KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution - AFFILIATED TO ANNA UNIVERSITY, CHENNAI)
S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

Department of

ELECTRONICS AND COMMUNICATION ENGINEERING

Value Added Course

on

Deep Learning

Date : 31.07.2023 to 05.08.2023 **Class : III ECE**

No. of Participants: 20

Academic Year: 2023-2024

(ODD Semester)

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1.	Academic Year	:	2023-2024
2.	Regulation	:	2021
3.	Department Name	:	Electronics and Communication Engineering
4.	Name of the Value Added Course	:	Deep Learning
5.	No. of Credits	:	2
6.	Category: Theory/Lab/Hands-on/Skill based etc	:	Hands-on
7.	Name and Details of the Joint-organization (industry/NGO etc) if any	:	Pantech eLearning Pvt. Ltd., Chennai
8.	Resource person details	:	Mr. Ramachandiran R
9.	Three Member Committee details	:	1. Dr. R. Suresh Babu, HoD/ECE 2. Dr. T. Prathiba, Expert 3. Er. S. Alwyn Rajiv, Chairperson
10.	VAC Coordinator Details	:	Er. S. Alwyn Rajiv, AP/ECE
11.	Duration (30 h mandatory)	:	45 Hours
12.	Period	:	31.07.2023 to 05.08.2023 (6 Days)
13.	Venue	:	CAD Lab (MTR Dept.)

Mark Statement

Department: Electronics and Communication Engineering **Regulation:R2021**

Year: III **Semester: V**

Sl.No.	Roll No.	Reg. No.	Student Name	Internal Marks (40)	External Marks (60)	Total (100)
1	21UEC001	920421106028	PADMA LOKSHANA M	38	40	78
2	21UEC002	920421106002	ABISHEK BABU R J	33	30	63
3	21UEC004	920421106001	ABHIKSHA G	38	43	81
4	21UEC007	920421106039	SARAVANAKUMAR V	37	39	76
5	21UEC008	920421106016	KAMALI M	37	27	64
6	21UEC012	920421106030	PAVITHRA M	37	34	71
7	21UEC015	920421106049	SWETHA R U	38	43	81
8	21UEC017	920421106009	DHARMESH KANNAN V	37	33	70
9	21UEC018	920421106019	KEERTHI G	38	41	79
10	21UEC026	920421106046	SRIKANTH V	37	36	73
11	21UEC035	920421106035	RAMPRASATH R	38	27	65
12	21UEC037	920421106053	VISHVA S	38	44	82
13	21UEC040	920421106013	FAIZARASOOL S	35	35	70
14	21UEC042	920421106021	MEENAKSHI M	37	33	70
15	21UEC045	920421106052	VISHAL.M A	40	29	69
16	21UEC050	920421106026	NIVITHA A G	35	38	73
17	21UEC052	920421106023	MUTHU BHARATHI P	38	41	79
18	21UEC054	920421106043	SHVETHA M	37	29	66
19	21UEC055	920421106012	DIVYA S	36	29	65
20	21UEC056	920421106011	DHIVYA DHARSHINI A	36	37	73

Guidelines / Assessment of VAC:

1. Internal 40 Marks. Preferably Assignments such as mini projects, presentations, worksheets, etc.
2. External 60 Marks. MCQs type.
   MCQs Type question paper pattern : Part A – 30 x 1 = 30 Marks, Part B – 15 x 2 = 30 Marks

Total (IM + EM): 100 Marks
Passing Criteria: 50 Marks
No revaluation and no re-exam will be entertained.

3. Mode of External Exam: Online proctored mode
4. Duration of the Exam: 1 h 30 min

VAC Coordinator

HoD

Dean (Academic Courses)

Encl:

1. Syllabus Copy
2. BoS Approval
3. Three Member Committee MoM
4. Geo-Tagged Photos
5. Certificates of all participants
6. Questionnaire
7. Attendance Sheet
8. Evaluated Answer script
9. Test Report
10. Feedback form
11. Feedback analysis
12. Students' oral feedback and Video (recorded video)

30/08/2023

The Value Added Course on "Deep Learning" organized by Pantech E Learning from 31.07.2023 to 05.08.2023, Herewith mentioned the students evaluation mark based on MCQ test conducted on 05.08.2023.

S. No.	Roll Number	Register Number	Name of the Student	Mark(60)
1	21UEC001	920421106028	PADMA LOKSHANA.M	40
2	21UEC002	920421106002	ABISHEK BABU.R.J	30
3	21UEC004	920421106001	ABHIKSHA.G	43
4	21UEC007	920421106039	SARAVANAKUMAR.V	39
5	21UEC008	920421106016	KAMALI.M	27
6	21UEC012	920421106030	PAVITHRA.M	34
7	21UEC015	920421106049	SWETHA.R.U	43
8	21UEC017	920421106009	DHARMESH KANNAN.V	33
9	21UEC018	920421106019	KEERTHI.G	41
10	21UEC026	920421106046	SRIKANTH.V	36
11	21UEC035	920421106035	RAMPRASATH.R	27
12	21UEC037	920421106053	VISHVA.S	44
13	21UEC040	920421106013	FAIZARASOOL.S	35
14	21UEC042	920421106021	MEENAKSHI.M	33
15	21UEC045	920421106052	VISHAL.M.A	29

16	21UEC050	920421106026	NIVITHA.A.G	38
17	21UEC052	920421106023	MUTHU BHARATHI.P	41
18	21UEC054	920421106043	SHVETHA.M	29
19	21UEC055	920421106012	DIVYA.S	29
20	21UEC056	920421106011	DHIVYA DHARSHINI.A	37

20/11/23

For Pantech e learning.,

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Department of Electronics and Communication Engineering

Value Added Course on Deep Learning

31/06/2023 to 05/07/2023 (6 Days)

INTERNAL MARK

REVIEW DATE : 31/10/2023 & 20/11/2023

S. No.	Roll Number	Name of the Student	R1	R2	R3	AVG (100)	INT (40)
1	21UEC001	PADMA LOKSHANA.M	95	91	93	93	38
2	21UEC002	ABISHEK BABU.R.J	76	85	84	82	33
3	21UEC004	ABHIKSHA.G	95	91	94	94	38
4	21UEC007	SARAVANAKUMAR.V	95	89	91	92	37
5	21UEC008	KAMALI.M	96	91	87	92	37
6	21UEC012	PAVITHRA.M	92	90	90	91	37
7	21UEC015	SWETHA.R.U	98	92	92	94	38
8	21UEC017	DHARMESH KANNAN.V	92	92	87	91	37
9	21UEC018	KEERTHI.G	98	92	92	94	38
10	21UEC026	SRIKANTH.V	92	92	87	91	37
11	21UEC035	RAMPRASATH.R	97	91	97	95	38
12	21UEC037	VISHVA.S	95	97	93	95	38
13	21UEC040	FAIZARASOOL.S	95	86	79	87	35
14	21UEC042	MEENAKSHI.M	92	90	90	91	37
15	21UEC045	VISHAL.M.A	97	100	97	98	40
16	21UEC050	NIVITHA.A.G	95	86	79	87	35
17	21UEC052	MUTHU BHARATHI.P	96	92	89	93	38
18	21UEC054	SHVETHA.M	96	91	87	92	37
19	21UEC055	DIVYA.S	91	88	89	90	36
20	21UEC056	DHIVYA DHARSHINI.A	91	88	89	90	36

Coordinators 20/11/23

HoD/ECE 20/11/23

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Value Added Course on Deep Learning / Oral Presentation

Name of the Committee Member : Dr. R. Suresh babu, Professor & Head of Department/ECE

Date : 31/10/2023 & 20/11/2023

S.No.	Roll Number	Name of the Student	Title	Report (40)		Presentation (30)				Total (100)
				Content (25)	Format (15)	Explanation of Concepts and scientific vocabulary (15)	Delivery (10)	Attitude (5)	VIVA VOCE (30)	
1	21UEC037	VISHVA.S	Deep learning Applications Using Streamlit	24	14	15	10	5	27	95
2	21UEC007	SARAVANAKUMAR.V				15	10	5	27	95
3	21UEC052	MUTHU BHARATHI.P	Face Recognition using Deep Learning in Open CV	23	13	15	10	5	30	96
4	21UEC002	ABISHEK BABU.R.J				15	10	5	10	76
5	21UEC045	VISHAL.M.A	Ethereum (crypto currency) Price Analysis Using Deep Learning	24	14	15	10	5	29	97
6	21UEC035	RAMPRASATH.R				15	10	5	29	97
7	21UEC026	SRIKANTH.V	Gun Detection using Cascade Classifier	25	15	15	10	5	22	92
8	21UEC017	DHARMESH KANNAN.V				15	10	5	22	92

