring the use of this skills in the major projects to enhance our industry level skills.”*

*“The workshop helped me gain information on how basic tasks in Git and Github are carried out. I would like to convey my thanks to Baskar Sir, Amitash and Rahul for making this course an informative one”*

### **Conclusion**

Value added course is concluded with mini hackathon by submitting a mini project leveraging Git & Github features (max possible) with minimum one Actions - Workflow.

Assignment is completed on Tuesday 26-Jul-22 all repo owners are issued course completion certificate and the top three repos are rewarded.

**Chairperson**

Dept. of Computer Science & Technology  
School of Engineering  
Dayananda Sagar University  
Kudlu Gate, Hosur Main Road,  
Bengaluru - 560 114.



**DR CHANDRAMMA DAYANANDA SAGAR INSTITUTE OF  
MEDICAL EDUCATION AND RESEARCH**

Harohalli, Kanakapura Taluk, Ramanagara District  
(A unit of Dayananda Sagar University)



**COURSE ON DEVELOPING SKILLS TO IMPROVE MENTAL- EMOTIONAL  
RESILIENCE**

**PROGRAM SCHEDULE**

**Duration:** One Month (30hrs)

From 2.05.2022 to 30.05.2022

**Venue:** Lecture Hall

<b>Date</b>	<b>Time</b>	<b>Topic</b>	<b>Name of the Resource Faculty</b>
2.05.2022	5.30 -6.30 P.M	Introduction to Value Added Course	<b>Dr.Neeraj Raj</b>
3.05.2022	5.30 -6.30 P.M	Ice breaking	<b>Dr.Anupama</b>
4.05.2022	5.30 -6.30 P.M	Key words – a guide	<b>Dr.Gopal Das</b>
5.05.2022	5.30 -6.30 P.M	Mechanism of stress	<b>Dr.Neeraj Raj</b>
6.05.2022	5.30 -6.30 P.M	Types of stress	<b>Dr.Neeraj Raj</b>
7.06.2022	3.30 PM – 5.30 PM	Workshop on Stress Management	<b>Dr.Gopal Das and Team</b>
9.05.2022	5.30 -6.30 P.M	Cognitive distortions	<b>Dr.Anupama</b>
10.05.2022	5.30 -6.30 P.M	Coping mechanisms	<b>Dr.Anupama</b>
11.05.2022	5.30 -6.30 P.M	Time management and techniques <b>WORKSHOP</b>	<b>Dr.Gopal Das and Team</b>
12.05.2022	5.30 -6.30 P.M	Relaxation techniques <b>WORKSHOP</b>	<b>Dr.Neeraj Raj and Team</b>
13.05.2022	5.30 -6.30 P.M	Relaxation techniques <b>WORKSHOP</b>	<b>Dr.Neeraj Raj and Team</b>
14.05.2022	3.30 PM – 5.30 PM	Anger management <b>WORKSHOP</b>	<b>Dr.Gopal Das and Team</b>
16.05.2022	5.30 -6.30 P.M	Sleep Hygiene	<b>Dr.Tarachand Naik</b>

17.05.2022	5.30 -6.30 P.M	Social media and Screen time	<b>Dr.Tarachand Naik</b>
18.05.2022	5.30 -6.30 P.M	Communication Skills	<b>Dr.Anupama</b>
19.05.2022	5.30 -6.30 P.M	Interpersonal Relations	<b>Dr.Anupama</b>
20.05.2022	5.30 -6.30 P.M	Exam preparation and Routine establishment	<b>Dr.Neeraj Raj</b>
21.05.2022	3.30 PM – 5.30 PM	WORKSHOP- Assertion Skills	<b>Dr.Anupama and Team</b>
23.05.2022	5.30 -6.30 P.M	Unmanaged stress	<b>Dr.Neeraj Raj</b>
24.05.2022	5.30 -6.30 P.M	Success and stress	<b>Dr.Neeraj Raj</b>
25.05.2022	5.30 -6.30 P.M	Introduction to Anxiety and Depression	<b>Dr.Anupama</b>
26.05.2022	5.30 -6.30 P.M	Suicide and Suicide gatekeeping -A WORKSHOP	<b>Dr.Gopal Das and Team</b>
27.05.2022	5.30 -6.30 P.M	Suicide and Suicide gatekeeping -A WORKSHOP	<b>Dr.Gopal Das and Team</b>
28.05.2022	3.30 PM – 5.30 PM	WORKSHOP-Managing exams successfully	<b>Dr.Gopal Das and Team</b>
30.5.2022	5.30 -6.30 P.M	Valedictory & Feedback	

