K.S. INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru – 560 109

Department of Computer Science & Engineering

PROJECT LABORATORY

K.S.INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road,

Bengaluru-560109

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

REPORT ON

3 Days Workshop on
IMAGE PROCESSING WITH OPENCV

Coordinators

Dr. Ganga Holi,

Professor, Department of CSE

KSIT, BANGALORE

Prof. Raghavendrachar S,

Assistant Professor,

Department of CSE

KSIT, BANGALOE

Prof. Roopesh Kumar BN,

Assistant Professor,

Department of CSE

KSIT, BANGALORE

Organizing Chair

Dr. Rekha B Venkatapur

Professor & Head, Department of CSE

KSIT, BANGALORE

CONTENTS

FDP Inauguration Brochure

KAMMAVARI SANGHAM (R) 1952

K. S. Institute of Technology

No. 14, Raghuvanahalli, Kanakapura Road, Bengaluru-560 109.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

In association with

Cordially Invite you for the Inaugural function of

3 Days Workshop

"Image processing with OpenCV"

[30th October – 2nd November 2023]

On 30th October 2023 in Seminar Hall New Block at 9 am

Will grace Function

Dr. K.V.A. Balaji, CEO, KSGI

Dr. Dilip Kumar. K, Principal & Director, KSIT

Dr. Pradeep Desai, Chairman, CSI-BC, Bengaluru

Chief Coordinator	Coordinators	Organizing Chair
Dr. Ganga Holi,	**Prof. Roopesh Kumar B.N.**	**Dr. Rekha B Venkatapur.**
Professor	Assistant Professor	Professor & HOD, Dept. of CSE
	&	
	Prof Raghavendrachar.S.	
	Assistant Professor	

K.S. INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, KanakapuraMainRoad,Bengaluru-560109

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Session wise details of 3 Days workshop on "Image Processing with OpenCV"

Date/D ay	Session 1 9.00 am 10.30am	Resource Person		Session-2 11.00- 12.30pm	Resource Person		Session-3 1.30-3.00	Resource Person
DAY-1 30/10/2 023	Inaugur ation & Keynote	Dr.Pradeep Desai, Chairman Bengaluru Chapter (CSI-BC)	10.45 am-11.00 am Tea break	Fundament als of Digital Image processing	Dr. Prashantha. H.S	12.30pm -1.30pm Lunch Break	Hands on Session on OpenCV	Dr.Ganga Holi
DAY-2 31/10/2 023	Image Enhancem ent	Dr.Ganga Holi		Image segmentation and Morphological operations	Dr.Vijayalaxmi Mekali		Hands on Session on OpenCV-Image Enhanceme nt	Dr.Ganga Holi
DAY-3 02/11/2 023	Machi ne learni ng for DIP Applicati ons	Ravindranath K, Research Scholar, NIT, Tirchy		Image restoration and Image filtering Dr.Arachana.H.R,Asst. Professor,BMSCE			Mini Project on Image Processing using OpenCV	

K.S.INSTITUTE OF TECHNOLOGY

#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru-560109

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Image Processing with OpenCV
Department Level Committee Coordinators

- ➤ **Registration Committee**

Faculty Members:

> Dr. Kusuma
>
> Dr. Sankamanavalli

- ➤ **Stage Committee**

Faculty Members:

> Mrs. Kavya
>
> Mrs.Pallavi K N
>
> Mrs.Pallavi R
>
> Mrs. Rashmi H

- ➤ **Stage Committee**

Faculty Members:

> Mr. Raghavendrachar S
>
> Mr.RoopeshKumarBN
>
> Mr. Babu G

- ➤ **Lab in-charge During Hands on Session**

Faculty Members:

> **Mr**.Abhilash
>
> **Ms**. Preethi
>
> **Mrs**. Rekha

K.S. INSTITUTE OF TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE & ENGG.
Image processing with CV workshop-Registration Form

SL.NO	USN	NAME OF THE STUDENT	
1	1KS20CS058	N KEERTHANA	100
2	1KS20CS059	NAJEEB MUTHAHEED ARIN UL HAQ	100
3	1KS20CS060	NAMRATHA R	100
4	1KS20CS061	NARASIMHA N	100
5	1KS20CS062	NEHA REDDY S	100
6	1KS20CS063	NIDHI K V	100
7	1KS20CS064	NIRMITHA N	100
8	1KS20CS065	N NITHESH KUMAR	100
9	1KS20CS066	NUTHANAPATI DEVITHA	100
10	1KS20CS067	PARVA SHREE..H M	100
11	1KS20CS068	PARVATHY P S	100
12	1KS20CS071	PAVAN M	100
13	1KS20CS072	PAVAN P	100
14	1KS20CS073	PAVITHRA R	100
15	1KS20CS074	POOJITHA Y	100
16	1KS20CS075	POONAM	100
17	1KS20CS076	PRADHYUMNA K	100
18	1KS20CS077	PRAJWAL NAIK U	100
19	1KS20CS078	R.KUSHAL SAI	100
20	1KS20CS079	RAGHAVI C S	100
21	1KS20CS080	RAKSHITH.C MAHALADKAR	100
22	1KS20CS081	RAKSHITHA P	100
23	1KS20CS083	S.SAI SHANKARI	100
24	1KS20CS084	SAAHIL BHUJANG DHARMAJI	100
25	1KS20CS086	SAHANA R	100
26	1KS20CS088	SANKET GANAPATI HEGDE	100
27	1KS20CS089	SHASHIKANTH N G	100
28	1KS20CS090	SHASHWATHA H M	100
29	1KS20CS091	SHILPA M	100
30	1KS20CS092	SHRAVYA M R	100
31	1KS20CS093	SINDHURA H	100
32	1KS20CS094	SIRIPIREDDY THULASI	100
33	1KS20CS096	SPOORTHY.N	100
34	1KS20CS097	SRISHTI SRIVASTAVA	100
35	1KS20CS099	SUSHMA SRIKANTA KURANDWAD	100
36	1KS20CS100	TAHREEM IMAD PASHA	100
37	1KS20CS101	TALIB MUKHTAR CHODA	100
38	1KS20CS102	TANVI KAMATH	100
39	1KS20CS103	THANUSHA K	100
40	1KS20CS104	TRUPTHI G B	100
41	1KS20CS105	TUSHAR S	100
42	1KS20CS106	V ARVIND	100

43	1KS20CS107	VAISHNAVI M	100
44	1KS20CS108	VANDANA N	100
45	1KS20CS109	VANDANA.N	100
46	1KS20CS110	VIBHAV KAUSHIK V	100
47	1KS20CS111	VIKAS KASHYAP R	100
48	1KS20CS112	VISHAL N KORABU	100
49	1KS20CS113	VUMMANENI CHARAN	100
50	1KS20CS114	Y JHANSI	100
51	1KS20CS115	MOHAMMAD TAHA	100
52	1KS20CS116	ASHRIT MADHAV VADIRAJ	100
53	1KS20CS117	DEEPAK S	100
54	1KS20CS118	K R SAHANA	100
55	1KS20CS119	SNEHA A S	100
56	1KS20CS120	AJAY GIRISH	100
57	1KS20CS121	SAKSHAM SINGH	100
58	1KS20CS122	RAVI VAMSHI D N	100
59	1KS20CS123	SANJANA G	100

K.S.INSTITUTEOF TECHNOLOGY,BANGALORE

Department of Computer Science and Engineering
3 Days Workshop on" Image Processing with OpenCV"
(30ᵗʰOctober 2023 to 2ⁿᵈNovember 2023)

PROFILE DETAILS

Name: Dr.Pradeep V Desai

Designation: Director of K. S Research and Innovation Foundation and Prof. of Computer Science and Engineering Department at KSIT.

Email: pradeep.desai@ksit.edu.in

Short Biography:

- Dr. Pradeep V Desai has completed MBA in Computer Applications from Newport University, USA. Master in Electronics and Bachelor in Electronics & Communication. PhD in Computer Science and Engineering. Post-Doctoral in Symbolic Data Analysis and Neural Nets, at Dauphine University, Paris, France.

- Dr. Pradeep V Desai has over 30 years of experience comprising of Industry and Entrepreneurship. Sir is the Director of KS Research and Innovation Foundation and Prof. of Computer Science and Engineering Department at KSIT. Currently, He is setting up KS Research and Innovation Foundation for the KS Group. He has held senior leadership positions at General Electric (GE), Tata Consultancy Services (TCS), Philips Research, and Wipro Technologies. He had set up and lead their global teams for Research and Innovations.

- Had Expertise in areas like
  - MedTech and HealthTech
  - Value Propositions, Business Models, and Commercialization
  - AI & ML, Data & Analytics, IoT, Cloud, and Mobility
  - Software, Embedded Systems, and Platforms

- Sir has a Professional Memberships in:
  - Fellow, Institution of Engineering and Technology, UK.
  - Senior Member, Institute of Electrical & Electronics Engineers, USA
  - Chairman of Computer Society of India, Bangalore Chapter.

K.S.INSTITUTEOF TECHNOLOGY,BANGALORE

Department of Computer Science and Engineering
3 Days Workshop on" Image Processing with OpenCV"
(30thOctober 2023 to 2ndNovember 2023)

PROFILE DETAILS

Name: Dr. Ganga Holi

Designation: Professor, CSE, KSIT, Bengaluru

Phone: 9739711159

Email: dr.gangaholi@ksit.edu.in

Short Biography:

- Dr. Ganga Holi mam had completed B.E., M.Tech in CSE from VTU and completed PhD in 2013. She has over 27 years of experience in teaching and 2 years in industry with 16 years' experience in Research.
- Dr. Ganga Holi mam has presented and published 45 research papers in International Journals and conferences. She has done 20 certifications in trending technologies and also delivered guest talks and conducted workshops and training for faculties and students.
- She had carried out various roles like
  - Demonstrated the proficiency in developing sentiment analysis model to analyze the code reviews made by clients using NLP techniques.
  - Demonstrated proficiency in fine tuning the pretrained language Open AI's models.
  - Organized various Faculty Development Programs / Workshops with sponsorship from VTU, KSHEC, CSI, ISTE, BITES.
  - SPOC for Infosys Campus Connect Program.
  - Served as BOS Member for CSE, PDACE, Gulbarga, BEC Bagalkot.
  - Served as BOE member for CSE/ISE at VTU, Belagavi for the academic year 2019-20.
  - Reviewed Conference papers and served as Technical Committee member at International Conference. Reviewer for IGI Journal.

K.S.INSTITUTEOF TECHNOLOGY,BANGALORE

Department of Computer Science and Engineering
3 Days Workshop on" Image Processing with OpenCV"
(30thOctober 2023 to 2ndNovember 2023)

PROFILE DETAILS

Name: **Dr. Prashantha H S**

Designation: Professor, CSE, KSIT, Bengaluru

Phone: 9902058362

Email: drhsprashanth@gmail.comp

Short Biography:

- Currently serving as Professor CSE Department KSIT and previously served as Professor at NMIT, PESIT and EWIT (more than 21 years of experience).

- Graduated from ECE under BU, M. Tech from VTU and PhD from Anna University Chennai during 2012. Extensive experience in executing Teaching/Training courses related to the Signal Processing for Under-Graduate (UG) and Post-Graduate (PG) Programs (Handled most of the courses, framed syllabus and contents in the domain).

- Guiding Under-Graduate and Post-Graduate Projects related to Signal Processing and Machine learning (Guided more than 100 UG projects, more than 25 PG Projects). Guiding Research students for PhD in the area of Signal Processing and Machine Learning, Publishing papers in the area of Signal Processing and Machine Learning (Guided 2 students for PhD and guiding 3 students for PhD program under VTU).

- Published more than 80 papers in Reputed Journals and conferences with more than 450 citation and h index 0f 10, research gate citations of 500.

- Served and serving as Reviewer for many reputed Journals and conferences including IEEE transactions, Jon WILEY, etc.

- Served and serving as Session chair for many conferences.

- Served and serving as Editorial Board member for Various Journals.

- He is a member of professional bodies such as IEEE (Senior Member), IEEE–Signal Processing Society, IEEE –Commuter Society, IET, ISSE, Fellow-IETE, IAENG, IFERP, MISTE, etc.