R.S — Bab
20/11/2023

Committee Member Name with Signature

S.No.	Roll Number	Name of the Student	Title	Report (40)		Presentation (30)			VIVA VOCE (30)	Total (100)
				Content (25)	Format (15)	Explanation of Concepts and scientific vocabulary (15)	Delivery (10)	Attitude (5)		
9	21UEC001	PADMA LOKSHANA.M	Gender Detection using Voice	25	15	15	10	5	25	95
10	21UEC004	ABHIKSHA.G				15	10	5	25	95
11	21UEC054	SHVETHA.M	Birds Classification Using Deep Learning	25	15	15	10	5	26	96
12	21UEC008	KAMALI.M				15	10	5	21	96
13	21UEC040	FAIZARASOOL.S	Image Classification using Random Forest	25	15	15	10	5	25	95
14	21UEC050	NIVITHA.A.G				15	10	5	25	95
15	21UEC015	SWETHA.R.U	Hand Gesture Recognition Using Deep Learning Algorithms	25	15	15	10	5	28	98
16	21UEC018	KEERTHI.G				15	10	5	24	98
17	21UEC042	MEENAKSHI.M	Implement a Perceptron on Binary Classifier	25	15	15	10	5	22	92
18	21UEC012	PAVITHRA.M				15	10	5	22	92
19	21UEC055	DIVYA.S	Digital Art Using Open CV	24	14	13	10	5	25	91
20	21UEC056	DHIVYA DHARSHINI.A								

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Value Added Course on Deep Learning / Oral Presentation

Name of the Committee Member : Dr. T. PRATHIBA, AP/ECE

Date : 31/10/2023 & 20/11/2023

S.No.	Roll Number	Name of the Student	Title	Report (40)		Presentation (30)				
				Content (25)	Format (15)	Explanation of Concepts and scientific vocabulary (15)	Delivery (10)	Attitude (5)	VIVA VOCE (30)	Total (100)
1	21UEC037	VISHVA.S	Deep learning Applications Using Streamlit	24	15	15	9	5	29	97
2	21UEC007	SARAVANAKUMAR.V				15	7	3	25	89
3	21UEC052	MUTHU BHARATHI.P	Face Recognition using Deep Learning in Open CV	24	14	14	9	5	26	92
4	21UEC002	ABISHEK BABU.R.J				13	7	3	24	85
5	21UEC045	VISHAL.M.A	Ethereum (crypto currency) Price Analysis Using Deep Learning	25	15	15	9	5	30	100
6	21UEC035	RAMPRASATH.R				13	8	4	26	91
7	21UEC026	SRIKANTH.V	Gun Detection using Cascade Classifier	24	15	13	9	4	27	92
8	21UEC017	DHARMESH KANNAN.T				13	9	4	27	92

T. Pratha 31/10/23.

Committee Member Name with Signature

				Report (40)		Presentation (30)				
S.No.	Roll Number	Name of the Student	Title	Content (25)	Format (15)	Explanation of Concepts and scientific vocabulary (15)	Delivery (10)	Attitude (5)	VIVA VOCE (30)	Total (100)
9	21UEC001	PADMA LOKSHANA.M	Gender Detection using Voice	24	14	14	9	4	26	91
10	21UEC004	ABHIKSHA.G				14	9	4	26	91
11	21UEC054	SHVETHA.M	Birds Classification Using Deep Learning	24	14	14	9	4	26	91
12	21UEC008	KAMALI.M				14	9	4	26	91
13	21UEC040	FAIZARASOOL.S	Image Classification using Random Forest	22	13	13	8	4	25	86
14	21UEC050	NIVITHA.A.G				13	8	4	26	86
15	21UEC015	SWETHA.R.U	Hand Gesture Recognition Using Deep Learning Algorithms	24	14	14	9	4	27	92
16	21UEC018	KEERTHI.G				14	9	4	24	92
17	21UEC042	MEENAKSHI.M	Implement a Perceptron on Binary Classifier	24	14	14	9	4	25	90
18	21UEC012	PAVITHRA.M				14	9	4	25	90
19	21UEC055	DIVYA.S	Digital Art Using Open CV	24	14	13	8	4	25	88
20	21UEC056	DHIVYA DHARSHINI.A				13	8	4	25	88

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DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Value Added Course on Deep Learning / Oral Presentation

Name of the Committee Member : S. Alwyn Rajiv, AP/ECE **Date :** 31/10/2023 & 20/11/2023

S.No.	Roll Number	Name of the Student	Title	Report (40)		Presentation (30)				
				Content (25)	Format (15)	Explanation of Concepts and scientific vocabulary (15)	Delivery (10)	Attitude (5)	VIVA VOCE (30)	Total (100)
1	21UEC037	VISHVA.S	Deep learning Applications Using Streamlit	25	12	14	10	5	27	93
2	21UEC007	SARAVANAKUMAR.V				12	10	5	27	91
3	21UEC052	MUTHU BHARATHI.P	Face Recognition using Deep Learning in Open CV	24	14	13	09	05	24	89
4	21UEC002	ABISHEK BABU.R.J				10	07	05	24	84
5	21UEC045	VISHAL.M.A	Ethereum (crypto currency) Price Analysis Using Deep Learning	24	14	15	10	5	29	97
6	21UEC035	RAMPRASATH.R				15	10	5	29	97
7	21UEC026	SRIKANTH.V	Gun Detection using Cascade Classifier	24	14	13	08	05	23	87
8	21UEC017	DHARMESH KANNAN.T				13	08	05	23	87

S Alwyn

Committee Member Name with Signature

[S ALWYN RAJIV]

				Report (40)		Presentation (30)				
S.No.	Roll Number	Name of the Student	Title	Content (25)	Format (15)	Explanation of Concepts and scientific vocabulary (15)	Delivery (10)	Attitude (5)	VIVA VOCE (30)	Total (100)
9	21UEC001	PADMA LOKSHANA.M	Gender Detection using Voice	24	14	15	10	5	25	93
10	21UEC004	ABHIKSHA.G				15	10	5	25	93
11	21UEC054	SHVETHA.M	Birds Classification Using Deep Learning	24	12	15	9	5	22	87
12	21UEC008	KAMALI.M				15	09	5	22	87
13	21UEC040	FAIZARASOOL.S	Image Classification using Random Forest	22	10	12	08	5	22	79
14	21UEC050	NIVITHA.A.G				12	08	5	22	79
15	21UEC015	SWETHA.R.U	Hand Gesture Recognition Using Deep Learning Algorithms	24	14	14	10	5	25	92
16	21UEC018	KEERTHI.G				14	10	5	25	92
17	21UEC042	MEENAKSHI.M	Implement a Perceptron on Binary Classifier	24	14	14	09	5	24	90
18	21UEC012	PAVITHRA.M				14	09	5	24	90
19	21UEC055	DIVYA.S	Digital Art Using Open CV	23	13	13	9	4	27	89
20	21UEC056	DHIVYA DHARSHINI.A				13	9	4	27	89

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Department of Electronics and Communication Engineering

Course Code	Course Name	L	T	P	C
Value Added Course	Deep Learning	20	0	25	2

a. Preamble

Integrated courses are built in a way to provide multidisciplinary knowledge in the field of Deep Learning. Here the core domains must be integrated with each other and ensure a proper understanding of the topic, leading to a great learning experience required in the industry.

b. Course Outcome

Upon successful completion of the course, the students will be able to

Cos	Course Outcome	Knowledge Level
CO1	Understand the Deep Learning by using Python	K2
CO2	Make use of the Deep Learning concept to do projects on recent research challenges using Python	K3

Introduction to Deep Learning in Python **5 Hours**

Introduction to AI, Introduction to Deep Learning, Broad Categories of Deep Learning Algorithms, Installation of Python Idle, Python Application, Basic Coding of Python, Introduction to the Modules in Python, Hands Session of Python Modules

Image Processing and Computer Vision **10 Hours**

Introduction to Image Processing, Image Processing Part in Deep Learning, Concepts of Open Source Computer Vision, Computer Vision Coding Part, Image and Video Streaming using Open CV

Deep Learning Application **10 Hours**

Color Based Object Tracking, Concept of Model Designing, XML, JSON, H5, Dat files introduction, Face Recognition based on models, Landmark Localization of face, Fire Detection using .xml model, Object Detection using mobile net SSD Model

Application Tools in Deep Learning **5 Hours**

Introduction to anaconda navigator, Creation of new environment, Installation of Packages Concept of Keras and Tensor Flow, Techniques and Applications, Training and Model Designing for own data, Practical Application of Classifications.

Projects & Assignments **15 Hours**

Practical 1 : Application of Maintaining Social Distance using yolo

Practical 2 : Covid 19 Detection in Chest X ray images using Jupiter Notebook.

Practical 3 : Unsupervised Learning of face Clustering

Practical 4 : Image to text and text to speech conversion.