Lahari Reddy N

Sharon Lakshmi R

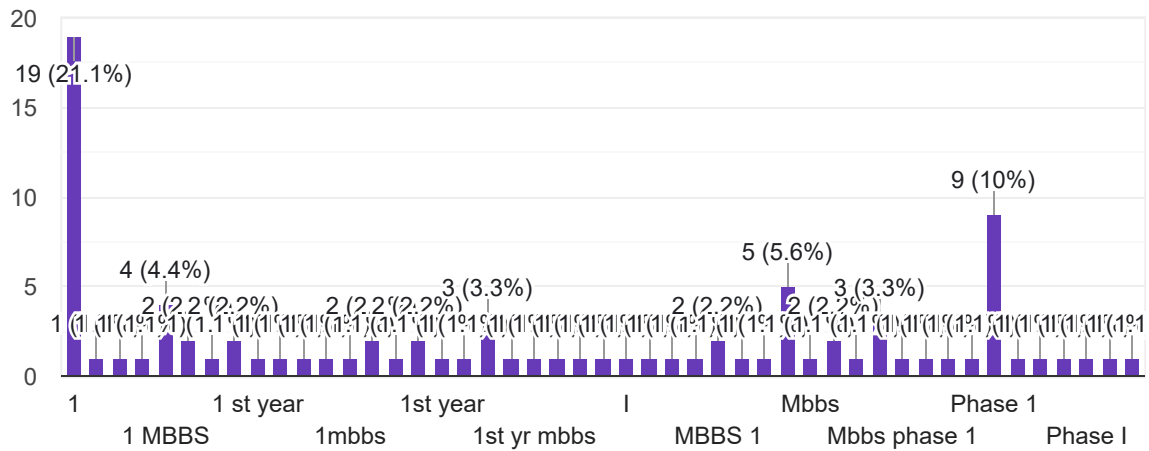
Ankitha A Masur

Akshay T M

### Phase



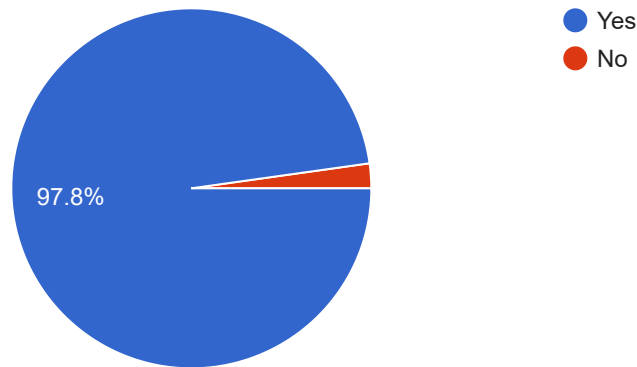
90 responses



### 1. The Objectives of the course were clear to you



90 responses



From

Dr Pratibha Nadig

Professor & HOD

Department of Pharmacology

CDSIMER, Harohalli

16 Mar 2022, Devarakaggalahalli

To

The Dean

CDSIMER

Harohalli

Through Proper Channel

Respected Sir

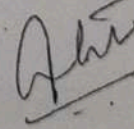
Sub: Permission to conduct 35 hours course titled "Certificate Course in Pharmacovigilance" for 2nd MBBS students

With reference to the above subject, I kindly request your permission for the conduct of 35 hrs "Certificate Course in Pharmacovigilance". The proposed dates are 01-Apr-2022 to 30-Oct-2022. The detailed schedule of activities is attached. I have also attached a copy of proposed brochure for your perusal. Kindly do the needful

Enclosure: Brochure

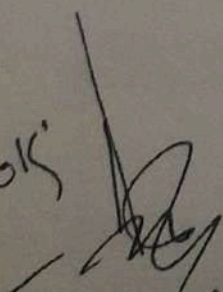
Thanking you

Yours faithfully



Head Dept. of Pharmacology  
Dr. Chandramma Dayananda Sagar  
Institute of Medical Education & Research  
DSU, Devarakaggala Halli Village, Harohalli Hobli  
Kanakapura, Ramanagara Dist., Karnataka