K.S.INSTITUTEOF TECHNOLOGY,BANGALORE

Department of Computer Science and Engineering
3 Days Workshop on" Image Processing with OpenCV"
(30ᵗʰOctober 2023 to 2ⁿᵈNovember 2023)

PROFILE DETAILS

Name: Dr. Vijayalakshmi Mekali

Designation: Professor & Head, AIML, KSIT, Bengaluru

Phone: 9986168811

Email: vijayalaxmimekali@ksit.edu.in

Short Biography:

- Currently serving as Professor & Head in AIML Department, KSIT.

- Dr. Vijayalakshmi Mekali has completed B.E, M. Tech in computer science and Engineering from VTU and completed PhD in CSE from VTU. Had 12 + years of teaching experience and 2 years of industry experience. she has presented and published 15 + papers in international and national journal and conferences. She had guided 5 projects at master's level and 27 batches at UG level.

- She has completed online course certification course on Python and also completed NPTEL course on data structures with Python.

K.S.INSTITUTEOF TECHNOLOGY,BANGALORE
Department of Computer Science and Engineering
3 Days Workshop on" Image Processing with OpenCV"
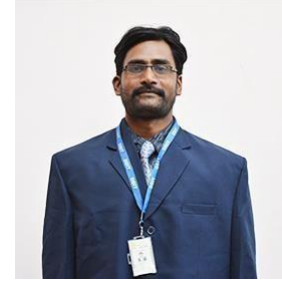**(30thOctober 2023 to 2ndNovember 2023)**

PROFILE DETAILS

Name: Mr.Ravindranath K

Designation: Research Scholar

Organization: NIT, Trichy

Phone:97424 20155

Email:ravindranath321@gmail.com

Short Biography:

- 10+ years of experience in the Research and academic profession, spearheading diverse teams and people worked at NMIT and DBIT Bangalore.
- Bachelor of Engineering from Vivekananda Institute of Technology, Master of Technology from RNS Institute of Technology Bangalore and Pursuing Ph.D. (2019-Till date), National Institute of Technology Tiruchirappalli(Final stage of completion).
- Projects Completed: 1)Novel classification algorithms were built to classify the Histopathological images 2) Novel automated algorithms were developed using the deep learning tool datasets.
- On Going projects:
- Developing Hybrid models by combining convolutional neural networks and long short-term memory to efficiently classify CT Lung images provided by Kangwon medical university and hospital, South Korea, and Chonbuk National University and Hospital, South Korea
- Studies are being made to automatically diagnose MRI Breast Images from Kangwon medical university and hospital South Korea.
- Segmentation of Mediastinal images from CT chest images from Kangwon medical hospital,SouthKorea.
- Supported the University of Saskatchewan, Canada team forrib segmentation.
- Hardware implementation of LiteHistoNet on Raspberry Pi for reducing the number of parameters used by neural networks.
- Published research manuscripts in reputed science citation and Scopus-indexed journals

K.S.INSTITUTEOF TECHNOLOGY,BANGALORE
Department of Computer Science and Engineering
3 Days Workshop on" Image Processing with OpenCV"
(30th October 2023 to 2nd November 2023)

PROFILE DETAILS

Name: Dr.Archana H R

Designation: Assistant Professor

Organization: BMSCE

Email: archanahr.ece@bmsce.ac.in

Short Biography:

- Dr. Archana H R has completed BE, M.Tech in Electronics from VTU and completed PhD in VLSI, SOC from VTU. She had 13 Years of Teaching experience and 1year of industry experience.

- Dr. Archana has presented and published papers in 16 national and international conferences and journals of which one paper is a scopus indexed and yet another being published in Springer journal series.

- She had guided 5 projects at Masters level. She has interaction with people from different Semiconductor industries like Waferspace Technologies, Sevitech Systems Pvt Ltd, ON Semiconductors and Analog Micro Circuits to facilitate internship for Mtech students and attended IEEE Blended Learning Program.

- Have an Australian Patent grant and two Indian Patents Published.

Session Details

DAY 1: Session 1   **Date**: 30/10/2023

Topic: Inauguration of the Workshop   **Schedule:** 9 AM to 10.30 AM

Brief Details About the Session

The 3 days workshop program was designed to address the 7th semester syllabus student projects domain along with research opportunities in various domain such as Image Processing, Machine Learning with hands-on demonstrations using OpenCV.

The workshop was inaugurated by the dignitaries such as Dr. K. V. A. Balaji - Chief Executive Officer K. S Group of Institution, Dr. Dilip kumar K -Principal & Director, KSIT, Dr. Rekha B Venkatapur - Head Department of CS&E KSIT,

Dr.Pradeep Desai, Chairman Bengaluru chapter and Dr.Ganga Holi, Professor Department of CSE KSIT. The program was attended by 7th Sem CSE KSIT students.

The agenda of the Inaugural Session areas follows:

Inaugural Function Agenda

Welcome Address:	Mr. Vikas
Invocation Song:	Ms. Gagana
Lighting the Lamp:	Chief Guest and Dignitaries
Introduction of Chief Guest:	Ms. Shilpa
Address by CEO:	Dr.K.V.A. Balaji
Address by Principal:	Dr.Dilip KumarK
Vote of Thanks:	Ms. Hrithika

Few Glimpses From The Inaugural Session

Bengaluru, Karnataka, India
14, Kanakapura Rd, Raghuvanahalli, Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.879045°
Long 77.544544°
30/10/23 09:32 AM GMT +05:30

Bengaluru, Karnataka, India
Atlantis Liberty Square, DHAMMANAGI SUMO LEAVES, Kanakapura Rd, Raghuvanahalli, Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.878982°
Long 77.544924°
30/10/23 09:39 AM GMT +05:30

KEY NOTE ADDRESS

Keynote Speaker: Dr. Pradeep V Desai, Chairman Bengaluru chapter, Director of KS Research and Innovation Foundation and Prof. of Computer Science and Engineering Department at KSIT

Schedule: 9:30AM to10:30 AM

Bengaluru, Karnataka, India
14, Kanakapura Rd, Raghuvanahalli, Bangalore City
Municipal Corporation Layout, Bengaluru, Karnataka
560062, India
Lat 12.878988°
Long 77.54485°
30/10/23 09:58 AM GMT +05:30
GPS Map Camera

Bengaluru, Karnataka, India
14, Kanakapura Rd, Raghuvanahalli, Bangalore City Municipal
Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.879045°
Long 77.544544°
30/10/23 09:33 AM GMT +05:30
GPS Map Camera

DAY 1: Session 2   **Date**: 30/10/2023

Speaker: Dr. Prashantha. H.S   **Schedule:** 11 AM to 12.30 PM

Topic: Inauguration of the Workshop

The speaker introduces about fundamentals of digital image processing, types of images and the applications of image processing.

DAY 1: Session 3   **Date**: 30/10/2023

Speaker: Dr.Ganga Holi   **Schedule:** 1.30 PM to 3 PM

Topic: Hands on Session on OpenCV

DAY 2: Session 1   **Date**: 31/10/2023

Speaker: Dr.Ganga Holi   **Schedule:** 9 AM to 10.30 AM

Topic: Image Enhancement

DAY 2: Session 2   **Date**: 31/10/2023

Speaker: Dr. Vijayalaxmi Mekali   **Schedule: 11** AM to 12.30 PM

Topic: Image segmentation and Morphological operations
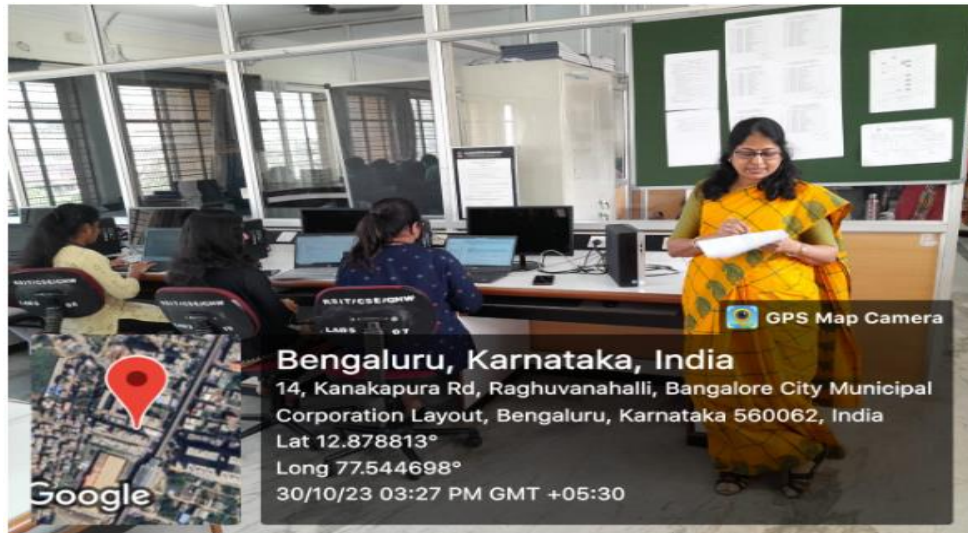
DAY 2: Session 3   **Date**: 31/10/2023

Speaker: Dr. Ganga Holi   **Schedule:** 1.30 PM to 3 PM

Topic: Hands on Session on OpenCV- Image Enhancement
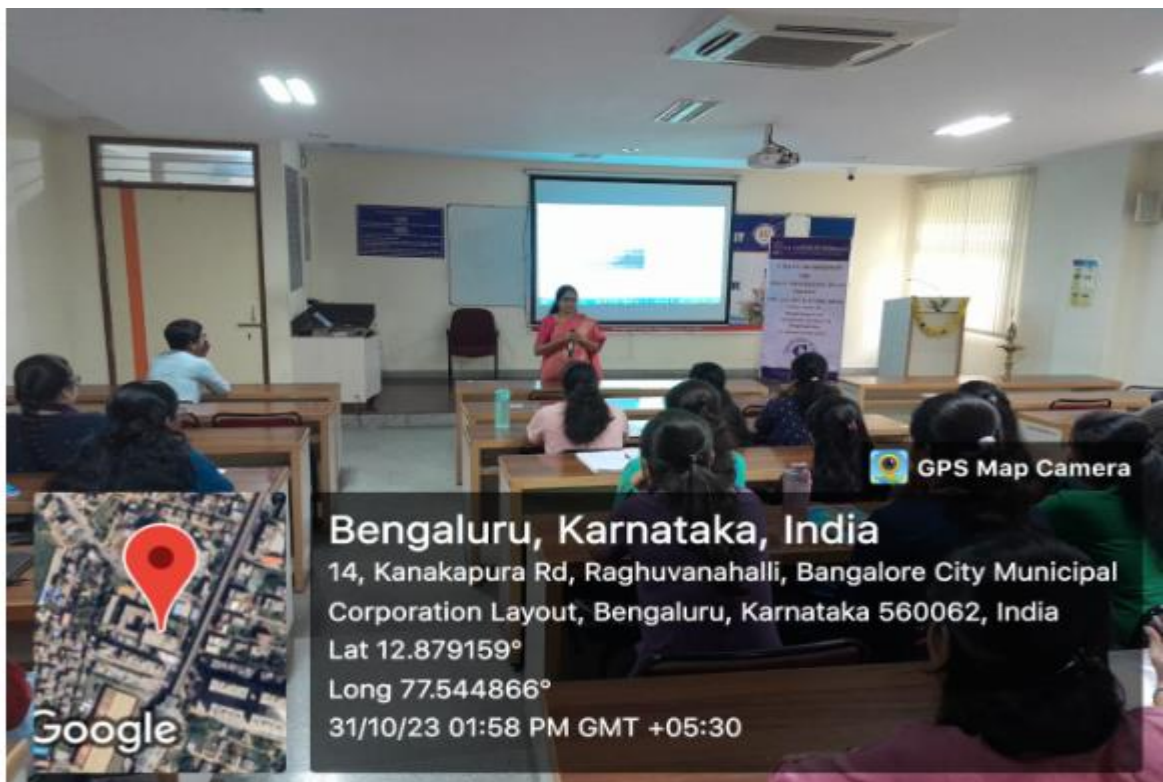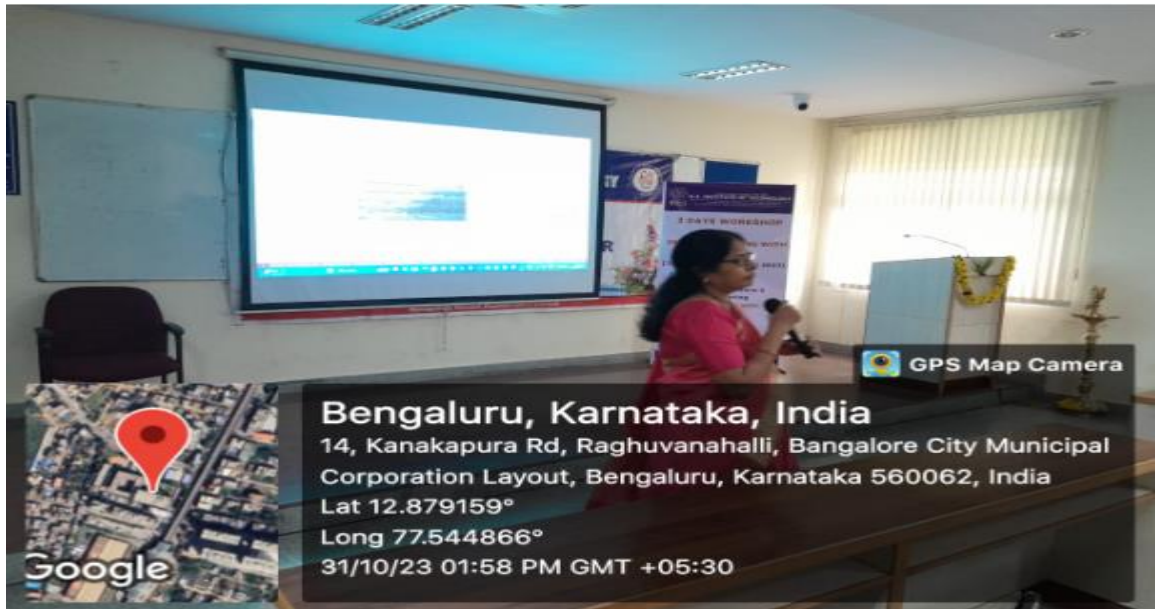
DAY 3: Session 1   **Date**: 02/11/2023