Practical 5 : Voice recognition using deep learning

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Department of Electronics and Communication Engineering

Seventh BoS Meeting Minutes

Date : 30.09.2023

Time : 2.00 PM

Venue : VLSI Lab, ECE Department

Link (hybrid mode) : https://tinyurl.com/mu6nhaud

The following members were present:

S.No.	Name of the Expert	Designation	Capacity
1.	Dr.E.S.Gopi, Ph.D.,	Associate Professor/ECE National Institute of Technology, Tiruchirappalli, Tamil Nadu	Anna University Nominee (Online mode)
2.	Dr. M. Sabarimalai Manikandan Ph.D.,	Associate Professor, Department of Electrical Engineering, Indian Institute of Technology Palakkad	Academic Council Nominee 30/01/2023
3.	Dr. A Kannammal, Ph.D.,	Associate Professor/ ECE PSG College of Technology, Avinashi Rd, Peelamedu -641004, Coimbatore	Academic Council Nominee (Online mode)
4.	Mr.M.Chinnathambi, M.E.,	Technical Lead Viasat India, Global Infocity, Module 1&2, 5th Floor, Block C, No.40, MGR Salai, Perungudi- 600 097, Chennai.	Industrial Expert
5.	Ms.A.Anto Amala, M.E.,	Associate Staff Engineer, Samsung Semiconductor India Research, Laxmi Sagar Layout, Mahadevapura, Bengaluru, Karnataka 560048	Alumni

Internal Faculty Members of BoS			
S.No.	**Name of the Faculty**	**Designation**	**Signature**
1.	Dr.R.Suresh Babu	Professor & Head	
2.	Dr.T.Pandiselvi	Associate Professor	
3.	Dr.N.M.Mary Sindhuja	Associate Professor	30/9/2023
4.	Dr.T.Prathiba	Assistant Professor	30/9/23
5.	Dr.S.Nisha Rani	Assistant Professor	30/09/2023
6.	Mrs.C.Nagavani	Assistant Professor	30/9/'23
7.	Mr.P.Aravind	Assistant Professor	
8.	Mr.R.Ashok	Assistant Professor	
9.	Mrs.M.Stella Mercy	Assistant Professor	
10.	Mr.S.Alwyn Rajiv	Assistant Professor	
11.	Mrs.P.Muthumari	Assistant Professor	
12.	Mrs.P.Ramalakshmi	Assistant Professor	
13.	Mr.R.Rajprabu	Assistant Professor	

007.01.00 : Welcome address by HoD

- Dr.R.Suresh Babu, Professor & Head welcomed the BoS members.

007.02.00 : Approval of 6th BoS Meeting Minutes & Action taken

Item No.	Suggestions of BoS Members in 6th BoS Meeting	Action Taken
1.	Dr.E.S.Gopi, Ph.D., suggested to include prerequisites for each course in the Professional elective list.	Unit I is framed as basic for all the professional courses
2.	Dr.E.S.Gopi, Ph.D., insisted to have some of the courses as industry based and partially it can be handled by the experts from industry.	Semiconductor Test Engineering Course will be handled by the faculty members trained by Tessolve Semiconductor pvt ltd, Bangalore. Tessolve Semiconductor Industrial persons will also handle some topics. Value added courses are completely handled by the industrial persons.
3.	Dr.E.S.Gopi, Ph.D., also suggested to have Data Analytics as a common course for all the departments.	Data Analytics course is included in Institute level minor courses.
4.	Dr. M. Sabarimalai Manikandan Ph.D., insisted to give Open ended projects across the departments.	Many students are doing projects with other department students
5.	Dr.E.S.Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., suggested to include Microprocessor as 1 unit in Embedded and modify the course name as Microprocessor and Embedded Systems	Included Microprocessor as 1 unit in Embedded and modified the course name as Microprocessor and Embedded Systems
6.	Dr.E.S.Gopi, Ph.D., insisted to combine control systems with Signals and Systems. Include the course Statistical Theory of Communication which may include Detection, Estimation and Information Coding. Dr.T.Prathiba suggested to bring the course Artificial Intelligence and Machine Learning in VI Semester. Move the course Statistical Theory of Communication in VII Semester.	Control system is combined with sensors and is included as Profeesional Elective. Included the course Statistical Theory of Communication which may include Detection, Estimation and Information Coding. Artificial Intelligence and Machine Learning is brought to VI Semester
7.	Dr.E.S.Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., suggested to include Microprocessor experiments also and modify the course title for Embedded	Microprocessor experiments are included and modified the course title as Microprocessor and Embedded Systems laboratory

	Systems laboratory as Microprocessor and Embedded Systems laboratory	
8.	Dr.E.S.Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., suggested to rename the course VLSI Testing and Design for Testability as VLSI Architecture for Signal Processing and Machine Learning	VLSI Testing and Design for Testability course is renamed the course as VLSI Architecture for Signal Processing and Machine Learning
9.	Dr.E.S.Gopi, Ph.D., suggested to include the Acoustics also in Speech Processing course. Hence the course name is changed as Acoustics & Speech Processing	Included Acoustics and the course name is changed as Acoustics & Speech Processing
10.	Dr.E.S.Gopi, Ph.D., insisted to remove DSP Architecture and Programming course. Instead he suggested to include Pattern recognition and Computational Intelligence	Removed DSP Architecture and Programming course and included Pattern recognition and Computational Intelligence
11.	Dr. M. Sabarimalai Manikandan Ph.D., insisted to remove Multimedia Compression Techniques course. Instead he suggested to include Deep Learning	Removed the course Multimedia Compression Techniques. Included Deep Learning course
12.	Dr. M. Sabarimalai Manikandan Ph.D., suggested to include SONAR along with RADAR. So, the course name is changed to RADAR & SONAR Signal Processing	Included SONAR and the course name is changed to RADAR & SONAR Signal Processing
13.	Dr. M. Sabarimalai Manikandan Ph.D., insisted to remove Microprocessor and Microcontroller course. Instead he suggested to include Sensors and Control Systems.	Microprocessors are included in Microprocessor and Embedded Systems course. So, removed the course Microprocessor and Microcontroller. Included Sensors and Control Systems.
14.	Dr.E.S.Gopi, Ph.D., insisted to remove Bio-sensors and Instrumentation course. Instead he suggested to include MEMS & Nanoelectronics	Removed Bio-sensors and Instrumentation course. MEMS & Nanoelectronics course is included.
15.	Dr. M. Sabarimalai Manikandan Ph.D., suggested to remove the course RFID and include the topics of RFID and sensors in Internet of Things Course. Instead, basics of Wireless Technologies course may be included with various wireless technologies used for Sensor Technologies.	The course RFID is removed and included the topics of RFID and sensors in Internet of Things Course. Wireless Technologies Course is included.

16.	Dr. M. Sabarimalai Manikandan Ph.D., suggested to rename the course Communication Protocol and Network Security for IoT as Device and Data Security	Renamed the course Communication Protocol and Network Security for IoT as Device and Data Security
17.	Dr. M. Sabarimalai Manikandan Ph.D., suggested to rename the course Basic Electronics and its Applications as Analog Devices and Circuits.	The course Basic Electronics and its Applications is renamed as Analog Devices and Circuits.
18.	Dr.E.S.Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., verified the syllabus of Machine Learning and Embedded Systems and insisted that machine learning and Embedded systems are two different courses and it is a dumped syllabus. Focus only on Machine Learning and the course name may be changed as Introduction to Machine Learning.	Machine Learning and Embedded Systems course is changed as Introduction to Machine Learning
19.	Dr. M. Sabarimalai Manikandan Ph.D., suggested to rename the course Electronic Product Design using PCB as Electronic System Design	The course Electronic Product Design using PCB is renamed as Electronic System Design
20.	Dr.E.S.Gopi, Ph.D., insisted the following regarding NPTEL • In R2020, Online course is a core course. If NPTEL is the online course, then in the transcript it may be printed as NPTEL course or the NPTEL course name (Which is chosen by the student). • If a student fails in NPTEL, it should not be considered as arrear if he compensates with subjects handled by the department. • Mentor role is very important in NPTEL course.	Dr.E.S.Gopi, Ph.D., was discussed in Academic Council meeting. It is decided that the NPTEL course name will be printed on the manuscript. If a student could not pass until the seventh semester, he has to write the theory course in VIII semester. The name of the theory course will be mentioned in the transcript.

- BoS members approved the action taken in 6th BoS Meeting Minutes

007.03.00 : Discussion and approval of

007.03.01 : Proposed Curriculum and Syllabi for VII and VIII Semester

VII Semester

Name of the Course	Suggestions from BoS members
Universal Human Values and Ethics	Approved the course and syllabus
Statistical Theory of Communication	Approved the course and syllabus

VIII Semester

Name of the Course	Suggestions from BoS members
Project Work	Approved the course

007.03.02 : List of Open Elective 1,2,3 & 4 courses offered

Name of the Course	Offered to	Suggestions from BoS members
Fundamentals of Electronic Devices and Circuits	CSE, IT, ADS, EEE, Mechanical, Civil, Mechatronics and Bio-Technology	1. Dr.M.Sabarimalai Manikandan Ph.D., suggested that instead of wave shaping circuits, include linear Integrated circuits using op-amp with the topics of Integrator, Differentiator, differential amplifier and Instrumentation amplifier. 2. Also he insisted to frame the new course as combine as follows. Unit I with Unit III contains special diodes. Add Basics of Digital Electronics as Unit V can be included with the topics of combinational and sequential circuits. For the digital electronics unit the text book "Digital Fundamentals" authored by, Thomas L. Floyd may be included.
Telecommunication Network Management	CSE, IT, ADS, EEE, Mechanical, Civil, Mechatronics and Bio-Technology	1. Dr.M.Sabarimalai Manikandan Ph.D., suggested that Telecommunication Network Management course may be replaced with "Sensors and Wireless Technologies" course because Telecommunication Network Management course is the outdated one. 2. They also insisted to frame the new course as, Unit I & Unit II can be framed with Sensors topics, Unit III - Basic Modulation scheme, Unit IV-Wireless Radios and standards including the topics of Wifi, Bluetooth, Zigbee, LoRa. RFID, LTE, Wimax,5G and Unit V with Wireless Network Topologies - Ring, Star, Mesh, Bus and ISO model.

