

Workshop on Computer Vision using MATLAB

Date: 09. 07. 2022

Resource Person Details (Along With Specialization & Short Bio-Data):

1. Mr. Pickon Majumdar, MATLAB Application Engineer, Mathworks and ELMAX Systems and Solutions.
2. Mr. Subhrojyoti Moitra, MATLAB Application Engineer, Mathworks and ELMAX Systems and Solutions.

No. of Students and/or Faculty Participated: 19

Co-ordinator Details: Dr. Harish Chandra Mohanta, Associate Professor & HOD, ECE

Objective:

1. To know about deep learning algorithms and applications

Detailed report of the activity:

Deep Learning is a machine learning technique that teaches computers to do what comes naturally to humans: learn by example. In deep learning, a computer model learns to perform classification tasks directly from images, text, or sound. Deep learning models can achieve state-of-the-art accuracy, sometimes exceeding human-level performance. Models are trained using a large set of labelled data and natural network architectures containing many layers. It was an online event and 19 participants attended this online SDP/FDP.

Topics Covered:

1. Overview of image processing, feature extraction & computer vision.
2. Deep learning for object recognition, and object segmentation.
3. Deep learning for object detection, and object tracking.
4. Case studies on Computer Vision.
5. Demo of a mobile robot

Photographs of the event:

What is computer vision?

Capacity of machine/computer to view & detect object

Objects to train the machine for recognition

Deep learning algorithms replace the machine learning ones for object detection

Machine Vision

input → sensing device → machine

Human Vision

input → eye → brain → CAT

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Classical approaches to computer vision

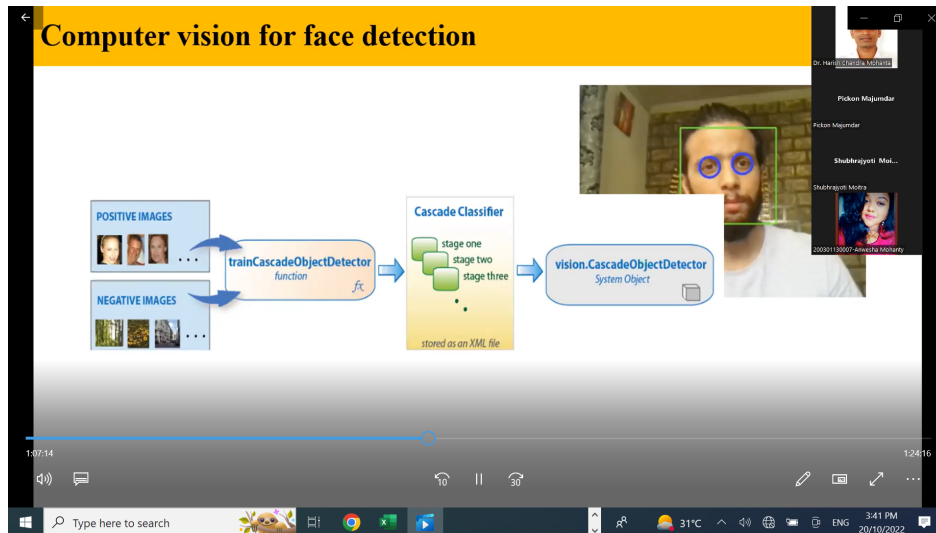
- ❖ The Blob analysis is the well-known basic platform of computer vision.
- ❖ HOG/LBP feature extracting algorithms commonly used for feature extraction from image/video.
- ❖ In order to detect feature, HARIS/SIFT/SURF algorithms are used.

Working of HOG algorithm.

Detect the targeted object

Object detector

1:02:49 1:28:41



List of Students/Faculty Attended:

	Participants Name	Department	Faculty/Student	Qualification
1	Dr. Harish Chandra Mohanta	ECE	Faculty	PhD
2	Tamminana.sumith kumar	ECE	Student	UG
3	Bikash Barik	CSE	Student	Graduation
4	Sachidananda Panda	ECE	Student	Graduate
5	Deba Priya Manna	ECE	Student	B. Tech 2nd year
6	Anwasha Mohanty	ECE	Student	B tech
7	Pooja Maharatha	EEE	Student	B.Tech
8	MANISH KUMAR NIRALA	CSE	Student	B.TECH
9	Dr. Trilochan Penthia	EEE	Faculty	PhD
10	Tinku Lal	CSE	Student	B.Tech
11	Banita Kumari Panigrahi	Btech cse	Student	Graduated
12	Dhiraj kumar	ECE	Student	BTech 2nd year
13	Abhishek Kumar Bhagat	ECE	Student	Pursuing Btech
14	N.Jeebaratnam	ECE	Faculty	M.tech

15	Abhimanyu Kumar	CSE	Student	Graduate(pursuing)
16	SURYA KANTA TARENIA	Physics	Student	MSc
17	Richa Mohanty	Biotech	Student	Persuing Btech
18	Sibasoni Devi	IT	Student	Persuing BSc
19	Dr.Murali Malijeddi	ECE	Faculty	PhD

Brochure related to the event:

FDP/SDP on
“Machine Learning, Deep Learning, and Computer
Vision using MATLAB”
Date: 09-07-2022
(11.30 AM to 1.30 PM IST)
Organized by :
Dept. of Electronics & Communication Engineering
Resource Person

Picon Majumdar
MATLAB Application Engineer

Subhrajyoti Moitra
MATLAB Application Engineer

Coordinators :
Dr. Harish Chandra Mohanta
 Associate Professor
 Dept. of ECE, SoET, CUTM
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Handwritten signature

Dr. Harish Chandra Mohanta

Associate Professor & HOD, ECE