Speaker: Ravindranath K   **Schedule:** 9 AM to 10.30 AM

Topic: Machine learning for DIP Applications
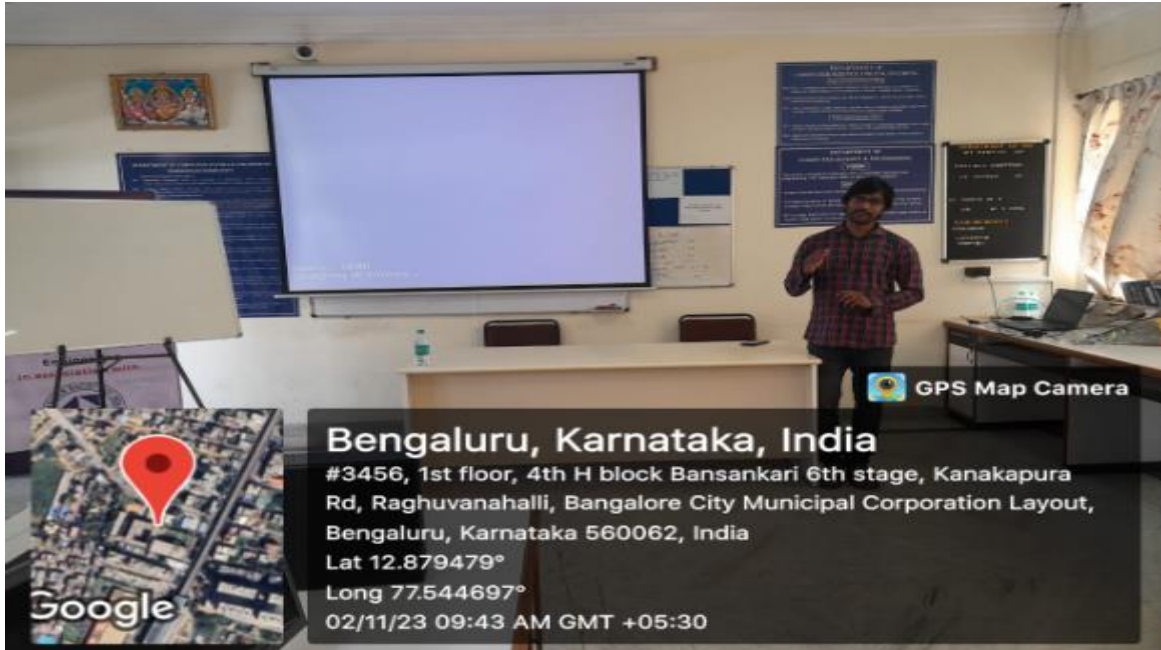
DAY 3: Session 2   **Date**: 02/11/2023

Speaker: Dr .Arachana   **Schedule:** 11 AM to 12.30 PM

Topic: Image restoration and Image filtering

DAY 3: Session 3   **Date**: 02/11/2023

Topic: Mini Project on Image Processing using OpenCV   **Schedule:** 1.30 PM to 3 PM

Valedictory and Certificate Distribution

Assessment on_Image_Processing_Topics(Workshop topics)

Assessment

1.   Email *

     _____

2.   Name   1 point

     _____

3.   USN   1 point

     _____

     Dr. Prashanth H S

4.   1. _____ determines the quality of a digital image   1 point

     Mark only one oval.

     ( ) The discrete gray levels

     ( ) The number of samples

     ( ) The discrete gray levels & number of samples

     ( ) None of the mentioned

5.   2. Which of the following tool is used in tasks such as zooming, shrinking,   1 point
     rotating?

Mark only one oval.

⬭ Filters

⬭ Sampling

⬭ Interpolation

⬭ None of the Mentioned

6.   3. What is the first step in the process of Image Processing?   1 point

Mark only one oval.

⬭ Segmentation

⬭ Image acquisition

⬭ Image enhancement

⬭ Image restoration

7.   4. What is the undesirable feature in the case of nearest neighbour   1 point
     Interpolation?

Mark only one oval.

⬭ Checkerboard effect

⬭ Ridging effect

⬭ False contouring effect

⬭ Aliasing effect

8.   5. Which of the following is not process of image processing?   1 point

Mark only one oval.

◯ High level

◯ Last level

◯ Low level

◯ Mid level

9.   6. The spatial resolution of the image is determined by   1 point

Mark only one oval.

◯ Contrast

◯ Quantization

◯ Sampling

◯ Dynamic range

10.   7. The spatial coordinate of the image are proportional to   1 point

Mark only one oval.

◯ position

◯ brightness

◯ contrast

◯ noise

11.   8. With respect to traditional TV, which aspect ratio is correct   1 point

Mark only one oval.

◯ 4:3

◯ 3:4

◯ 1:2

◯ 2:1

12.   9. With Respect to Video Graphics Array, which is correct?   1 point

Mark only one oval.

◯ 320 X 240

◯ 640 X 480

◯ 480 X 640

◯ 480 X 320

13.   10. Find the number of bits required to store a 2048 X 2048 image with 256   1 point
       gray levels

Mark only one oval.

◯ 17384 Bytes

◯ 18834 Bytes

◯ 16384 Bytes

◯ 16184 Bytes

Dr. Ganga Holi

14.   1. **Which of the following are the basic functions of digital image**   1 point
       processing?

Mark only one oval.

⬭ Image Enhancement

⬭ Noise Reduction

⬭ Distortion

⬭ All the above

15.   2   **Image enhancement technique benefit in terms of _____?**   1 point

Mark only one oval.

⬭ Visualization

⬭ Remove Noise

⬭ Clear Image by Deblurring

⬭ all the above

16.   3. **. Image processing in image enhancement extracts hidden**   1 point
       information using

Mark only one oval.

⬭ Sharpening

⬭ Smoothing

⬭ edges extraction

⬭ All of the above

17.   4. _____ is called unwanted zones in image?   1 point

Mark only one oval.

⬭ Noise

⬭ Music

⬭ Sound

⬭ All of the above

18.   5. **Which of the following is the software used in digital image**   1 point
       processing?

Mark only one oval.

⬭ C

⬭ HTML

⬭ OpenCV Python

⬭ None of the above

19.   6. The output of a smoothing, linear spatial filtering is a _____ of   1 point
       the pixels contained in the neighbourhood of the filter mask.

Mark only one oval.

⬭ Dot Product

⬭ Product

⬭ Average

⬭ Sum

20. 7. Which of the following is the primary objective of sharpening of an image? 1 point

Mark only one oval.

○ Increase the brightness of the image

○ Blurring the image

○ Highlight fine details in the image

○ None of the above

21. 8. Using gray-level transformation, the basic function linearity deals with   1 point
which of the following transformation?.

Mark only one oval.

○ Negative and identity transformations

○ Log and inverse log transformations

○ Power Law Transformation

○ Noen of these

22. 9. If r be the gray-level of image before processing and s after processing   1 point
then which expression defines the negative transformation, for the gray-level
in the range [0, L - 1]?

Mark only one oval.

○ s = cr^(y), c and y are positive constant

○ s = c(log(1 + r)), c is constant and r > 0

○ s = L - 1 - r

○ None of the above

23.   10.   In neighborhood operations working is being done with the value of   1 point
       image pixel in the neighborhood and the corresponding value of a sub image
       that has same dimension as neighborhood. The subn image is referred as

       _____

Mark only one oval.

⬭ Mask

⬭ Template

⬭ Filter

⬭ All of the above

Mr. Ravindranath K

24.   1. In which of the scenarios traditional image processing applications are best   1 point
       suited

Mark only one oval.

⬭ Rule - based applications

⬭ when dataset is abundantly available

⬭ when we want to automate the application

⬭ reward based applications

25.   2. In resource constrained applications the best suited application is   1 point

Mark only one oval.

⬭ Machine learning

⬭ Deep learning

⬭ Reinforcement learning

⬭ Traditional Image Processing

26.   3. Reward based mechanism is used in   1 point

Mark only one oval.

○ Supervised Learning

○ Un-Supervised Learning

○ Reinforcement Learning

○ Semi-supervised Learning

27.   4. The quality of results in Machine learning depends on the following   1 point
      parameters

Mark only one oval.

○ Feature Engineering

○ Data handling mechanisms

○ Structure of the data

○ Fine tuning the features

28.   5. when size of the dataset is limited and we want to build a automated   1 point
      system the best suited method is

Mark only one oval.

○ Deep Learning

○ Image Processing

○ Reinforcement Learning

29.   6. A model is built to identify the sparrow birds flying across the road and the   1 point
       model is deployed. The developer has forgot to train the model do detect the
       black sparrows (minority/less number) how to rectify this problem after
       deployment.

       Mark only one oval.

       ( ) collect more data on black sparrows and retrain the model and deploy the new
       model

       ( ) collect more data on black sparrows and retrain the model by addressing the
       imbalance dataset and deploy the new model

       ( ) collect more data on black sparrows and retrain the model by addressing the
       imbalance dataset and deploy the new model by introducing the continual learning

       ( ) just ignore as the new deployment is going to cost too much on your company as
       the occurrence of black sparrows is very minimal

30.   7. we want to develop a segmentation methodology to extract the edges of   1 point
       the iris for 10 images the best suited method is

       Mark only one oval.

       ( ) Machine Learning

       ( ) Deep Learning

       ( ) Reinforcement Learning

       ( ) Image processing principles

31.   8. We choose deep learning applications when   1 point

       Mark only one oval.

       ( ) Sufficiently large dataset is available

       ( ) Resources are not a constraint

       ( ) Fully automatic application is desired

       ( ) All of the above

32.   9. The performance of the developed deep learning model mainly depends   1 point
      on

      Mark only one oval.

      ◯ Size of the dataset

      ◯ Size of the model

      ◯ Hyper-parameters

      ◯ Pre-processing of the dataset

33.   10. Lets take a situation to develop a sophisticated video game the best   1 point
      suited method is

      Mark only one oval.