VLSI Design	CSE, IT, ADS, EEE, Mechanical, Civil, Mechatronics and Bio-Technology	1. Dr.M.Sabarimalai Manikandan Ph.D., and Dr.E.S.Gopi, Ph.D., suggested that VLSI Design course is tough for other department students. So, they insisted to change the course as MEMS & VLSI. 2. They also insisted to frame the new course as follows. Digital Logic as Unit I covered with topics of Basic logic families. CMOS VLSI as Unit II, Unit III and Unit IV may be covered with MEMS concepts. Verilog programming as Unit V with programming of Analog & Digital Design. More weightage may be given for programming.
Industrial IoT and Industry 4.0	CSE, IT, ADS, EEE, Mechanical, Civil, Mechatronics and Bio-Technology	Dr.M.Sabarimalai Manikandan Ph.D., suggested to change the Industrial IoT and Industry 4.0 course title into Industry 4.0. Unit I title is changed as Introduction to Industry 4.0. Unit II may be based on IoT Components. Unit III Security Systems is about autonomous vehicles. Unit IV may be Data Analytics and Imaging Systems.
Medical Electronics	CSE, IT, ADS, EEE, Mechanical, Civil, Mechatronics and Bio-Technology	Dr.M.Sabarimalai Manikandan Ph.D., insisted to combine Unit I and Unit II. He also insisted that in Unit II, include topics under Medical Imaging Modalities such as X-ray, CT Scan, PET, Magnetic Resonance Imaging Systems, Ultrasonic Imaging Systems. Rangaraj M Rangayyan, 'Biomedical Signal Analysis-a case-study approach' may be included as one of the reference books

- Dr. E. S. Gopi, Ph.D., insisted that for all the open elective courses must be self-explanatory.
- Dr. E. S. Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., insisted to add Introduction to Signal Processing as one of the open elective courses.

007.03.03 : List of courses for PhD candidates

Name of the Course	Suggestions from BoS members
Advanced Design of Experiments	Approved the course and syllabus
Big Data	Approved the course and syllabus
Deep Learning	Approved the course and syllabus
Machine Learning	Approved the course and syllabus
Internet of Things	Approved the course and syllabus

- Dr. E. S. Gopi, Ph.D., and Dr. M. Sabarimalai Manikandan Ph.D., suggested to include Linear Algebra, Probability and Statistics, Numerical Methods and Computing and more courses for PhD course works

007.03.04 : Human Values and Ethics Courses

Name of the Course	Suggestions from BoS members
Universal Human Values and Ethics	Approved the course and syllabus

007.04.00 : ITEMS FOR RATIFICATION

007.04.01 : Changes or Corrections in the existing Curriculum of R2020 and R2021

Existing	Corrections required and specify the reasons
Mini Project, R2021	To move from VII semester to VI semester because it will be helpful for students placement in VII semester.
Statistical Theory of Communication, R2021	To move from VII semester to VI semester
EC2352/Microprocessor and Embedded Systems, R2021	To move from VI semester to VII semester
EC2353/Microprocessor and Embedded Systems laboratory, R2021	To move from VI semester to VII semester

007.04.02 : NPTEL Examination results (students performance) and action taken for the students who did not receive the certificates

- Students have to complete two 3 credits NPTEL courses mandatorily for R2020 curriculum.
- In IV ECE (2021-2024 Batch) under R2020, total number of students in the class is 61. In that, 3 students have cleared 3 courses, 48 students have completed 2 courses, 6 students have completed 1 course and 4 students didn't complete any of the NPTEL courses.

NPTEL Online Exam (January to April 2022)

Sl.No	Course Id	Course Title	Offered Institute	No. of Students Registered	No. of Students attended	No. of Students passed	No. of Students failed	Pass %
1	noc22-ee45	Digital System Design	IIT Ropar	61	61	24	37	39.34

NPTEL Online Exam (July to October 2022)

Sl.No	Course Id	Course Title	Offered Institute	No. of Students Registered	No. of Students attended	No. of Students passed	No. of Students failed	Pass %
1	noc22-hs76	Soft Skills	IIT, Roorkee	58	58	48	10	82.75
2	noc22-cs96	Introduction to Internet of Things	IIT, Kharagpur	10	10	10	--	100

NPTEL Online Exam (January to April 2023)

Sl.No	Course Id	Course Title	Offered Institute	No. of Students Registered	No. of Students attended	No. of Students passed	No. of Students failed	Pass %
1	noc23-mg33	Principles of Management	IIT, Roorkee	23	23	9	14	39.1
2	noc22-cs96	Introduction to Internet of Things	IIT, Kharagpur	25	25	20	5	80

Action Plan

- 6 students (1 course completed) + 4 (No Courses Completed) who failed in the registered subjects have to compensate with the subjects Softskills / IoT for this semester in NPTEL.
- Mentors are asked to monitor the assignment submissions of students.

007.04.03 : Curriculum feedback and action taken if any

- Collected the curriculum feedback from the students and action plan is being carried out.
- Dr. E. S. Gopi, Ph.D., insisted not to collect curriculum feedback from students, instead other stake holders feedback must be collected.

007.04.04 : Value Added Courses offered – ratification

The following are the value added courses conducted for the III year students in the academic year 2023-2024.

S. No.	Course Name	Resource Person	Participants	Date
1.	Value Added Course on Deep Learning	Mr.R.Ramachandran, Pantech eLearning Pvt Ltd.,	III ECE – 20 students	31st July 2023 to 05th August 2023
2.	Value Added Course on IoT Application Design using Raspberry Pi and Python	Mr.R.Jegadeswaran, Enthu Technology Solutions India Pvt Ltd.	III ECE – 20 students	31st July 2023 to 05th August 2023
3.	Value Added Course on The Internet of Things using LoRaWAN Technology	Dr. Subramaniam Enthu Technology Solutions India Pvt Ltd.	III ECE – 20 students	31st July 2023 to 05th August 2023

- BoS members approved the Value added courses conducted.

007.05.00: Information about the (Points Discussed in the following)

Item No.	Description	Suggestions / Comments from the BoS Members
007.05.01	Number of students doing Honours/ Honours with Specialization Minors and its respective courses	The HOD Presented the number of students doing Honours/ Honours with specialization/ Minors and its respective courses …. 1. Honors with Specialization degree-Semiconductor Chip Design and Testing-10 2. Honors with Specialization degree-Sensor Technologies and IoT-2 3. Honors degree – 9 4. Minor degree- Computing Technology-13
007.05.02	Student Internship Completion details	The HOD shared the statistical data of the student internship/ Inplant training details for R2020 & R2021 - All the 61 students of IV ECE (R2020) have completed. - All the 60 Students of III ECE (R2021) have completed.
007.05.03	Pass Percentage of students	The HOD Presented the Pass percentage yearwise and course wise for the academic year 2022-2023 (Even). II Year- Pass percentage -76.67% III Year- Pass percentage – 88.53% IV Year- Pass percentage – 100%

007.05.04	Value Added Courses offered/ Planned for the academic year : 2023 – 2024	The HOD Presented the Value added course planned for II year students for the academic year 2023-2024 1. Integrated Full stack web development with IoT Networks 2. IoT Applications using Node MCU and Raspberry Pi 3. Machine Learning using Python
007.05.05	NBA eSAR / status /compliance preparation and its information	The HOD happily shared the NBA eSAR / Status On 09.04.2023 – NBA Compliance audit was held. Received NBA reaccreditation extended for three years (July 2023- July 2026)
007.05.06	Department achievements between 6th and 7th BoS	HoD happily shared the department, student and faculty achievements with the BoS members.

007.06.00 : Any other Item

- Next BoS Meeting is tentatively scheduled on March 2024.

007.07.00 : Vote of Thanks

- The meeting ended with the Vote of Thanks by Dr.S.Nisha Rani, Assistant Professor, Department of Electronics and Communication Engineering, Kamaraj College of Engineering and Technology, Virudhunagar.

6/10/2023

BoS Coordinator

Dr.S.Nisha Rani, AP/ECE

6/10/2023

BoS Chairman

Dr.R.Suresh Babu

HoD / ECE

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06/06/2023

Minutes of 3 Member Committee Meeting

Member 1 - Head of the Department - Dr.R.Suresh Babu

Member 2 – Expert Member – Dr. T. Prathiba

Member 3 - Course Incharge & Chairperson – Mr. S. Alwyn Rajiv

The following points were discussed in the 3 Member Committee meeting held on 06th June 2023.