GK

  
Dr. A.C. ASHOK MBBS, MS, DNB, DA  
Principal & Dean  
Dr. Chandramma Dayananda Sagar  
Institute of Medical Education & Research, DSU  
Devarakaggala Halli, Kanakapura Road  
Ramanagara Dist. - 562112, Karnataka



**CERTIFICATE COURSE IN PHARMACOVIGILANCE  
PROGRAM SCHEDULE**

Date : 01-Apr-2022 to 31-Oct-2022

Venue: CDSIMER, Dept of Pharmacology

**SCHEDULE OF ACTIVITIES**

Time	Topic	Name of the Resource Faculty
2-4 pm	Pharmacovigilance: History, Definitions, Regulations, Drug Development, Safety Reports, Clinical and regulatory implications	Dr Shiva murthy N
2-4 pm	How to recognize and report an adverse drug reaction and a case based workshop	All staff of department of pharmacology
4-7 pm	Ward and Filed work - Visit to wards of various departments, review of case sheets, interview staff, students, collect ADRs	Students self directed works
4-7 pm	Ward and Filed work - Visit to wards of various departments, review of case sheets, interview staff, students, collect ADRs	Students self directed works
4-7 pm	Ward and Filed work - Visit to wards of various departments, review of case sheets, interview staff, students, collect ADRs	Students self directed works
4-7 pm	Ward and Filed work - Visit to wards of various departments, review of case sheets, interview staff, students, collect ADRs	Students self directed works
4-7 pm	Ward and Filed work - Visit to wards of various departments, review of case sheets, interview staff, students, collect ADRs	Students self directed works
3-4 pm	5 Presentation of cases to faculty	Each student complete the preparation PPT and do the presentation in front of pharmacology department faculty
2 am - 6 pm	Participation in various competitions, programs, road shows, public engagement	All faculty and students
Half day on		

23 Sept 2022 and complete day on 24th Sept 2022.	programs as participant and as audience to learn various concepts during National Pharmacovigilance week celebration between 22 Sept 2022 to 28th Sept 2022	
Half day on 28th Sept 2022	COMPLETION TEST AND CERTIFICATION	CDSIMER management and Guest of Honour, HOD Pharmacology, PV coordinator and Other department staff.

*N. Chivakoty*  
**Course Coordinator**

*[Signature]*  
**Head of the Department**

*[Signature]*  
**Dean**

Dr. Prashanth Kumar M. MBBCh, D, FA  
 Vice Principal

Head Dept. of Pharmacology  
 Dr. Chandramma Dayananda Sagar  
 Institute of Medical Education & Research,  
 Devarakaggalahalli, Kanakapura Road,  
 Ramanagara Dist. - 562117, Karnataka