      ◯ Reinforcement Learning

      ◯ Machine Learning

      ◯ Deep Learning

      ◯ Deep Reinforcement Learning

   Dr. Archana H R

   Image Restoration & 2D DFT Basics

34.   1. Low frequency signals are passed by: 1 point

      Mark only one oval.

      ◯ High pass Filter

      ◯ Band pass filter

      ◯ Low pass filter

      ◯ Band reject filter

      ◯ Other: _____

35.   2. Main source of Noise arises during: 1 point

Mark only one oval.

◯ Destruction

◯ Degradation

◯ Restoration

◯ Acquisition

◯ Other: _____

36.   3. Periodic Noises arise from   1 point

Mark only one oval.

◯ mechanical Interference

◯ Electrical Interference

◯ Beta Interference

◯ Gamma Interference

◯ Other: _____

37.   4.Speckle noise is also called   1 point

Mark only one oval.

◯ White Noise

◯ Impulse noise

◯ Multiplicative noise

◯ Additive noise

◯ Other: _____

38.   5. Salt & Pepper noise is also called   1 point

Mark only one oval.

⬭ Impulse noise

⬭ Shot noise

⬭ Binary noise

⬭ All of the above

⬭ Other: _____

39.   6. Median filter is a case of   1 point

Mark only one oval.

⬭ Adaptive filtering

⬭ Rank Order filtering

⬭ Geometric mean filtering

⬭ None of the above

⬭ Other: _____

40.   7. Which method is suitable to eliminate Gaussian noise with high variance   1 point

Mark only one oval.

⬭ Adaptive filtering

⬭ Average Filtering

⬭ Median Filtering

⬭ Band Reject Filtering

⬭ Other: _____

41.   8. Which filtering technique is used to remove periodic noise   1 point

Mark only one oval.

⬭ Band Reject filter

⬭ Adaptive filter

⬭ Notch Filter

⬭ Both a and c

⬭ Other: _____

42.   9. DFT abbreviates   1 point

Mark only one oval.

⬭ Digital Frequency Transform

⬭ Discrete Frequency Transform

⬭ Discrete Time Fourier Transform

⬭ Digital Time Fourier Transform

⬭ Other: _____

43.   10. For Computer applications which of these computation process is   1 point
        preferred.

Mark only one oval.

⬭ DFT

⬭ FFT

⬭ Both a & b

⬭ None of the above

⬭ Other: _____

Assessment Score

Timestamp	Email Address	Score	Name
06-11-2023 16:04	jeevan8055indian@gmail.com	24 / 42	Jeevan
06-11-2023 19:43	spoornachandra290@gmail.com	25 / 42	S Poornachandra
07-11-2023 20:47	ankitachoudhary228@gmail.com	24 / 42	Ankita choudhary
08-11-2023 12:53	pavanarnav@gmail.com	Dec-42	Pavan P
08-11-2023 12:54	shashwathahm81222@gmail.com	23 / 42	SHASHWATHA HM
08-11-2023 12:55	sahanasahar21@gmail.com	23 / 42	Sahana R
08-11-2023 12:55	spoorthynaidu810@gmail.com	23 / 42	Spoorthy.N
08-11-2023 12:56	shilpa2003.m@gmail.com	23 / 42	Shilpa M
08-11-2023 12:56	keenunani@gmail.com	23 / 42	N Keerthana
08-11-2023 12:56	vandana99722@gmail.com	23 / 42	VANDANA N
08-11-2023 13:06	arvind80802@gmail.com	13 / 42	V ARVIND
08-11-2023 13:08	nithesh2545@gmail.com	24 / 42	N NITHESH KUMAR
08-11-2023 13:17	shashikanthngshashi@gmail.com	17 / 42	Shashikanth N G
08-11-2023 13:49	tushar255@gmail.com	26 / 42	Tushar S
08-11-2023 13:50	deepakadithya1127@gmail.com	18 / 42	Deepak s
08-11-2023 13:52	madhav261102@gmail.com	23 / 42	Ashrit Madhav Vadiraj
08-11-2023 13:53	nidhiii1416@gmail.com	29 / 42	Nidhi K V
08-11-2023 13:55	ajaygirish72@gmail.com	27 / 42	Ajay Girish
08-11-2023 14:00	thanushagowda21@gmail.com	Oct-42	Thanusha K
08-11-2023 14:43	kavitharajesh.2511@gmail.com	23 / 42	Kavitha R
08-11-2023 14:43	kavyarajesh.2511@gmail.com	23 / 42	Kavya R
08-11-2023 15:01	mpavan2313@gmail.com	23 / 42	Pavan M
08-11-2023 15:08	abhinayachowdary8@gmail.com	18 / 42	EDIMUDI ABHINAYA
08-11-2023 15:11	devithanuthanapati@gmail.com	29 / 42	Nuthanapati Devitha
08-11-2023 15:16	morbagalshravya@gmail.com	29 / 42	Shravya M R
08-11-2023 15:23	vikasvik1828@gmail.com	29 / 42	Vikas Kashyap R
08-11-2023 15:37	02.rakshitha@gmail.com	16 / 42	Rakshitha P
08-11-2023 15:37	vandukeerthi6055@gmail.com	18 / 42	Vandana Naidu
08-11-2023 15:37	saishankari123@gmail.com	17 / 42	S Sai Shankari
08-11-2023 15:37	jhansiy1803@gmail.com	16 / 42	Y Jhansi
08-11-2023 16:01	talibmukhtar54@gmail.com	23 / 42	Talib mukhtar choda
08-11-2023 17:59	pavithra.a.s.2705@gmail.com	24 / 42	Pavithra A S
08-11-2023 18:20	manishagn02@gmail.com	17 / 42	Manisha G N
08-11-2023 18:34	divyachikkamath2002@gmail.com	15 / 42	Divya V Chikkamath
08-11-2023 19:34	dhanu94495@gmail.com	Jan-42	Dhanya Sharanya Shree
08-11-2023 20:31	sushmakurandwad1@gmail.com	17 / 42	Sushma srikanta kurand
08-11-2023 23:43	ganashreegm1610@gmail.com	23 / 42	Ganashree G M
09-11-2023 07:40	vummanenicharan3@gmail.com	25 / 42	Vummaneni Charan
10-11-2023 10:02	nirmithagowda29@gmail.com	18 / 42	Nirmitha N
10-11-2023 10:08	brunda.bgowda369@gmail.com	25 / 42	Brunda B
10-11-2023 10:33	jahnavip_student@ksit.edu.in	18 / 42	Jahnavi p
10-11-2023 10:35	ganashreek_student@ksit.edu.in	Nov-42	Ganashree K
10-11-2023 10:36	aqibnengroo5@gmail.com	Jul-42	Aaqib bashir
10-11-2023 10:41	monikagowda2811@gmail.com	Dec-42	Monika N
10-11-2023 10:45	kushal.rks07@gmail.com	Sep-42	R Kushal Sai

10-11-2023 10:55	pavithraramesh990@gmail.com	13 / 42	Pavithra. R
10-11-2023 11:01	sabhareeshbalaji23n@gmail.com	27 / 42	Sabhareesh Balaji P
10-11-2023 11:01	pinkeysindhurah@gmail.com	29 / 42	Sindhura H
10-11-2023 11:02	nidhiii1416@gmail.com	28 / 42	Nidhi K V
10-11-2023 11:10	monicacs17062002@gmail.com	20 / 42	Monica cs
10-11-2023 11:10	teju3534@gmail.com	21 / 42	BOMMINENI TEJASWIN
10-11-2023 11:12	shashikanthngshashi@gmail.com	0 / 42	Shashikanth N G
10-11-2023 11:15	spoornachandra290@gmail.com	29 / 42	S Poornachandra
10-11-2023 11:26	tushar255@gmail.com	27 / 42	Tushar S
10-11-2023 11:32	wadikarpoonam@gmail.com	Aug-42	Poonam
10-11-2023 11:35	ankitachoudhary228@gmail.com	0 / 42	Ankita choudhary
10-11-2023 11:44	madhav261102@gmail.com	24 / 42	Ashrit Madhav Vadiraj
10-11-2023 11:45	deepakadithya1127@gmail.com	24 / 42	Deepak s
10-11-2023 11:45	ajaygirish72@gmail.com	24 / 42	Ajay Girish
10-11-2023 11:51	sushmakurandwad1@gmail.com	18 / 42	Sushma srikanta kurand
10-11-2023 11:56	vaishnavi.m9972@gmail.com	25 / 42	Vaishnavi M
10-11-2023 11:56	snehaaa1003@gmail.com	25 / 42	Sneha A S
10-11-2023 11:56	krsahana2803@gmail.com	24 / 42	K R Sahana
10-11-2023 11:56	sanjanatantry03@gmail.com	24 / 42	Sanjana G
10-11-2023 12:01	nehareddy2132@gmail.com	23 / 42	Neha Reddy S
10-11-2023 12:32	ganashreegm_student@ksit.edu.in	Dec-42	Ganashree G M
10-11-2023 13:42	chethans290@gmail.com	24 / 42	Chethan S
10-11-2023 14:26	hegdesanket7@gmail.com	28 / 42	Sanket Ganapati Hegde
10-11-2023 17:43	jeevan8055indian@gmail.com	26 / 42	Jeevan
10-11-2023 19:27	bhargavdhanvin@gmail.com	Oct-42	Dhanvin C Bhargav
10-11-2023 19:29	archit.avadhani@gmail.com	13 / 42	Archit Ganapati Avadhar
13-11-2023 11:48	patilananya49@gmail.com	19 / 42	Ananya Patil

K. S. Group of Institutions

K. S. INSTITUTE OF TECHNOLOGY

Approved by AICTE, Affiliateed to VTU,
Accredited by NBA (CSE, ECE & ME) & NAAC
#14, Raghuvanahalli, Kanakapura Main Road, Bengaluru - 560109, INDIA
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
IN ASSOCIATION WITH CSI

CERTIFICATE

OF PARTICIPATION

THIS CERTIFICATE IS PROUDLY PRESENTED TO

Mahim Subhash Akhawat

In 3 Days workshop on **IMAGE PROCESSING WITH OpenCV** organized by Department of Computer Science and Engineering at K. S. Institute of Technology on 30th, 31st OCT & 2nd NOV 2023.

DR. REKHA B. VENKATAPUR
Professor & HOD

Dr. DILIP KUMAR K
Principal / Director

3 Days Workshop on **"Image Processing with OpenCV"**

30/10/2023 Day 1 Session 1 (9:00am to 10:30am):
Dr. Pradeep Desai, Chairman Bengaluru Chapter

* Indicates required question

1. Student Name *

   _____

2. USN *

   _____

3. How would you rate the session? was the topic relevant? *

   Mark only one oval.

   ◯ Strongly Agree

   ◯ Agree

   ◯ Strongly Disagree

   ◯ Disagree

4. The information and skills presented were relevant and useful. *

   Mark only one oval.

   ◯ Strongly Agree

   ◯ Agree

   ◯ Strongly Disagree

   ◯ Disagree

5. How would you rate the level and amount of information provided? *

   Mark only one oval.

   ( ) Too Much

   ( ) About Right

   ( ) Not Enough

6. How would you rate the resource person? The resource person was   *
   knowledgeable, clear and professional.

   Mark only one oval.