1. Discussed about the Demo given by Pantech solutions on 7th June 2023.
2. Decided to conduct online pre requirement session to III ECE Students on 28th July 2023.
3. The dates of the course were decided in the meeting as 31/07/2023 & 05/08/2023 (6 days).
4. Discussed to conduct review of project after the completion of the course.
5. Discussed about the venue of value added program.

Course In-charge **Class Chairperson** **HOD/ECE**

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Department of Electronics and Communication Engineering
(Accredited by NBA, New Delhi)

Report on Value Added Course in Deep Learning

Venue: CAD Lab (MTR Department)

Date: 31.07.2023 to 05.08.2023

Department of Electronics and Communication Engineering orgainzed 6 days Value Added Course on **"Deep Learning"** for III ECE students from 31.07.2023 to 05.08.2023. Totally 20 students from III ECE have attended the course. Inaugural function of the value added course was held on 31.07.2023, 9.30 am. Function start with the Tamil Thai Vaalthu. Dr. S. Nisharani, AP/ECE welcomed the gathering., Dr. T. Prathiba, AP/ECE gave the inaugural address with encouragement to attend the course. The session was handed over to the resource person from Pantech eLearning Pvt. Ltd., Chennai. Mr. R. Ramachandiran has handled the seesions during the course.

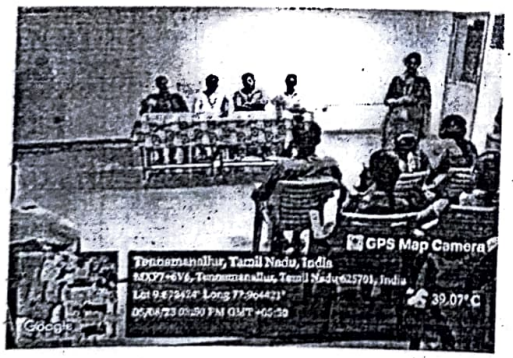
Valedictory function of Value Added course was held on 05.08.2023 at 3.30 pm. Dr. R. Suresh Babu, Professor and Head / ECE proposed the Valedictory address. Online feedback and oral feedback were collected from the students. Dr. S. Nisharani, AP/ECE, proposed the Vote of Thanks. The session ended with National Anthem.

Dr. T. Prathiba, Assistant Professor /ECE, Inaugural Address

Mr. R. Ramachandiran, Trainers, Pantech eLearning, Chennai

Students doing their Project work

Online Proctored Exam



Students Oral Feed Back during Valedictory function

Dr. S. Nishrani, Vote of Thanks

S Alwyn 08/23

VAC Coordinator

Mr. S. Alwyn Rajiv, AP/ECE

HoD/ECE

Dr. R. Suresh Babu

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MARK : 37/60

Director

COLLEGE OF ENGINEERING & TECHNOLOGY

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Department of Electronics and Communication Engineering

Value Added Course on Deep Learning

31/06/2023 to 05/07/2023 (6 Days)

ATTENDANCE

S. No.	Roll Number	Name of the Student	31/07 (FN)	31/07 (AN)	01/08 (FN)	01/08 (AN)	02/08 (FN)	02/08 (AN)	03/08 (FN)	03/08 (AN)	04/08 (FN)	04/08 (AN)	05/08 (FN)	05/08 (AN)
1	21UEC001	PADMA LOKSHANA.M												
2	21UEC002	ABISHEK BABU.R.J												
3	21UEC004	ABHIKSHA.G												
4	21UEC007	SARAVANAKUMAR.V												
5	21UEC008	KAMALI.M												
6	21UEC012	PAVITHRA.M												
7	21UEC015	SWETHA.R.U												
8	21UEC017	DHARMESH KANNAN.V												
9	21UEC018	KEERTHI.G												
10	21UEC026	SRIKANTH.V												
11	21UEC035	RAMPRASATH.R												
12	21UEC037	VISHVA.S												
13	21UEC040	FAIZARASOOL.S												
14	21UEC042	MEENAKSHI.M												
15	21UEC045	VISHAL.M.A												

S. No.	Roll Number	Name of the Student	31/07 (FN)	31/07 (AN)	01/08 (FN)	01/08 (AN)	02/08 (FN)	02/08 (AN)	03/08 (FN)	03/08 (AN)	04/08 (FN)	04/08 (AN)	05/08 (FN)	05/08 (AN)
16	21UEC050	NIVITHA.A.G												
17	21UEC052	MUTHU BHARATHI.P												
18	21UEC054	SHVETHA.M												
19	21UEC055	DIVYA.S					AB	AB						
20	21UEC056	DHIVYA DHARSHINI.A												

Coordinator

HoD/ECE

90 minutes

Value Added Course on "Deep Learning" - External Exam

* Required

* This form will record your name, please fill your name.

1. What is the primary purpose of the "cv2.goodFeaturesToTrack()" method in OpenCV? * (1 Point)

- ◯ Compute the image histogram
- ◯ Perform image thresholding
- ◯ Detect and extract corners from an image
- ◯ Compute the image gradient magnitude

2. What is the purpose of the "cv2.minAreaRect()" method in OpenCV? * (2 Points)

- ◯ Compute the minimum bounding rectangle of an object in an image
- ◯ Detect and extract keypoints in an image
- ◯ Find the minimum enclosing circle of an object in an image
- ◯ Compute the minimum eigenvalue of an image

3. In OpenCV, what does the "cv2.Laplacian()" method do? * (2 Points)

- ◯ Compute the gradient magnitude of an image
- ◯ Apply image thresholding
- ◯ Detect edges in an image
- ◯ Perform image dilation

4. The "cv2.HoughLines()" method in OpenCV is used for: * (2 Points)

- ◯ Detecting and extracting lines from an image
- ◯ Finding contours in an image
- ◯ Performing image segmentation
- ◯ Detecting and extracting circles from an image

5. What is the fundamental building block of a neural network in deep learning? * (1 Point)

- ◯ Feature vector
- ◯ Activation function
- ◯ Linear regression
- ◯ Perceptron

6. Which OpenCV method is used to compute the dense optical flow between two images? * (1 Point)

- ◯ cv2.cornerHarris()
- ◯ cv2.HoughLinesP()
- ◯ cv2.calcOpticalFlowFarneback()
- ◯ cv2.goodFeaturesToTrack()

7. In OpenCV, what is the purpose of the "cv2.HuMoments()" method? * (1 Point)

- ◯ Perform image thresholding
- ◯ Compute the histogram of an image
- ◯ Detect and extract keypoints in an image
- ◯ Compute the Hu moments of an image

8. What is the function of Convolution layer in CNN * (1 Point)

- ◯ Convert the negative value into positive value
- ◯ giving the clear images
- ◯ Create the feature of images
- ◯ Resize the image

9. What is the purpose of the "cv2.SimpleBlobDetector()" in OpenCV? * (2 Points)

- ◯ Detect and extract edges in an image
- ◯ Perform image thresholding
- ◯ Detect and extract keypoints in an image
- ◯ Find contours in an image

10. What is the major work of pixels? * (1 Point)

- ◯ Hiding the image
- ◯ Storing the colour and brightness information
- ◯ Increasing the brightness
- ◯ Merging the image

11. What is the usage of pooling layer * (1 Point)

- ◯ Executing the activation function
- ◯ feature extraction from the image
- ◯ Resize the image
- ◯ storing the previous data

12. Which deep learning architecture is designed to process sequences and time-series data efficiently? * (1 Point)

- ◯ Convolutional Neural Network (CNN)
- ◯ Recurrent Neural Network (RNN)
- ◯ Long Short-Term Memory (LSTM)
- ◯ Transformer

13. What is the purpose of the "ReLU" activation function in deep learning? * (1 Point)

- ◯ Introduce non-linearity to the network
- ◯ Calculate the gradient during backpropagation
- ◯ Improve the numerical stability of the network
- ◯ Normalize the input data

14. Alexa , ok google are example for which type of AI * (1 Point)

- Artificial Strong Intelligence
- Artificial Narrow Intelligence
- Artificial super Intelligence

15. Which Neural network will store the previous data? * (1 Point)

- RNN
- CNN
- GAN
- ANN

16. What is the usage of optimizer * (1 Point)

- reduce the loss and increase the accuracy of output
- increase the loss and increase the accuracy of output
- reduce the loss and decrease the accuracy of output
- increase the loss and decrease the accuracy of output

17. Which OpenCV technique can be used for image rectification and removing distortion caused by camera lenses? * (1 Point)

- ◯ Image stitching
- ◯ Image thresholding
- ◯ Camera calibration
- ◯ Image warping

18. Which neural network will use the pooling layer * (1 Point)

- ◯ LSTM
- ◯ CNN
- ◯ RNN
- ◯ ANN

19. In OpenCV, which method can be used to apply a perspective transformation to an image? * (2 Points)

- ◯ cv2.resize()
- ◯ cv2.warpAffine()
- ◯ cv2.remap()
- ◯ cv2.warpPerspective()