1. The Objectives of the course were clear to you

Copy

149 responses

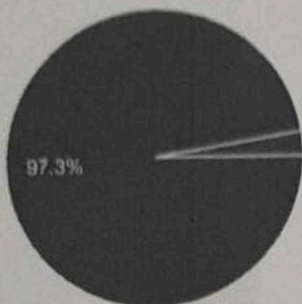


● Yes  
● No

2. The course contents met your expectations

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149 responses

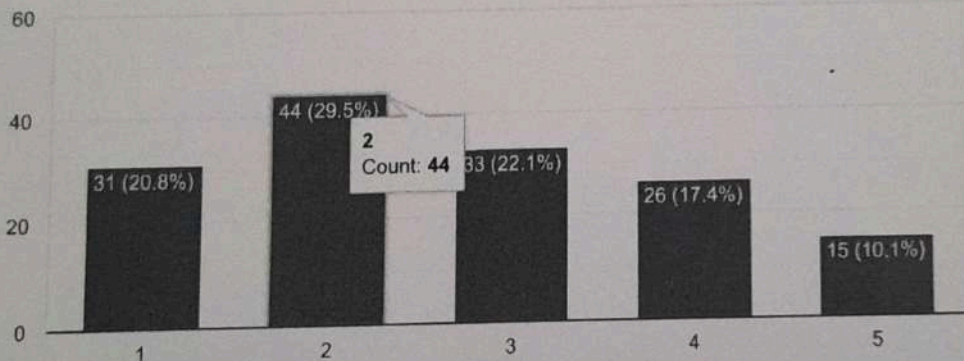


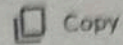
● Yes  
● No

3. The lecture sequence was well planned

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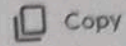
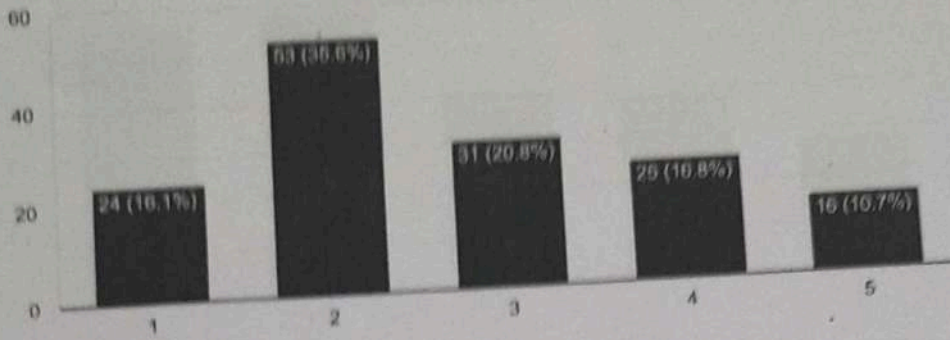
149 responses





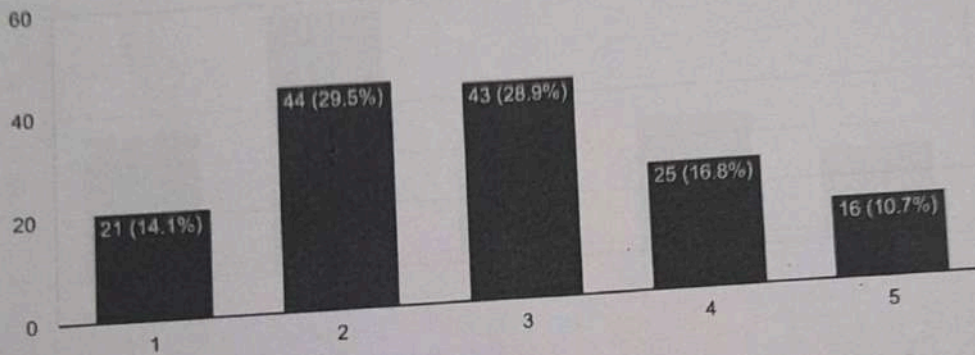
4. The contents were illustrated with sufficient examples