   ( ) Strongly Agree
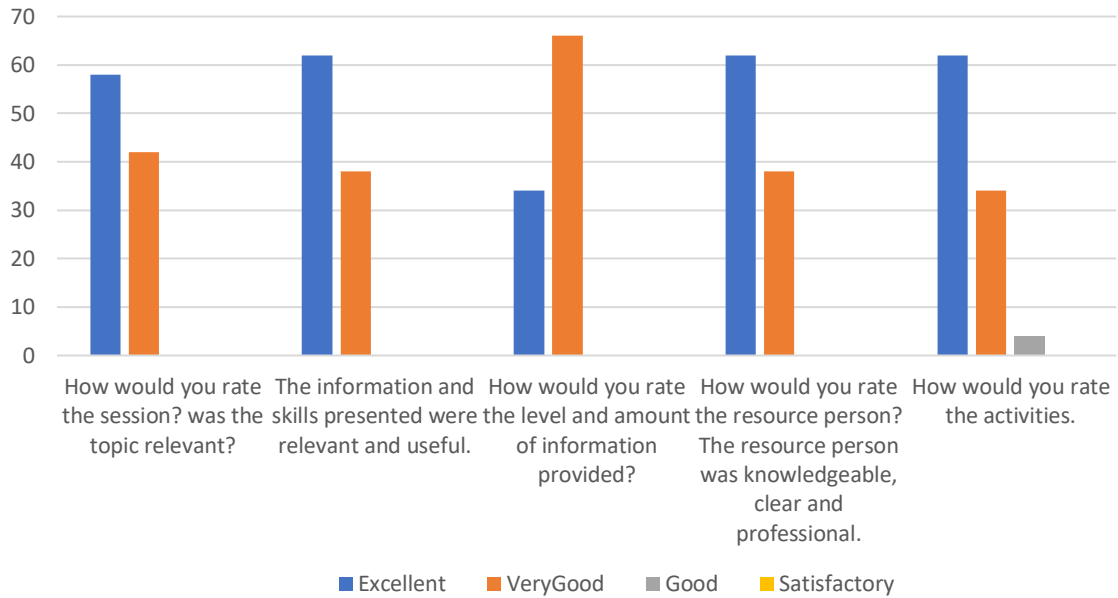
   ( ) Agree

   ( ) Strongly Disagree

   ( ) Disagree

7. How would you rate the activities. *
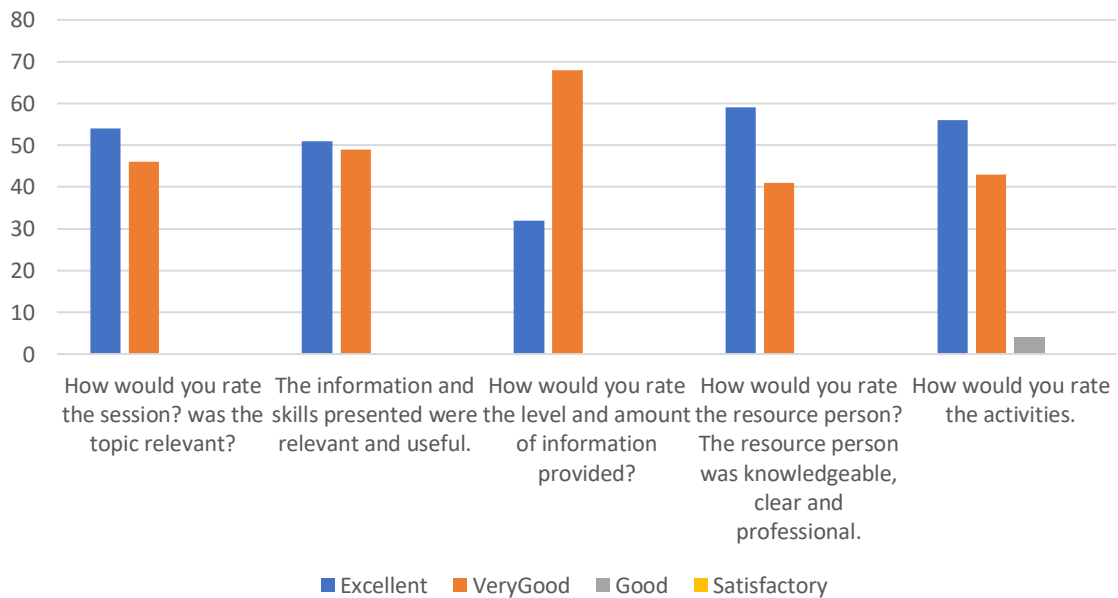
   Mark only one oval.

   ( ) Excellent

   ( ) Very Good

   ( ) Good
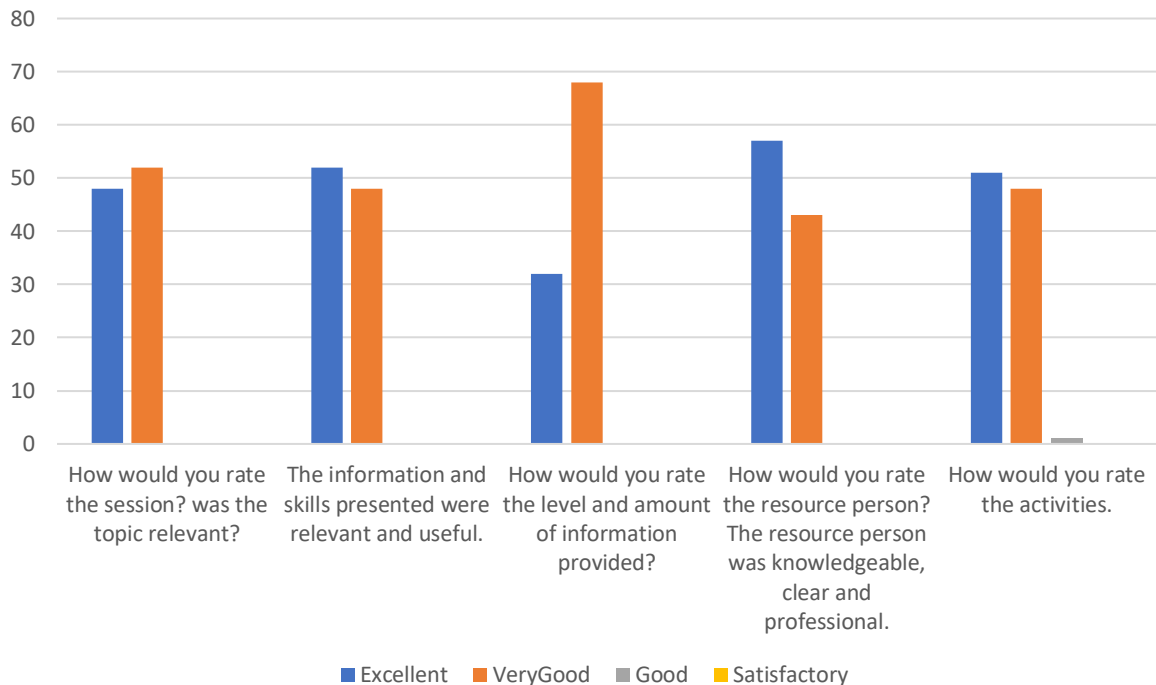
   ( ) Poor

8. Comments/ Suggestions *

   _____

Google Forms

DAY 1 : SESSION 1 FEEDBACK

Question	Excellent	VeryGood	Good	Satisfactory
How would you rate the session? was the topic relevant?	58	42		
The information and skills presented were relevant and useful.	62	38		
How would you rate the level and amount of information provided?	34	66		
How would you rate the resource person? The resource person was knowledgeable, clear and professional.	62	38		
How would you rate the activities.	62	34	4	

DAY 1 : SESSION 2 FEEDBACK

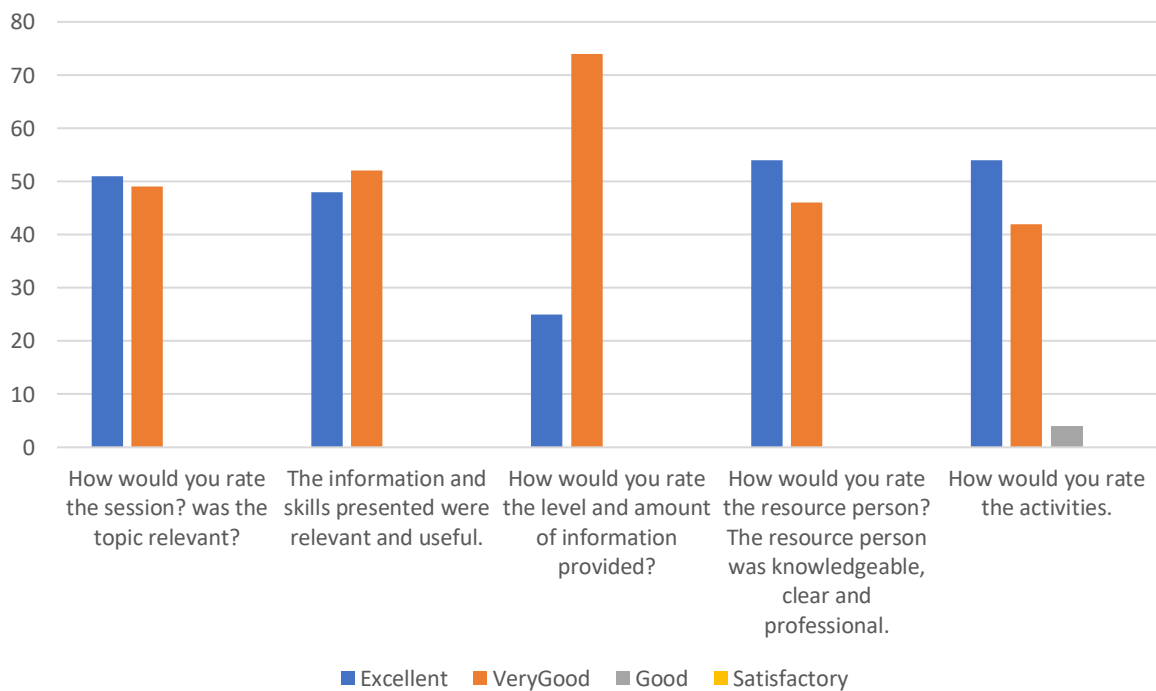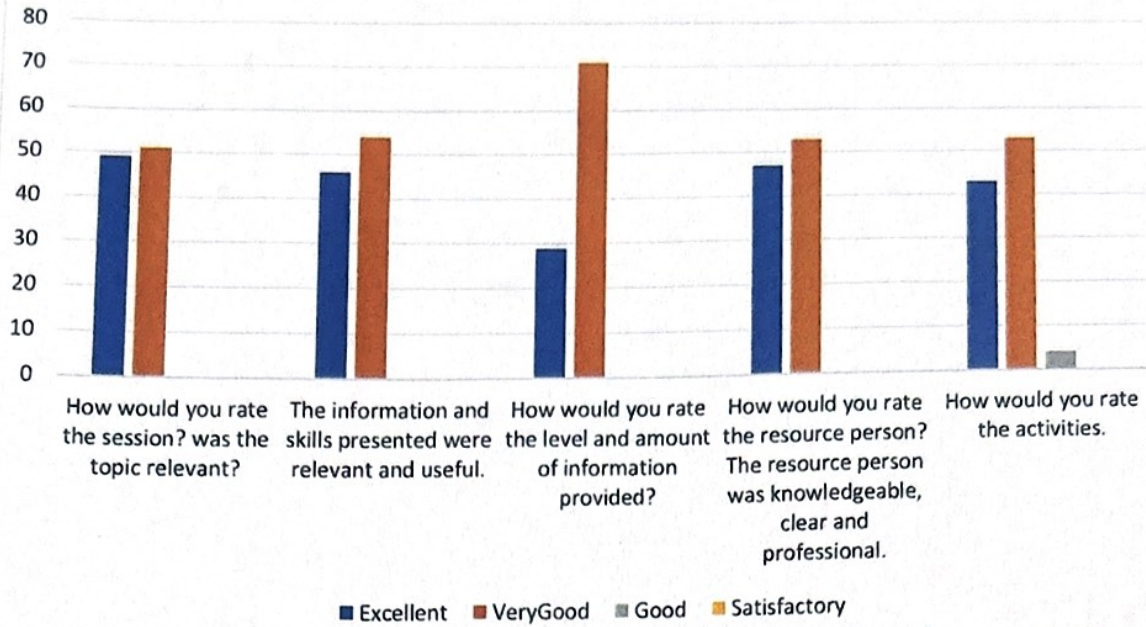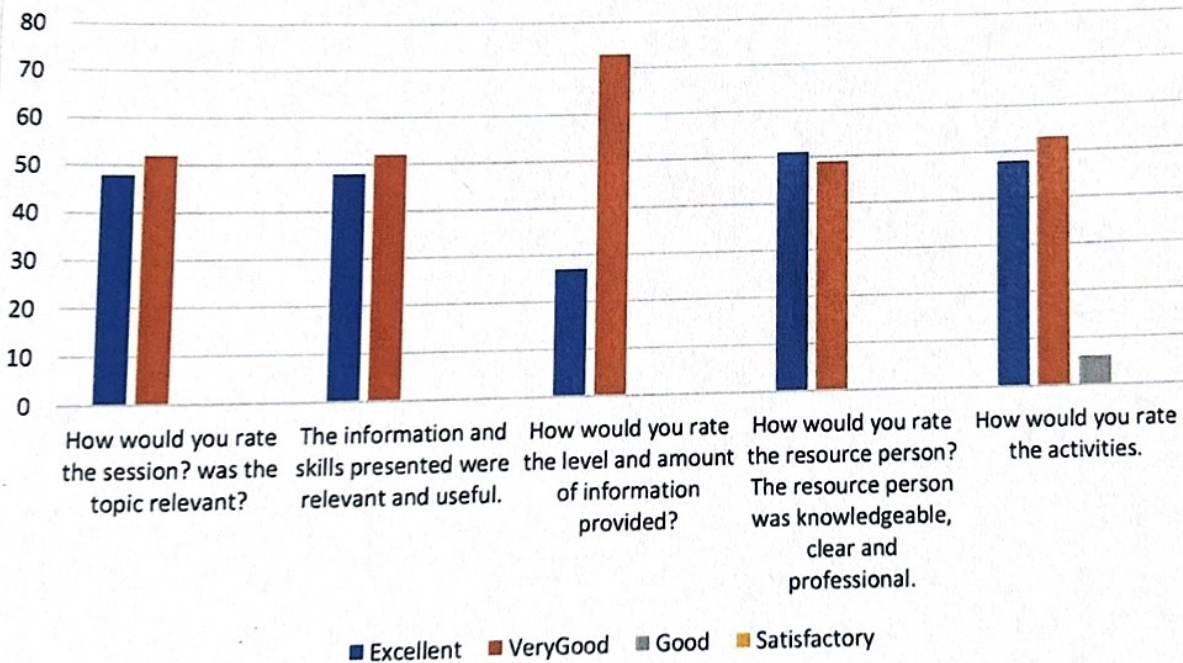| Question	Excellent	VeryGood	Good	Satisfactory
How would you rate the session? was the topic relevant?	54	46		
The information and skills presented were relevant and useful.	51	49		
How would you rate the level and amount of information provided?	32	68		
How would you rate the resource person? The resource person was knowledgeable, clear and professional.	59	41		
How would you rate the activities.	56	43	4	