20. In OpenCV, which method is used to perform image blurring and smoothing? * (2 Points)

- ◯ cv2.GaussianBlur()
- ◯ cv2.filter2D()
- ◯ cv2.HoughCircles()
- ◯ cv2.Sobel()

21. What does the "cv2.resize()" method in OpenCV do? * (1 Point)

- ◯ Perform image segmentation
- ◯ Apply image thresholding
- ◯ Compute the histogram of an image
- ◯ Change the size of an image

22. What is the formula for tanh activation function? * (1 Point)

- ◯ f(x) = (2/1+e^-2x)-1
- ◯ f(x) = 1/1-e^-x
- ◯ f(x) = 1/1+e^-x
- ◯ f(x) = 2/1+e^-x

23. In OpenCV, what is the purpose of the "cv2.WARP_INVERSE_MAP" flag in the "cv2.remap()" method? * (2 Points)

- ◯ Reverse the effect of perspective transformation
- ◯ Use inverse warping for image resizing
- ◯ Apply inverse warp to an image
- ◯ Change the mapping order for coordinates

24. What is the output of tanh(x) activation function? * (1 Point)

- ◯ binary value 0 and 1
- ◯ probability based
- ◯ range between 0 to 1
- ◯ range between -1 to1

25. In deep learning, what is the process of updating the model's parameters using the training data to minimize the error called? * (2 Points)

- ◯ Regularization
- ◯ Forward propagation
- ◯ Gradient descent
- ◯ Backpropagation

26. What does the "cv2.calcHist()" method in OpenCV compute? * (2 Points)

- ◯ The color moments of an image
- ◯ The gradient magnitude of an image
- ◯ The integral image of an image
- ◯ The histogram of an image

27. What is the formula for sigmoid or logistic activation function * (1 Point)

- ◯ f(x) = 1/1-e^-x
- ◯ f(x) = 2/1+e^-x
- ◯ f(x) = (2/1+e^-2x)-1
- ◯ f(x) = 1/1+e^-x

28. What is the primary purpose of the "cv2.findHomography()" method in OpenCV? * (2 Points)

- ◯ Compute the fundamental matrix for stereo vision
- ◯ Find the homography between keypoints in two images
- ◯ Compute the homography matrix for image registration
- ◯ Perform image thresholding

29. Which OpenCV method is used for image inpainting? * (1 Point)

- cv2.warpPerspective()
- cv2.inpaint()
- cv2.filter2D()
- cv2.dilate()

30. Which OpenCV method is used for detecting and extracting circles from an image? * (1 Point)

- cv2.GaussianBlur()
- cv2.SIFT()
- cv2.HoughLines()
- cv2.HoughCircles()

31. What is the usage of Steganography? * (1 Point)

- Merging the original image and hidden image
- Filtering the original image and hidden image
- Hidding the original image and hidden image
- Separating the hidden image and original image

32. Which term is used to describe the difference between the predicted output and the actual target value in supervised learning? * (1 Point)

- ◯ Cost function
- ◯ Loss function
- ◯ Gradient function
- ◯ Activation function

33. What type of input will be feed into the RNN Network * (1 Point)

- ◯ Input from image
- ◯ Input as Time Series of data
- ◯ Input from video
- ◯ Input from audio

34. What is the another name of Artificial neuron * (1 Point)

- ◯ Axon
- ◯ neural network
- ◯ neuron
- ◯ perceptron

35. The "cv2.meanShift()" method in OpenCV is used for: * (2 Points)

- ◯ Image thresholding
- ◯ Image segmentation
- ◯ Image registration
- ◯ Image feature extraction

36. The "cv2.ORB()" method in OpenCV is used for: * (2 Points)

- ◯ Feature detection and description
- ◯ Image morphological operations
- ◯ Image thresholding
- ◯ Image rotation

37. The "cv2.cvtColor()" method in OpenCV is used to: * (1 Point)

- ◯ Apply image blur
- ◯ Change the image brightness
- ◯ Convert images to grayscale
- ◯ Convert images to a different color space

38. In OpenCV, which method is used to calculate the integral image of an image? * (1 Point)

- ◯ cv2.cornerHarris()
- ◯ cv2.GaussianBlur()
- ◯ cv2.integral()
- ◯ cv2.Canny()

39. The "cv2.drawMatches()" method in OpenCV is used for: * (1 Point)

- ◯ Edge detection
- ◯ Drawing contours on an image
- ◯ Image blending
- ◯ Feature matching visualization

40. Which OpenCV method is used for feature matching between two images? * (2 Points)

- ◯ cv2.SIFT()
- ◯ cv2.matchTemplate()
- ◯ cv2.findHomography()
- ◯ cv2.drawMatches()

41. Which OpenCV technique is commonly used for image registration and aligning two images together? * (1 Point)

- ◯ Image blending
- ◯ Image histogram matching
- ◯ Image thresholding
- ◯ Image warping

42. Which OpenCV method is commonly used for real-time object detection using a pre-trained deep learning model? * (2 Points)

- ◯ cv2.goodFeaturesToTrack()
- ◯ cv2.cornerHarris()
- ◯ cv2.matchTemplate()
- ◯ cv2.dnn.blobFromImage()

43. What is the input of activation function? * (1 Point)

- ◯ giving the value of bias
- ◯ input of the raw data
- ◯ output of the summation function
- ◯ giving the value of weights

44. The "cv2.SURF()" method in OpenCV is used for: * (2 Points)

- ◯ Image feature detection and description
- ◯ Image thresholding
- ◯ Image smoothing
- ◯ Image rotation

45. What is the usage of image enhancement? * (1 Point)

- ◯ Pixel manipulation
- ◯ Increasing image quality
- ◯ Image restoration
- ◯ Image blurring

Value Added Course on "Deep Learning" - External Exam

20	35.2	35:06	Closed
Responses	Average Score	Average time to complete	Status

1. What is the fundamental building block of a neural network in deep learning? (1 point)
25% of respondents (5 of 20) answered this question correctly.

Perceptron	5	✓
Feature vector	1	
Activation function	13	
Linear regression	1	

2. In deep learning, what is the process of updating the model's parameters using the training data to minimize the error called? (2 points)
30% of respondents (6 of 20) answered this question correctly.

Forward propagation	4	
Gradient descent	6	✓
Backpropagation	9	
Regularization	1	

3. Which term is used to describe the difference between the predicted output and the actual target value in supervised learning? (1 point)

20% of respondents (4 of 20) answered this question correctly.

Cost function	1	
Activation function	13	
Loss function	4	✓
Gradient function	2	

4. Which deep learning architecture is designed to process sequences and time-series data efficiently? (1 point)

45% of respondents (9 of 20) answered this question correctly.

Convolutional Neural Network (...	7	
Recurrent Neural Network (RNN)	9	✓
Transformer	1	
Long Short-Term Memory (LSTM)	3	

5. What is the purpose of the "ReLU" activation function in deep learning? (1 point)

45% of respondents (9 of 20) answered this question correctly.

Normalize the input data	4	
Introduce non-linearity to the n...	9	✓
Improve the numerical stability ...	2	
Calculate the gradient during ba...	5	

6. In OpenCV, which method is used to perform image blurring and smoothing? (2 points)

75% of respondents (15 of 20) answered this question correctly.

cv2.filter2D()	3	
cv2.GaussianBlur()	15	✓
cv2.Sobel()	2	
cv2.HoughCircles()	0	

7. The "cv2.HoughLines()" method in OpenCV is used for: (2 points)

80% of respondents (16 of 20) answered this question correctly.

Detecting and extracting lines fr...	16	✓
Performing image segmentation	1	
Finding contours in an image	1	
Detecting and extracting circles ...	2	

8. What does the "cv2.calcHist()" method in OpenCV compute? (2 points)

80% of respondents (16 of 20) answered this question correctly.

The gradient magnitude of an i...	3	
The histogram of an image	16	✓
The integral image of an image	1	
The color moments of an image	0	

9. In OpenCV, what is the purpose of the "cv2.WARP_INVERSE_MAP" flag in the "cv2.remap()" method? (2 points)

15% of respondents (3 of 20) answered this question correctly.

Apply inverse warp to an image	6	
Change the mapping order for c...	3	✓
Reverse the effect of perspectiv...	3	
Use inverse warping for image r...	8	

10. Which OpenCV method is used for feature matching between two images? (2 points)

25% of respondents (5 of 20) answered this question correctly.

cv2.SIFT()	2	
cv2.matchTemplate()	5	✓
cv2.drawMatches()	10	
cv2.findHomography()	3	

11. The "cv2.ORB()" method in OpenCV is used for: (2 points)

35% of respondents (7 of 20) answered this question correctly.

Image thresholding	1	
Feature detection and description	7	✓
Image rotation	0	
Image morphological operations	12	

12. What is the purpose of the "cv2.SimpleBlobDetector()" in OpenCV? (2 points)

35% of respondents (7 of 20) answered this question correctly.