149 responses



5. Sufficient time was allotted for hands on experience in terms of workshop

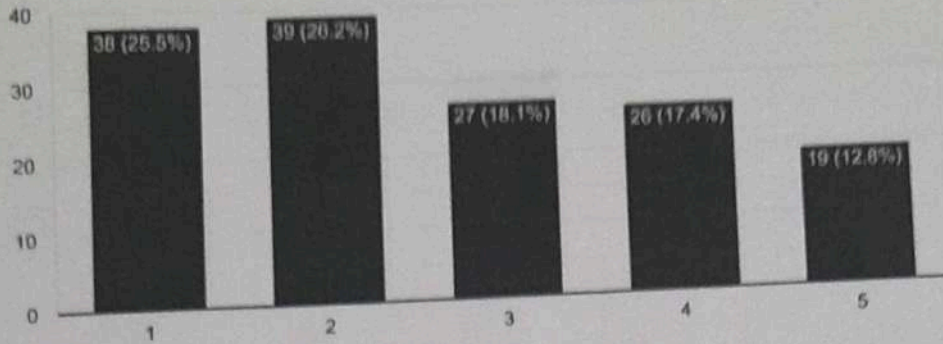
149 responses



6. The course helped you to gain new knowledge and practices

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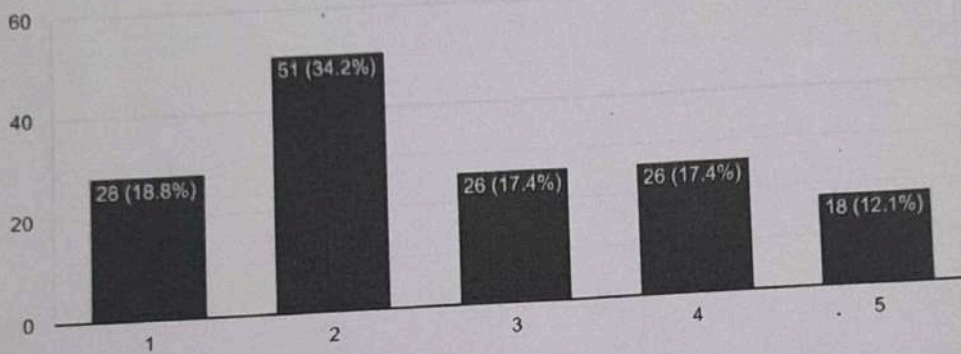
149 responses



7. The lectures were clear and met the objectives of the course

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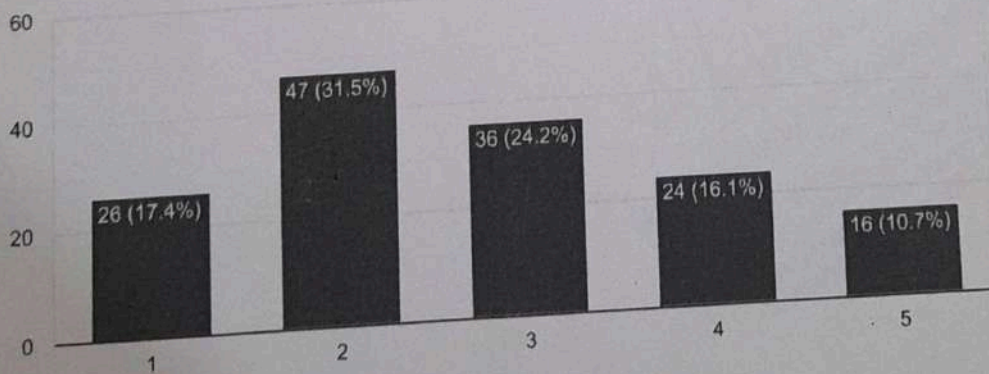
149 responses



8. Audio Visual Aids were effectively used

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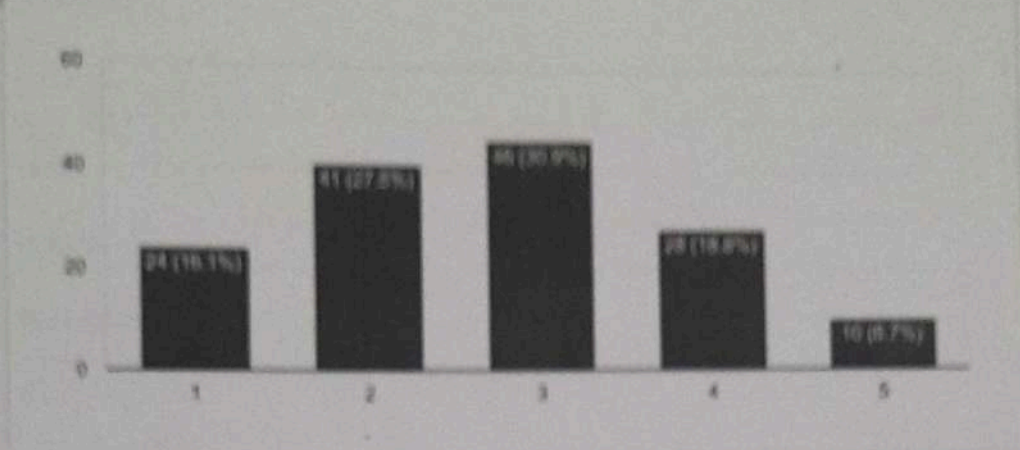
149 responses



g. Sufficient time was given to practice what I learnt

Copy

149 responses



**Dr. Prashanth Kumar M. MBBS, MD, FAIMER**  
Vice Principal  
Dr. Chandramma Dayananda Sagar  
Institute of Medical Education & Research, DSU  
Devarakaggalahalli, Kanakapura Road,  
Ramanagara Dist. - 562112, Karnataka