DAY 1 : SESSION 3/ DAY 2 : SESSION 2 &3 FEEDBACK

DAY 2 : SESSION 2 FEEDBACK
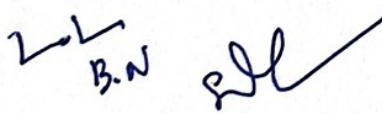
DAY 3 : SESSION 1 FEEDBACK

Chart showing feedback categories with values (scale 0–80):
- How would you rate the session? was the topic relevant? — Excellent ~48, VeryGood ~50
- The information and skills presented were relevant and useful. — Excellent ~44, VeryGood ~52
- How would you rate the level and amount of information provided? — Excellent ~28, VeryGood ~69
- How would you rate the resource person? The resource person was knowledgeable, clear and professional. — Excellent ~46, VeryGood ~52
- How would you rate the activities. — Excellent ~42, VeryGood ~52, Good ~5

■ Excellent ■ VeryGood ■ Good ■ Satisfactory

DAY 3 : SESSION 2 FEEDBACK

Chart showing feedback categories with values (scale 0–80):
- How would you rate the session? was the topic relevant? — Excellent ~48, VeryGood ~52
- The information and skills presented were relevant and useful. — Excellent ~48, VeryGood ~52
- How would you rate the level and amount of information provided? — Excellent ~28, VeryGood ~73
- How would you rate the resource person? The resource person was knowledgeable, clear and professional. — Excellent ~52, VeryGood ~50
- How would you rate the activities. — Excellent ~50, VeryGood ~56, Good ~10

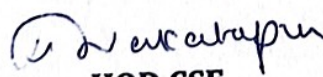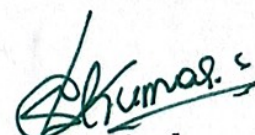■ Excellent ■ VeryGood ■ Good ■ Satisfactory

Name and Signature of

coordinator

B.N

HOD CSE

Principal
PRINCIPAL
K.S. INSTITUTE OF TECHNOLO
BENGALURU - 560 109.

K S INSTITUTE OF TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

A REPORT ON
SKILL DEVELOPMENT TRAINING AND PROJECT EXHIBITION"

Semester/ Section:	5thSemester / A & B
Event Type:	Technical Training & Project Exhibition
Event Name:	SKILL DEVELOPMENT TRAINING ON IOT EDGE & GATEWAY AND PROJECT EXHIBITION
Date/Duration:	26th October 2023 to 20th November2023 / 25 days 1st December 2023 / 1 Day
Industry Collaboration for training	Cranes Varsity Software
No. of Students:	128
Online link/Offline:	Offline

Event Objectives:
- An Introduction to components involved in Computation through IOT.
- Addressing and identifying various Projects using OOPs and IOT.
- Emphasizing on Practical / Physical models using IOT and implement.
- Addressing the social issues and the key points to evolve in the current Industry requirements.

Speaker Details:

Ms. Bhavani Sankari

Domain Expert, Corporate Trainer for Data Science and IoT

Expertise:

- 5+ years of Strong technical expertise in consulting and training.
- Expert in Data Science, Python, Machine Learning, Data Analysis and Visualization, Deep learning, and IoT
- 3500+ Man hours of training experience.
- Successfully trained 1000+ engineering graduates and working professionals in Linux and IoT
- Proficient in working on RaspberryPi, Arduino, Microcontrollers, IoT, Linux, and Device Drivers.
- Successful Training Delivered on
- Basic and Advanced Level Python Programming
- Python Unit Testing
- IoT Edge Node & Gateway
- Linux and device drivers etc

Kanchana H, M.Tech (Ph.D)
Domain Expert, Corporate Trainer for Embedded and VLSI Design

Professional Summary:
- Overall, 6+ Years of experience in retail & corporate training.
- Proven expertise in delivering training to diversified audiences C, C++, Python, Embedded C , Verilog HDL and FPGA Design.
- Trained 5000+ audiences from diversified groups including freshers, working professionals and corporate clients.
- More than 12,000 man-hours of training on various technologies.

Technical Skills:
- Programming Languages: C, C++, Python, Embedded C, Verilog HDL
- FPGA: Spartan-2, Spartan-3, Spartan-6, Artix-7
- Embedded protocols: UART, SPI, I2C and others

Mohsin Khan A, M.Tech (PhD)
Domain Expert, Corporate Trainer for Embedded and VLSI
- Over 14 plus years of Training & IT experience
- C, C++, Python, Embedded C, ARM Microcontroller, RTOS, MATLAB & Simulink, CAPL Scripting CANoe, Verilog/VHDL, FPGA, System Verilog, UVM.
- Demonstrated expertise in Embedded System and Automotive
- VLSI design and verification
- Programming Languages: C, C++, Python, CAPL, Embedded C, MATLAB, Verilog/VHDL, System Verilog
- 25,000+ Man hours training experience.
- Preferred trainer for EMBEDDED & VLSI.
- Trained over 2000+ engineers at Student Level and has trained over 200+ engineers at Corporate Level.
- Provided several workshops with hands-on lab sessions for various corporate training programs.

Mr. Nishanth T
Domain Expert, Corporate Trainer
Areas of expertise
- Delivered 5000+ Manhours Training
- Programming Languages: Python, Basic knowledge on c & shell scripting
- IDE: Arduino, Python DILE, spyder, Google colab and code block
- Linux OS: Ubuntu, centOS, Redhat and MacOS

Technical Skills

- Expert in Raspberry Pi Training.
- Experience in MariaDB
- Experience in C, Python, and Embedded Systems.
- IOT, Arduino Microcontroller, Embedded c & Robotics
- Red Hat Enterprise Linux, CentOS, and Ubuntu.
- Configuring the crontab to automate the tasks.
- Creating and maintaining YUM/APT/GIT repositories.
- Bash Scripting
- User administration and managing file permission and ACL.
- Setting up Web Servers (httpd).
- Experience in Configuring and Maintaining various Open-Source applications on Linux - NFS, Autofs, SCP, SFTP, httpd.

Reddyrani. N, (BTech)
Corporate Trainer for Embedded and Automotive
Professional Summary:

- Overall, 3+ Years of experience in retail & corporate training.
- Proven expertise in delivering training to diversified audiences C, Python, Embedded C , IOT, ARM.
- Trained 500+ audiences from diversified groups including freshers, working professionals and corporate clients.
- More than 5000 man-hours of training on various technologies.

Technical Skills:

- Programming Languages: C, Python, Embedded C
- Embedded protocols: UART, SPI, I2C and others

Mr. Shaik Imam
Domain Expert, Corporate Trainer
Areas of expertise

- Over 15 years of Training & IT experience
- Microprocessors, Microcontrollers, ARM, Embedded C, VLSI and IOT

Technical Skills

- Programming Languages: C, C++, ASM, Embedded C for ARM, Verilog, VHDL, System Verilog.
- Embedded System Development using high end Microcontrollers STM32.
- VLSI design and verification using Verilog/System Verilog
- Python Programming for IOT applications
- Programming in C following MISRA-C guidelines
- Programming in C++ 11/14
- 25,000+ Man hours training experience.
- Preferred trainer for Embedded and VLSI
- Trained over 2500+ engineers at Student Level and has trained over 300+ engineers at Corporate Level.
- Conducted several workshops with hands-on lab sessions for various corporate training programs.

Mr. T S Tejas
Domain Expert, Corporate Trainer
Professional Summary:

- Overall, 4 Years of experience in retail & corporate training at cranes varsity.
- Proven expertise in delivering training to diversified audiences on C.
- Trained 1000+ audiences from diversified groups including students and corporate from junior engineers to project leads.
- Handled internships at various colleges for the engineering students
- Handled corporate trainings for companies like UST GLOBAL,PCC CONTROLS
- Trusted Trainer for C Programming trainer for fresh graduates and working professionals
- Cohesive team worker, having strong analytical, problem-solving and interpersonal skills.

Technical Skills:

- Programming Languages / OS: C, Linux System Programming, and Data structures

Ms. Zaiba Afreen
Domain Expert, Corporate Trainer
Areas of expertise

- Trainer with Over 4+ Years of experience retail & corporate training at cranes varsity.
- Proven expertise in delivering training to diversified audiences on HTML, CSS, JAVASCRIPT Programming, ANGULAR JS AND MONOGO DB
- Trained 1000+ audiences from diversified groups including students and graduates and corporates
- Trusted Trainer for Web Technology, Angular Js and Mongo DB
- Cohesive team worker, having strong analytical, problem-solving and interpersonal skills.