Detect and extract keypoints in ...	7	✓
Detect and extract edges in an i...	4	
Perform image thresholding	2	
Find contours in an image	7	

13. Which OpenCV technique is commonly used for image registration and aligning two images together? (1 point)

15% of respondents (3 of 20) answered this question correctly.

Image blending	3	✓
Image warping	9	
Image thresholding	4	
Image histogram matching	4	

14. In OpenCV, what does the "cv2.Laplacian()" method do? (2 points)

55% of respondents (11 of 20) answered this question correctly.

Compute the gradient magnitu...	5	
Detect edges in an image	11	✓
Apply image thresholding	0	
Perform image dilation	4	

15. The "cv2.meanShift()" method in OpenCV is used for: (2 points)

55% of respondents (11 of 20) answered this question correctly.

Image thresholding	0	
Image segmentation	11	✓
Image registration	3	
Image feature extraction	6	

16. Which OpenCV method is used to compute the dense optical flow between two images? (1 point)

80% of respondents (16 of 20) answered this question correctly.

cv2.goodFeaturesToTrack()	1	
cv2.HoughLinesP()	0	
cv2.calcOpticalFlowFarneback()	16	✓
cv2.cornerHarris()	3	

17. What is the purpose of the "cv2.minAreaRect()" method in OpenCV? (2 points)

85% of respondents (17 of 20) answered this question correctly.

Find the minimum enclosing cir...	2	
Compute the minimum boundin...	17	✓
Detect and extract keypoints in ...	1	
Compute the minimum eigenval...	0	

18. In OpenCV, which method can be used to apply a perspective transformation to an image? (2 points)

95% of respondents (19 of 20) answered this question correctly.

cv2.warpAffine()	0	
cv2.warpPerspective()	19	✓
cv2.remap()	1	
cv2.resize()	0	

19. What is the primary purpose of the "cv2.findHomography()" method in OpenCV? (2 points)

60% of respondents (12 of 20) answered this question correctly.

Compute the homography matr...	8	
Find the homography between ...	12	✓
Perform image thresholding	0	
Compute the fundamental matri...	0	

20. Which OpenCV method is commonly used for real-time object detection using a pre-trained deep learning model? (2 points)

45% of respondents (9 of 20) answered this question correctly.

cv2.goodFeaturesToTrack()	2	
cv2.matchTemplate()	7	
cv2.dnn.blobFromImage()	9	✓
cv2.cornerHarris()	2	

21. The "cv2.SURF()" method in OpenCV is used for: (2 points)

55% of respondents (11 of 20) answered this question correctly.

Image thresholding	1	
Image feature detection and de...	11	✓
Image rotation	1	
Image smoothing	7	

22. What does the "cv2.resize()" method in OpenCV do? (1 point)

95% of respondents (19 of 20) answered this question correctly.

Apply image thresholding	1	
Perform image segmentation	0	
Change the size of an image	19	✓
Compute the histogram of an i...	0	

23. Which OpenCV method is used for detecting and extracting circles from an image? (1 point)

85% of respondents (17 of 20) answered this question correctly.

cv2.HoughLines()	1	
cv2.SIFT()	1	
cv2.GaussianBlur()	1	
cv2.HoughCircles()	17	✓

24. In OpenCV, what is the purpose of the "cv2.HuMoments()" method? (1 point)

65% of respondents (13 of 20) answered this question correctly.

Compute the Hu moments of a...	13	✓
Detect and extract keypoints in ...	3	
Compute the histogram of an i...	2	
Perform image thresholding	2	

25. The "cv2.drawMatches()" method in OpenCV is used for: (1 point)

55% of respondents (11 of 20) answered this question correctly.

Feature matching visualization	11	✓
Drawing contours on an image	7	
Image blending	0	
Edge detection	2	

26. Which OpenCV method is used for image inpainting? (1 point)

80% of respondents (16 of 20) answered this question correctly.

cv2.filter2D()	1	
cv2.inpaint()	16	✓
cv2.warpPerspective()	0	
cv2.dilate()	3	

27. What is the primary purpose of the "cv2.goodFeaturesToTrack()" method in OpenCV? (1 point)

50% of respondents (10 of 20) answered this question correctly.

Compute the image gradient m...	7	
Detect and extract corners from ...	10	✓
Perform image thresholding	2	
Compute the image histogram	1	

28. In OpenCV, which method is used to calculate the integral image of an image? (1 point)

75% of respondents (15 of 20) answered this question correctly.

cv2.integral()	15	✓
cv2.cornerHarris()	1	
cv2.GaussianBlur()	2	
cv2.Canny()	2	

29. Which OpenCV technique can be used for image rectification and removing distortion caused by camera lenses? (1 point)

50% of respondents (10 of 20) answered this question correctly.

Image stitching	0	
Camera calibration	10	✓
Image warping	6	
Image thresholding	4	

30. The "cv2.cvtColor()" method in OpenCV is used to: (1 point)

85% of respondents (17 of 20) answered this question correctly.

Convert images to grayscale	3	
Convert images to a different co...	17	✓
Change the image brightness	0	
Apply image blur	0	

31. What is the usage of Steganography? (1 point)

50% of respondents (10 of 20) answered this question correctly.

Separating the hidden image an...	2	
Merging the original image and ...	7	
Filtering the original image and ...	1	
Hidding the original image and ...	10	✓

32. What is the formula for sigmoid or logistic activation function (1 point)

80% of respondents (16 of 20) answered this question correctly.

f(x) = 1/1+e^-x	16	✓
f(x) = (2/1+e^-2x)-1	2	
f(x) = 1/1-e^-x	0	
f(x) = 2/1+e^-x	2	

33. What is the usage of image enhancement? (1 point)

75% of respondents (15 of 20) answered this question correctly.

Image blurring	1	
Image restoration	0	
Increasing image quality	15	✓
Pixel manipulation	4	

34. What is the output of tanh(x) activation function? (1 point)

55% of respondents (11 of 20) answered this question correctly.

range between 0 to 1	8	
binary value 0 and 1	0	
probability based	1	
range between -1 to1	11	✓

35. Which Neural network will store the previous data? (1 point)

85% of respondents (17 of 20) answered this question correctly.

GAN	0	
CNN	2	
RNN	17	✓
ANN	1	

36. What is the another name of Artificial neuron (1 point)

55% of respondents (11 of 20) answered this question correctly.

perceptron	11	✓
neuron	0	
neural network	7	
Axon	2	

37. Alexa , ok google are example for which type of AI (1 point)

75% of respondents (15 of 20) answered this question correctly.

Artificial Narrow Intelligence	15	✓
Artificial Strong Intelligence	3	
Artificial super Intelligence	2	

38. What is the major work of pixels? (1 point)

95% of respondents (19 of 20) answered this question correctly.

Hiding the image	1	
Merging the image	0	
Storing the colour and brightne...	19	✓
Increasing the brightness	0	

39. Which neural network will use the pooling layer (1 point)

45% of respondents (9 of 20) answered this question correctly.

ANN	3	
LSTM	0	
RNN	8	
CNN	9	✓

40. What is the usage of pooling layer (1 point)

50% of respondents (10 of 20) answered this question correctly.

Resize the image	10	✓
feature extraction from the image	3	
storing the previous data	6	
Executing the activation function	1	

41. What is the formula for tanh activation function? (1 point)

35% of respondents (7 of 20) answered this question correctly.

f(x) = 1/1+e^-x	8	
f(x) = (2/1+e^-2x)-1	7	✓
f(x) = 1/1-e^-x	2	
f(x) = 2/1+e^-x	3	

42. What type of input will be feed into the RNN Network (1 point)

65% of respondents (13 of 20) answered this question correctly.

Input from image	0	
Input from video	6	
Input from audio	1	
Input as Time Series of data	13	✓

43. What is the usage of optimizer (1 point)

90% of respondents (18 of 20) answered this question correctly.

reduce the loss and increase the...	18	✓
increase the loss and decrease t...	0	
reduce the loss and decrease th...	1	
increase the loss and increase t...	1	

44. What is the function of Convolution layer in CNN (1 point)

75% of respondents (15 of 20) answered this question correctly.