# Title of Course: Certificate course in Pharmacovigilance

## Report of the Course

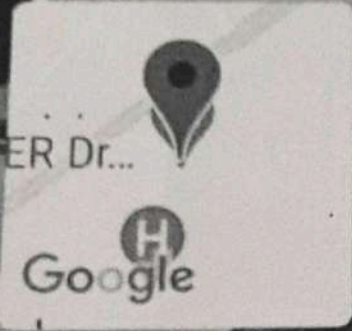
Sl No	Parameter	Comments
1	<p>Course contents</p> <ul style="list-style-type: none"> <li>- Theory discussion - 2 hrs</li> <li>- Practical demonstration - 2 hrs</li> <li>- Field work - Cases collection, completion of form, study of case, presentation of case, submission of final case - 3 hrs per case, total 15 hrs</li> <li>- conclusion meeting and certification - 1 hrs</li> </ul>	Total (20 hrs +10hrs)
2	No of students enrolled	145 students
3	Course duration dates	01-Apr-2022 to 30-Jun-2022
4	Activities so far completed	<p>Till date 200 ADRs are reported by students. Some of them completed 5 ADRs and some are on the way to complete.</p> <p>Since ADRs are real time events, we need to wait till real cases are reported.</p> <p>We have given additional time to complete the reports collection.</p>
5	Theory class and practical demonstration of cases - activity completed and attendance is recorded	Attachment given
6	Photos of classes taken	Attached
7	Photos of sample cases submitted by students	Attached
8	Feedback comments for improvement	<ul style="list-style-type: none"> <li>*Additional time may be dedicated for better experience and learning</li> <li>*Discussion of the submitted ADRs in the class, so that we get to learn about other drugs and their adverse drug reaction</li> <li>* Detailed explanation of the side effects of the drugs</li> <li>*Activity based learning and Guest lectures</li> <li>* provide more time for collection of adverse drug reactions</li> <li>* Teaching with more examples.</li> <li>* Spread more awareness about ADRs and how to fill it.</li> <li>* Everything was well planned and organized</li> <li>* It was upto the mark nothing from my side</li> </ul>

9	Extension of the course (10hrs)	<p>*Clinical cases should be discussed</p> <p>Participation in various competitions, programs, road shows, public engagement programs as participant and as audience to learn various concepts during National Pharmacovigilance week celebration is planned.</p> <p>Final certification will be done after this</p>
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Introductory class



ADR Form completion Group photo



Ramanagara, Karnataka, India

CDSIMER , Kanakapura Rd, Karnataka 562112, India

Lat N 12° 39' 40.4352"

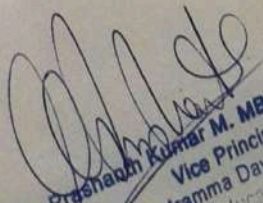
Long E 77° 26' 58.038"

12/07/22 10:18 AM

**Dr. Prashanth Kumar M. MBBS, MD, FAIMER**  
Vice Principal  
Dr. Chandramma Dayananda Sagar  
Institute of Medical Education & Research, DSU  
Devarakaggalahalli, Kanakapura Road,  
Ramanagara Dist. - 562112, Karnataka

Workshop on ADR completion



  
Dr. Prashant Kumar M. MBBS, MD, FAI  
Vice Principal  
Dr. Chandramma Dayananda Sagar  
Institute of Medical Education & Research  
Devarakaggiahalli, Kanakapura R  
Ramanagara Dist. - 562112, Karn



Dr. Chandramma  
Institute of  
Vice Principal  
Dr. Chandramma  
M. Hobb, MD, FARMER

The certificate program is particularly recommended for those students and practicing managers who would like to take up business analytics and decision making as a specialized field of study.

# Introduction to Statistics Using Excel

## Certification Program

*February - 2022*

Amarnath K N

---

# Certification Program

## Introduction to Statistics Using Excel

Dayananda Sagar University's "Introduction to Statistics" delves into statistical thinking concepts over eighteen hours that are essential for learning from data and communicating insights. By the end of the certificate course, a participant will be able to perform exploratory data analysis, understand key principles of sampling, and select appropriate tests of significance for multiple contexts. The student will gain the foundational skills that prepare them to pursue more advanced topics in statistical thinking and business analytics using Excel.

Topics include an understanding of Advanced Excel, Descriptive Statistics, Sampling, Probability, Sampling Distributions and the Central Limit Theorem, Regression, Common Tests of Significance, Resampling, Multiple Comparisons.