Technical Skills

- Programming Languages   : HTML, CSS, JAVASCRIPT, ANGULAR JS AND MONGODB
- Tools used   : ANGULAR CLI TOOL
- Operating system worked on : Windows 7/8/10/11 ,Linux.
- Database   : MONGO DB

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
V SEM A SECTION PROJECT BATCH LIST
1		1KS21CS033	HARSHITHA K M	
2		1KS21CS055	MADHU SNEHA SHREE S	
3		1KS22CS414	SOUNDARYA K S	Smart Traffic control system
4		1KS21CS016	ASHA H P	
5	Batch - 1	1KS21CS014	ARCHANA P	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS017	ASHWINI	
2		1KS22CS401	ARBEENA FARHEEN	
3		1KS21CS035	HARSHITHA R	Smart Garage Door
4		1KS21CS048	KAVANA N	
5	Batch - 2	1KS21CS052	KUNAPALLI LAASYASREE	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS011	AKSHAY VIVEKANANDA B	
2		1KS21CS027	DHRUTHI UMESH S	
3		1KS21CS029	GAANA S	"PET FEEDER"
4		1KS21CS034	HARSHITHA P	
5	Batch - 3	1KS21CS120	NIDHI R	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS006	ADITHI R	
2		1KS21CS007	ADITHI S REDDY	
3		1KS21CS021	CHAITRA M	CROP MONITORING AND MANAGEMENT
4		1KS21CS026	DEEPTHI A B	
5	Batch - 4	1KS21CS042	JAHNAVI P	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS050	KEERTHIKA S	
2		1KS21CS005	ABHIRAM YADATORE SHANTARAM	
3		1KS21CS054	M VAIBHAV NAYAK	CHARGE CONTROLLER
4		1KS21CS053	L.LAVANYA	
5	Batch - 5	1KS21CS119	ARJUN BHARADWAJ	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS009	AFIFAH AYESHA BIJLI	
2		1KS21CS012	ANANYA PRASAD S	
3		1KS21CS020	BHAVANA B	SMART DETECTIONS
4		1KS21CS049	KAVYA B SINGH	
5	Batch - 6	1KS21CS040	IBBANI V GOWDA	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS024	CHETHAN H	
2		1KS21CS051	KONGARA SREE SAI	
3		1KS21CS056	MANIKANTH	"SMART BUILDING "
4		1KS21CS057	MANJUNATH	
5	Batch - 7	1KS21CS047	KAUSHIK G V	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS039	HRITHIKA V	
2		1KS21CS025	DARSHAN S	
3		1KS21CS022	CHARISHMA A	Smart Parking System Using IOT
4		1KS22CS411	B NAVEEN KUMAR	
5	Batch - 8	1KS21CS004	ABHIRAM K	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS023	CHARISHMA M	
2		1KS21CS036	HARSHITHA S	
3		1KS21CS037	HARSHITHA S	"HOME AUTOMATION USING WEB PAGE"
4		1KS21CS001	A RAMYASREE	
5	Batch - 9	1KS22CS404	DHANALAKSHMI P	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS22CS403	ASHILESH VISHWAKARMA	
2		1KS22CS405	KIRAN B S	
3		1KS22CS408	LOGESHWARAN S	WEATHER STATION
4		1KS22CS413	SHIVA KUMAR R	
5	Batch - 10	1KS21CS028	D L SHIVANG	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS003	ABHILASHA V	
2		1KS21CS038	HEMANTH KUMAR V	
3		1KS21CS031	GOPALA KRISHNA V	Smart Car Parking System
4		1KS21CS032	GURUPRASAD Y S	
5	Batch - 11	1KS21CS015	ARTHAN M GOWDA	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS030	GAGAN SHIVANNA	
2		1KS21CS008	ADITYA V	
3		1KS21CS046	KARTHIK H N	Automation in Shipment Industry
4		1KS21CS043	JASHWANTH P C	
5	Batch - 12	1KS21CS018	B G PRAJWAL	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS010	AISHWARYA G	
2		1KS21CS041	IMAN GHORAI	
3		1KS21CS045	KANISHK E R	Automated Toll System
4		1KS21CS059	MAUSAM KUMAR	
5	Batch - 13	1KS21CS060	MAYA	

V SEM B SECTION PROJECT BATCH LIST

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS063	NAGADARSHAN R P	
2		1KS21CS105	SWARUP R KOWSHIK	
3	Batch - 1	1KS21CS112	VARUN SAI V	Home security system
4		1KS21CS113	VIBHA GOVIN S	
5		1KS21CS114	VIJETHA S	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS080	RAVEESH PRASAD M	
2		1KS21CS082	REDDY TEJASWINI A	
3	Batch - 2	1KS21CS089	SHEETAL NAIK	Smart Bin
4		1KS21CS107	UJWAL M L	
5		1KS22CS409	MANOHARI S	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS075	R AISHWARYA	
2		1KS21CS100	SUMEDHA R	
3	Batch - 3	1KS21CS106	TEJASHREE GOWDA Y K	Smart Density Based Traffic Light Control System
4		1KS21CS110	VANISHREE	
5		1KS21CS111	VARSHA H R	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS083	RUSHIKESH B	
2		1KS21CS098	SRINIDHI MADHUSUDHAN	
3	Batch - 4	1KS21CS099	SUMAN B S	Application of Smart Automation in Kitchen
4		1KS21CS101	SUMUKHA S BHARADWAJ	
5		1KS21CS117	YASHAS D GOWDA	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS061	MONIKA D	
2		1KS21CS064	NAGASHREE A	
3	Batch - 5	1KS21CS070	POOJA G	Iot based wifi weather station
4		1KS21CS071	POOJITHA M V	
5		1KS21CS088	SHAMITHA RAVISHANKAR	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS090	SHEETHAL G	
2		1KS21CS094	SINDHU MEGHA	
3	Batch - 6	1KS21CS095	SKANDA KUMAR H S	Plant Irrigation
4		1KS21CS097	SOUJANYA N	
5		1KS22CS402	ARUNA G N	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS072	POOJITHA R	
2		1KS21CS078	RAKSHITHA D H	
3	Batch - 7	1KS21CS084	RUTHU M R	water monitoring system
4		1KS21CS096	SNEHA S	
5		1KS21CS104	SUSHMITHA M	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1	Batch - 8	1KS21CS077	RAKSHITA G SATARADDI	Smart Medical Assistance System
2		1KS21CS091	SHEETHAL R	
3		1KS21CS108	V M TEJUS	
4		1KS21CS109	VAISHALI BHOSLE	
5		1KS22CS416	VEDASHREE S	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1	Batch - 9	1KS21CS062	N VIDYASAGAR	Smart Toll Gate System
2		1KS21CS067	NIKHIL SAI K V	
3		1KS21CS076	R HARSHA	
4		1KS21CS085	SAGAR S N	
5		1KS21CS093	SHREYAS C	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1	Batch - 10	1KS22CS406	LAKSHMEESH M V	Automatic Speed Breaker
2		1KS22CS410	MOHAMMED FAISAL	
3		1KS22CS412	SAINATH A	
4		1KS22CS415	SPANDANA M	
5		1KS22CS407	LAYA R	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1	Batch - 11	1KS21CS079	RASHMI B PHULARI	smart Garage System
2		1KS21CS087	SANTHOSH K A	
3		1KS21CS102	SUNIDHI P	
4		1KS21CS115	VILAS V	
5		1KS21CS116	VISHAL KAMAN	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS068	NOOR ZAHIDA	
2		1KS21CS074	PRIYANKA V	
3	Batch - 12	1KS21CS066	NETYAM SHIVSARAN	Smart Sprout
4		1KS21CS065	NAREN RAKSHITH K V	
5		1KS21CS069	OMKAR ARJUN MAGADUM	

SL.NO	Batches	USN	NAME OF THE STUDENT	PROJECT TITILE
1		1KS21CS103	SURESH C	
2		1KS21CS081	RAVITEJ ARJUN KAKHANDAKI	
3	Batch - 13	1KS21CS086	SAMRAT SINGH	Toll gate
4		1KS21CS092	SHOEB AHMED QUADRI	
5		1KS22CS400	ABHISHEK S	

Event description with pictures:

During the enriching internship at KSIT by Cranes Varsity, spanning from 26th October 2023 to 20thNovember 2023, students delved into a myriad of new concepts in Python and the Internet of Things (IoT). Over the course of this one-month program, their focus in Python covered a diverse range of topics, including linear search, binary search, pattern programs, object-oriented programming (OOP) concepts, nested classes, method utilization, and object creation.

Additionally in Python, students explored functions, lists, tuples, data types, decorators, dictionaries, and operator overloading. The comprehensive curriculum was reinforced by both pre-assessment and post-assessment tests, showcasing significant progress in knowledge development and problem-solving skills in Python. The internship wasn't limited to Python alone; there was a significant emphasis on IOT. Dedicated classes were conducted where each student team received an IOT devices kit.

In IOT kit each instructors elucidated the importance of each component, clarifying doubts and covering a spectrum of IOT concepts. Notable areas of focus included rotating servo motor applications, gas sensor-based smoke detection, water pumping using relays, LED illumination with ESP32, text display on LCD, soil moisture sensor for moisture content detection, applications of the RFID module and so on

To enhance practical understanding, an exhibition was organized, allowing students to showcase their IOT projects. Each team received a comprehensive IOT kit consisting of around 26 devices, and they were given 16 days of training with an additional 7-day period to develop their own IOT projects. The results were remarkable, with diverse projects ranging from Home Automation to Smart Agricultural Irrigation covering all the social sectors.

 The post-assessment tests, featuring both theoretical and skill-based questions, reflected the students' thorough understanding of the topics covered, inspiring the faculty to delve deeper into teaching advanced skills. Though challenging yet rewarding nature of the internship empowered students to think creatively and implement their newfound knowledge. This hands-on experience not only enhanced their technological prowess but also instilled a greater sense of confidence.

The positive overall experience highlights the potential for these acquired skills to be instrumental in shaping the students' future careers in the field of technology. From the excitement on day one to the culmination in the exhibition, the journey was a testament to the valuable learning experiences gained during this internship.

Bengaluru, Karnataka, India
Atlantis Liberty Square, DHAMMANAGI SUMO LEAVES, Kanakapura Rd, Raghuvanahalli,
Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.878996°
Long 77.544922°
01/12/23 11:06 AM GMT +05:30

Bengaluru, Karnataka, India
Atlantis Liberty Square, DHAMMANAGI SUMO LEAVES, Kanakapura Rd, Raghuvanahalli,
Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.878996°
Long 77.544922°
01/12/23 11:06 AM GMT +05:30

Bengaluru, Karnataka, India
Atlantis Liberty Square, DHAMMANAGI SUMO LEAVES, Kanakapura Rd, Raghuvanahalli,
Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.878996°
Long 77.544922°
01/12/23 11:24 AM GMT +05:30

Bengaluru, Karnataka, India
Atlantis Liberty Square, DHAMMANAGI SUMO LEAVES, Kanakapura Rd, Raghuvanahalli,
Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.878996°
Long 77.544922°
01/12/23 10:51 AM GMT +05:30

Bengaluru, Karnataka, India
Atlantis Liberty Square, DHAMMANAGI SUMO LEAVES, Kanakapura Rd, Raghuvanahalli,
Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.878996°
Long 77.544922°
01/12/23 11:06 AM GMT +05:30

Bengaluru, Karnataka, India
Atlantis Liberty Square, DHAMMANAGI SUMO LEAVES, Kanakapura Rd, Raghuvanahalli,
Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.878996°
Long 77.544922°
01/12/23 10:51 AM GMT +05:30

Bengaluru, Karnataka, India
Atlantis Liberty Square, DHAMMANAGI SUMO LEAVES, Kanakapura Rd, Raghuvanahalli,
Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.878996°
Long 77.544922°
01/12/23 11:10 AM GMT +05:30

Bengaluru, Karnataka, India
Atlantis Liberty Square, DHAMMANAGI SUMO LEAVES, Kanakapura Rd, Raghuvanahalli,
Bangalore City Municipal Corporation Layout, Bengaluru, Karnataka 560062, India
Lat 12.878996°
Long 77.544922°
01/12/23 11:10 AM GMT +05:30

Figures: Project Exhibition Pictures

EO#	EVENT OUTCOMES
EO1	Able to get components involved in Computation through IOT.
EO2	Able to identify various Projects using OOPs with Python and IOT.
EO3	Able to work on Practical / Physical models using IOT and implement.
EO4	Able to spotlighting the key points to evolve in the current industry requirements.

PO1: Science and engineering Knowledge PO2: Problem Analysis PO3: Design & Development PO4: Investigations of Complex Problems PO5: Modern Tool Usage PO6: Engineer & Society PSO1: Ability to understand, analyse problems, and implement solutions in Programming languages, as well to apply concepts in core arears of Computer science in association with professional bodies and clubs.	PO7: Environment and Sustainability PO8: Ethics PO9: Individual & Team Work PO10: Communication PO11: Project Management & Finance PO12: Lifelong Learning PSO2: Ability to use Computation Skills and apply software knowledge to develop effective solutions and data to address real world challenges.

EO-PO Mapping

EO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
EO1	3	2	3	2	2	2	-	-	3	3	2	2	3	3
EO2	3	3	3	2	2	2	-	-	3	3	2	2	3	3
EO3	3	3	3	2	2	2	-	-	3	3	2	2	3	3
EO4	3	2	3	2	2	2	-	-	3	3	2	2	3	3

3	Substantial (High) Correlation
2	Moderate (Medium) Correlation
1	Slight (Low) Correlation
-	No correlation.

PO's and PSO's Attained: PO1, PO2, PO3,PO4, PO5, PO6, PO9,PO10, PO11, PO12, PSO1& PSO2.