The certificate program is particularly recommended for those students and practicing managers who would like to take up business analytics and decision making as a specialized field of study. Eventually decision making is the fundamental role of a manager. It is also applicable for research scholars and those students making a foray into doctoral studies.

On successful completion of the course a student will be awarded a certificate from Dayananda Sagar University, Bengaluru.

### Learning Outcomes:

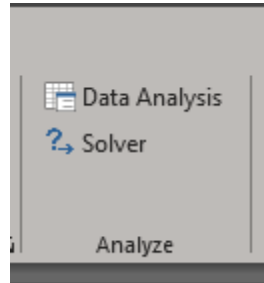
1. A student will on completion of this course have a firm grasp on the basics of statistics
2. A student will on completion of this course have a firm grasp on the basic concepts of descriptive statistics
3. A student will on completion of this course have a firm grasp on bivariate analyses
4. A student will on completion of this course have a firm grasp on probability theory and the rules for calculating with probabilities
5. A student will on completion of this course have a firm grasp on sampling distributions
6. A student will on completion of this course have a firm grasp on inferential statistics: estimation by means of a confidence interval
7. A student will on completion of this course have a firm grasp on main ingredients of the method of significance testing

### Instructor



Prof. K.N. Amaranth is an accomplished data analytics professional with impressive career credentials of about three decades. He is a versatile statistician making noteworthy recommendations for strategic decision making. Amarnath consults widely as Senior Research Analyst with deep insight into market trends and business scenarios driving at effective market positioning several product launches.

The enlarged view of the options:



No Excel alternatives are entertained as Softwares because the calculations will not work on them.

Readings:

1. An Excel-Aided Method for Teaching Calculus-Based Business Mathematics.  
<https://core.ac.uk/download/pdf/268109734.pdf>
2. There are many more articles as above which are available over WWW.

**Details:**

Course Fee: INR 2000/-

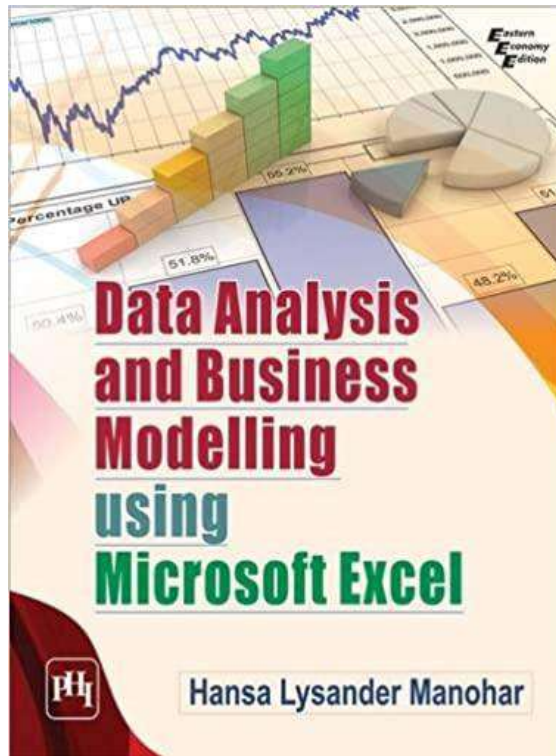
Contact: Prof. V.V. Rajan, [vvrajan@dsu.edu.in](mailto:vvrajan@dsu.edu.in) / 888 418 6036

Workshop Schedule:

	21-Feb	23-Feb	25-Feb	26-Feb	28-Feb	02-Mar	04-Mar	05-Mar	06-Mar	07-Mar	09-Mar	Total
	Mon	Wed	Fri	Sat	Mon	Wed	Fri	Sat	Sun	Mon	Wed	
07:00 PM-08:30 PM	1.5	1.5	1.5		1.5	1.5	1.5			1.5	1.5	12
10:00 AM-12:00 PM				2.0				2.0	2.0			6
Practicals (6:00PM to 07:00PM)	1.00	1.00	1.00	2.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	14
											<b>Total</b>	<b>32</b>

Please purchase e-book only from the below link. INR 337.50 only

<https://www.phindia.com/Books/BookDetail/9788120352889/data-analysis-and-business-modelling-using-microsoft-excel>



Sample Certificate