Event Coordinators

Prof. & Head, CSE

Head of the Department
Dept. of Computer Science & Engg
K.S. Institute of Technology
Bengaluru -560 109

Principal

PRINCIPAL
K.S. INSTITUTE OF TECHNOLOGY
BENGALURU - 560 109.

K S INSTITUTE OF TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
REPORT ON WORKSHOP ON

"BUILDING COMPUTER VISION AI MODEL"

Semester:	3rd Semester
Event Type:	Workshop
Event Name:	BUILDING COMPUTER VISION AI MODEL
Date/Duration:	08-02-2023
Associated Professional Bodies	CSI,SPICES scheme
No. of Students:	80
Speaker Details:	Mr. Varun Poladiya, Head Marketing, navan.ai , Bengaluru
Online link/Offline:	Offline

Event Objectives:

- Provide a platform to students for Experiential learning.

- To provide an opportunity for students to explore Computer Vision AI Models.

- Focus on identifying real-world problems and their solutions with no coding using Computer Vision AI Models

Event description with pictures:

Fig. Workshop poster

The resource person was welcomed by the CEO Dr. KVA Balaji.The event started with the welcome address by the CEO Dr. KVA Balaji and Principal Dr. Dilip Kumar K. of KSIT.The speaker Mr. Varun Poladiya is from navan.ai were facilitated florally.The HoD of Computer Science and Engineering Dr. Rekha Venkatapura, HoD of AIML Dr. Vaneetha M and HoD of CSD Dr.Deepa S R welcomed the guests.
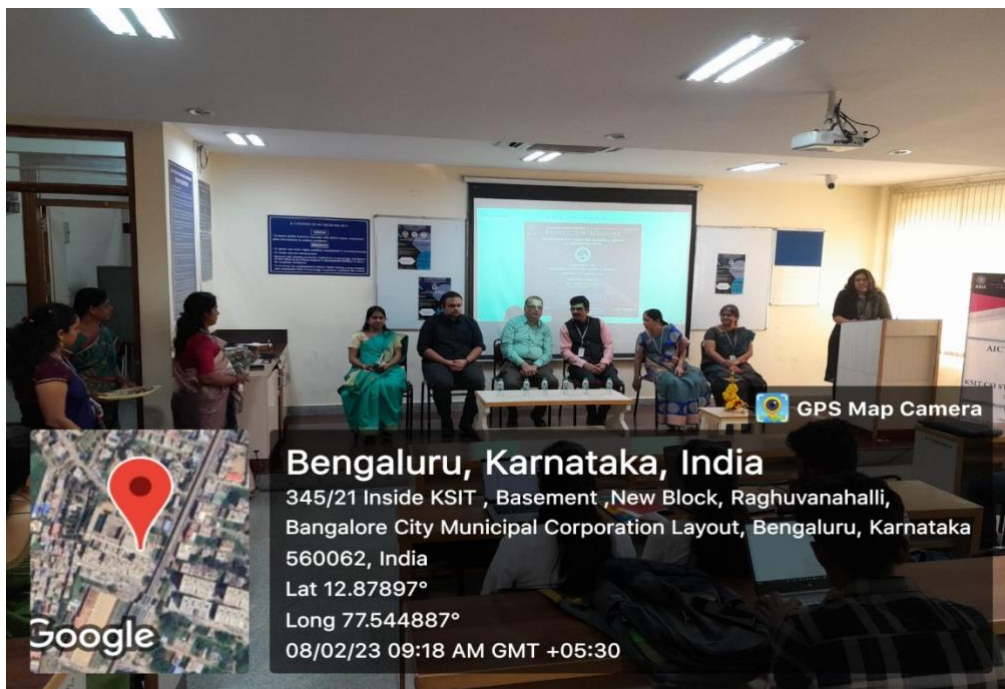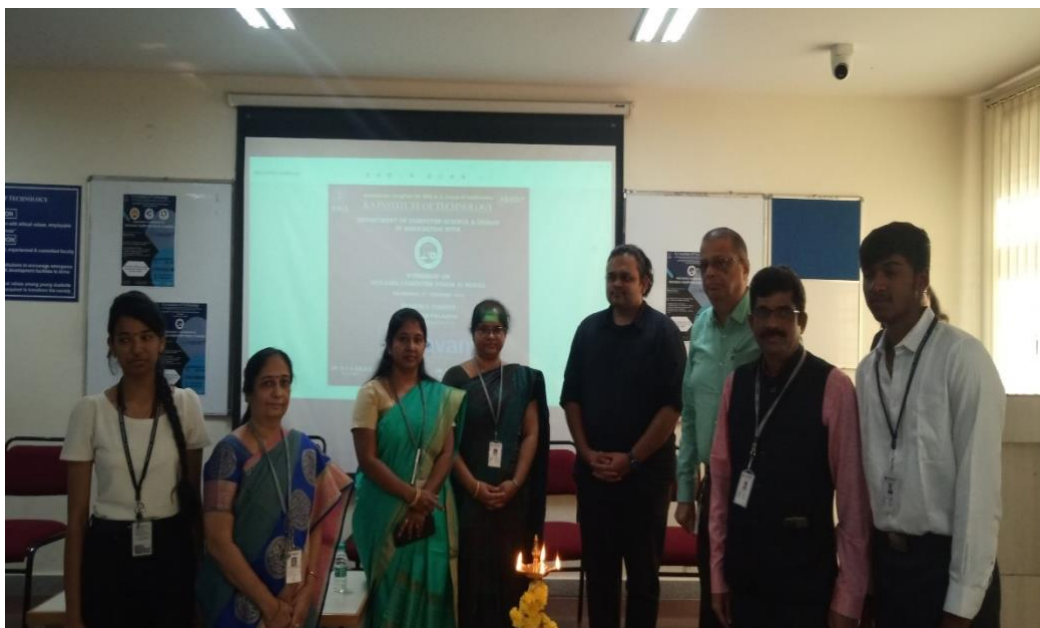

Fig. Workshop Inaugural

Fig. Lamp lighting at Workshop Inaugural

Fig. Welcoming Guest By CEO Dr. K. V. A Balaji

The workshop began with the resource person introducing us t,o what Artificial intelligence is and what Computer vision is. the theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages. Computer vision is a field of artificial intelligence (AI) enabling computers to derive information from images, videos and other inputs— and take actions or make recommendations based on that information

Fig. Workshop Session

The objective of the workshop was to bring students closer to a tool to be able to execute their ideas on AI and learn about how computer vision works.

The students were introduced to 'FLUTTER' where they are one step closer to building apps and integrate computer vision models built by them. Models built on Flutter works on both Android and IOS.

Fig. Resource person addressing students

The students were further given a hands-on experience of how to create models on computer vision. Each student was made to work on their laptop and create a computer vision model and test it. The students were first made to download a data set which they would use in their model. They were then instructed to use the EfficientNet B0 for Image Classification. They then uploaded about 100 images in each class and renamed their classes based on their data set.
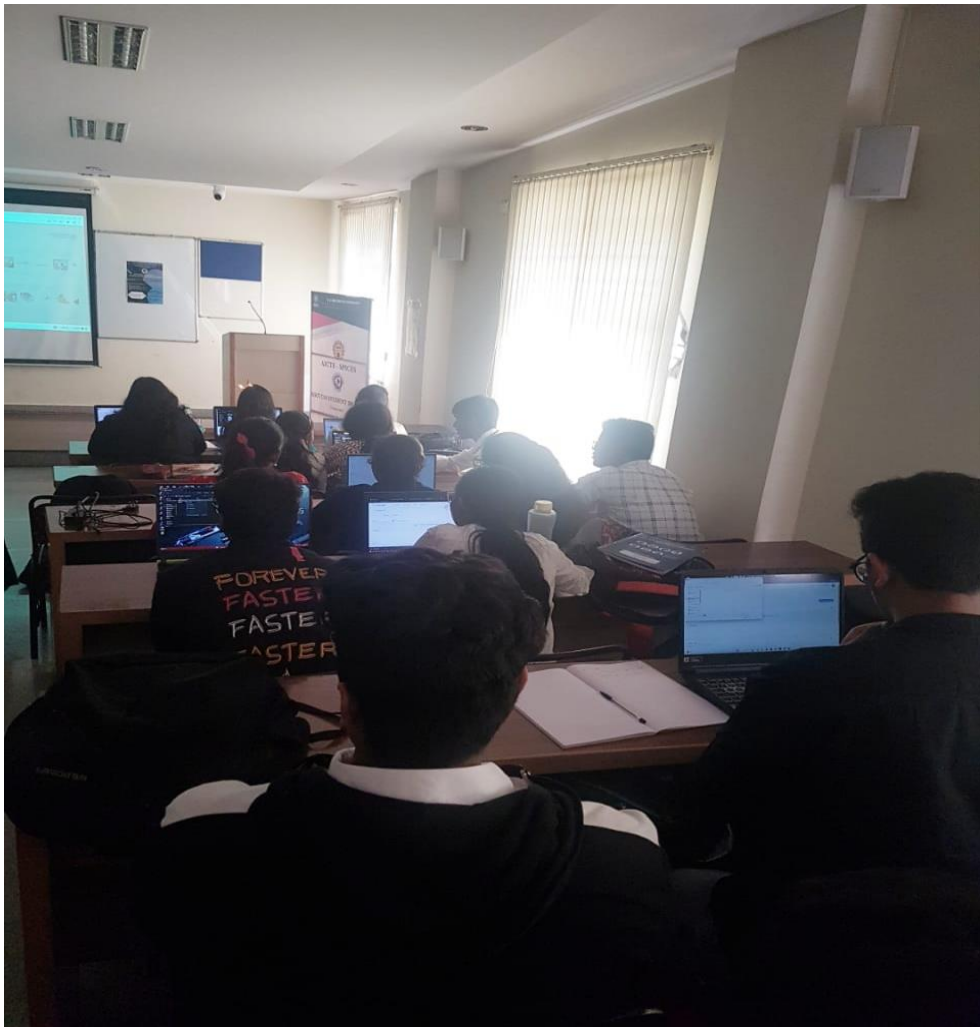

Fig. Students attending the session

Fig. Hands on session

Speaker concluded the session by giving an insight in to the career options in the field of new ideas with AI and Computer Vision. This workshop was on opportunity for all the students to come together as a community to learn, share and explore new ideas with AI and Computer Vision.

Fig. Presenting Memento to Resource person

EO#	EVENT OUTCOMES
EO1	Identify Real-world Problems and applications of Computer Vision
EO2	Design and develop Computer Vision AI model-based solutions for problems in thrust areas.
EO3	Analyse the solution with the existing systems and demonstrate the result through no coding.

EO-PO Mapping

EO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
EO1	3	3	3	2	3	3	3	-	3	-	-	3	3	3
EO2	3	2	3	2	3	2	1	3	3	3	2	3	3	3
EO3	3	3	3	2	3	3	1	3	3	3	2	3	3	3
	3	2.6	3	2	3	2.6	1.6	2	3	2	1.3	3	3	3

3	Substantial (High) Correlation
2	Moderate (Medium) Correlation
1	Slight (Low) Correlation
-	No correlation.

PO's Attained: PO1, PO2, P03, PO6, PO7, PO9, PO12

PSO's Attained: PSO1, PSO2

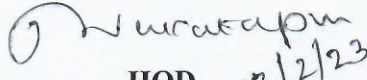**Event Coordinator**   **HoD**   **Principal**

Guided the students in building their own model on the navan.ai website which proved to be very enlightening and beneficial to them. The developed model was also tested and accurate results were also obtained based on the chosen data.

EO#	EVENT OUTCOMES
EO1	Learned the different tools which are required to build the applications.
EO2	Students can learn AI and build their own computer vision models for **free** with navan.ai.
EO3	Students can able to understand the application of computer vision in industries.

Google Drive Link for Models developed by Students

https://drive.google.com/drive/folders/1CA4fsuLycRagarzOIsWZgd2s-xHiPQzA

Rashmi. H
Superior

Event Coordinator

HOD 13/2/23

Head of the Department
Dept. of Computer Science & Eng.
K.S. Institute of Technology
Bengaluru -560 109

Principal

PRINCIPAL
K.S. INSTITUTE OF TECHNOLOGY
BENGALURU - 560 109.