Convert the negative value into ...	3	
Resize the image	0	
Create the feature of images	15	✓
giving the clear images	2	

45. What is the input of activation function? (1 point)

70% of respondents (14 of 20) answered this question correctly.

input of the raw data	1	
output of the summation function	14	✓
giving the value of bias	2	
giving the value of weights	3	

Review: Value Added Course on "Deep Learning" - External Exam

Respondent		Time to complete	Points
3	MUTHU BHARATHI.P	30:57	41/60

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

1. What is the fundamental building block of a neural network in deep learning? *

- ○ Perceptron ✓
- ○ Feature vector
- ◉ Activation function
- ○ Linear regression

✕ **Incorrect** 0/2 Points

0 / 2 pts
Auto-graded

2. In deep learning, what is the process of updating the model's parameters using the training data to minimize the error called? *

- ○ Forward propagation
- ○ Gradient descent ✓
- ◉ Backpropagation
- ○ Regularization

✕ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

3. Which term is used to describe the difference between the predicted output and the actual target value in supervised learning? *

- ○ Cost function
- ○ Activation function
- ○ Loss function ✓
- ◉ Gradient function

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

4. Which deep learning architecture is designed to process sequences and time-series data efficiently? *

- ○ Convolutional Neural Network (CNN)
- ○ Recurrent Neural Network (RNN) ✓
- ○ Transformer
- ◉ Long Short-Term Memory (LSTM)

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

5. What is the purpose of the "ReLU" activation function in deep learning? *

- ○ Normalize the input data
- ○ Introduce non-linearity to the network ✓
- ○ Improve the numerical stability of the network
- ◉ Calculate the gradient during backpropagation

✓ **Correct** 2/2 Points

2 / 2 pts
Auto-graded

6. In OpenCV, which method is used to perform image blurring and smoothing? *

- ○ cv2.filter2D()
- ◉ cv2.GaussianBlur() ✓
- ○ cv2.Sobel()
- ○ cv2.HoughCircles()

✓ **Correct** 2/2 Points

2 / 2 pts
Auto-graded

7. The "cv2.HoughLines()" method in OpenCV is used for: *

- ◉ Detecting and extracting lines from an image ✓
- ○ Performing image segmentation
- ○ Finding contours in an image
- ○ Detecting and extracting circles from an image

✓ **Correct** 2/2 Points

2 / 2 pts
Auto-graded

8. What does the "cv2.calcHist()" method in OpenCV compute? *

- ○ The gradient magnitude of an image
- ◉ The histogram of an image ✓
- ○ The integral image of an image
- ○ The color moments of an image

✗ **Incorrect** 0/2 Points

0 / 2 pts
Auto-graded

9. In OpenCV, what is the purpose of the "cv2.WARP_INVERSE_MAP" flag in the "cv2.remap()" method? *

- ○ Apply inverse warp to an image
- ○ Change the mapping order for coordinates ✓
- ◉ Reverse the effect of perspective transformation
- ○ Use inverse warping for image resizing

✗ **Incorrect** 0/2 Points

0 / 2 pts
Auto-graded

10. Which OpenCV method is used for feature matching between two images? *

- ◉ cv2.SIFT()
- ○ cv2.matchTemplate() ✓
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✓ **Correct** 2/2 Points

2 / 2 pts
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0 / 1 pt
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0 / 1 pt
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1 / 1 pt
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Review: Value Added Course on "Deep Learning" - External Exam

Respondent		Time to complete	Points
20	DIVYA.S	46:05	29/60

✗ **Incorrect** 0/1 Points

0 / 1 pt
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18	SWETHA.R.U	42:50	43/60

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Auto-graded

15. The "cv2.meanShift()" method in OpenCV is used for: *

- ○ Image thresholding
- ◉ Image segmentation ✓
- ○ Image registration
- ○ Image feature extraction

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

16. Which OpenCV method is used to compute the dense optical flow between two images? *

- cv2.goodFeaturesToTrack()
- cv2.HoughLinesP()
- cv2.calcOpticalFlowFarneback() ✓
- cv2.cornerHarris()

✓ **Correct** 2/2 Points

2 / 2 pts
Auto-graded

17. What is the purpose of the "cv2.minAreaRect()" method in OpenCV? *

- Find the minimum enclosing circle of an object in an image
- Compute the minimum bounding rectangle of an object in an image ✓
- Detect and extract keypoints in an image
- Compute the minimum eigenvalue of an image

✓ **Correct** 2/2 Points

2 / 2 pts
Auto-graded

18. In OpenCV, which method can be used to apply a perspective transformation to an image? *

- cv2.warpAffine()
- cv2.warpPerspective() ✓
- cv2.remap()
- cv2.resize()

✓ **Correct** 2/2 Points

2 / 2 pts
Auto-graded

19. What is the primary purpose of the "cv2.findHomography()" method in OpenCV? *

- Compute the homography matrix for image registration
- Find the homography between keypoints in two images ✓
- Perform image thresholding
- Compute the fundamental matrix for stereo vision

✓ **Correct** 2/2 Points

2 / 2 pts
Auto-graded

20. Which OpenCV method is commonly used for real-time object detection using a pre-trained deep learning model? *

- cv2.goodFeaturesToTrack()
- cv2.matchTemplate()
- cv2.dnn.blobFromImage() ✓
- cv2.cornerHarris()

✓ **Correct** 2/2 Points

2 / 2 pts
Auto-graded

21. The "cv2.SURF()" method in OpenCV is used for: *

- Image thresholding
- Image feature detection and description ✓
- Image rotation
- Image smoothing

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

22. What does the "cv2.resize()" method in OpenCV do? *

- Apply image thresholding
- Perform image segmentation
- Change the size of an image ✓
- Compute the histogram of an image

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

23. Which OpenCV method is used for detecting and extracting circles from an image? *

- cv2.HoughLines()
- cv2.SIFT()
- cv2.GaussianBlur()
- cv2.HoughCircles() ✓

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

24. In OpenCV, what is the purpose of the "cv2.HuMoments()" method? *

- ○ Compute the Hu moments of an image ✓
- ○ Detect and extract keypoints in an image
- ○ Compute the histogram of an image
- ◉ Perform image thresholding

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

25. The "cv2.drawMatches()" method in OpenCV is used for: *

- ◉ Feature matching visualization ✓
- ○ Drawing contours on an image
- ○ Image blending
- ○ Edge detection

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

26. Which OpenCV method is used for image inpainting? *

- ○ cv2.filter2D()
- ◉ cv2.inpaint() ✓
- ○ cv2.warpPerspective()
- ○ cv2.dilate()

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

27. What is the primary purpose of the "cv2.goodFeaturesToTrack()" method in OpenCV? *

- ○ Compute the image gradient magnitude
- ◉ Detect and extract corners from an image ✓
- ○ Perform image thresholding
- ○ Compute the image histogram

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

28. In OpenCV, which method is used to calculate the integral image of an image? *

- (●) cv2.integral() ✓
- ( ) cv2.cornerHarris()
- ( ) cv2.GaussianBlur()
- ( ) cv2.Canny()

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

29. Which OpenCV technique can be used for image rectification and removing distortion caused by camera lenses? *

- ( ) Image stitching
- (●) Camera calibration ✓
- ( ) Image warping
- ( ) Image thresholding

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

30. The "cv2.cvtColor()" method in OpenCV is used to: *

- ( ) Convert images to grayscale
- (●) Convert images to a different color space ✓
- ( ) Change the image brightness
- ( ) Apply image blur

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

31. What is the usage of Steganography? *

- ( ) Separating the hidden image and original image
- ( ) Merging the original image and hidden image
- ( ) Filtering the original image and hidden image
- (●) Hidding the original image and hidden image ✓

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

32. What is the formula for sigmoid or logistic activation function *

- (●) f(x) = 1/1+e^-x ✓
- ( ) f(x) = (2/1+e^-2x)-1
- ( ) f(x) = 1/1-e^-x
- ( ) f(x) = 2/1+e^-x

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

33. What is the usage of image enhancement? *

- ( ) Image blurring
- ( ) Image restoration
- (●) Increasing image quality ✓
- ( ) Pixel manipulation

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

34. What is the output of tanh(x) activation function? *

- (●) range between 0 to 1
- ( ) binary value 0 and 1
- ( ) probability based
- ( ) range between -1 to1 ✓

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

35. Which Neural network will store the previous data? *

- ( ) GAN
- ( ) CNN
- (●) RNN ✓
- ( ) ANN

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

36. What is the another name of Artificial neuron *

- (●) perceptron ✓
- ( ) neuron
- ( ) neural network
- ( ) Axon

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

37. Alexa , ok google are example for which type of AI *

- ( ) Artificial Narrow Intelligence ✓
- (●) Artificial Strong Intelligence
- ( ) Artificial super Intelligence

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

38. What is the major work of pixels? *

- ( ) Hiding the image
- ( ) Merging the image
- (●) Storing the colour and brightness information ✓
- ( ) Increasing the brightness

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

39. Which neural network will use the pooling layer *

- ( ) ANN
- ( ) LSTM
- (●) RNN
- ( ) CNN ✓

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

40. What is the usage of pooling layer *

- ○ Resize the image ✓
- ○ feature extraction from the image
- ◉ storing the previous data
- ○ Executing the activation function

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

41. What is the formula for tanh activation function? *

- ○ f(x) = 1/1+e^-x
- ○ f(x) = (2/1+e^-2x)-1 ✓
- ○ f(x) = 1/1-e^-x
- ◉ f(x) = 2/1+e^-x

✗ **Incorrect** 0/1 Points

0 / 1 pt
Auto-graded

42. What type of input will be feed into the RNN Network *

- ○ Input from image
- ◉ Input from video
- ○ Input from audio
- ○ Input as Time Series of data ✓

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

43. What is the usage of optimizer *

- ◉ reduce the loss and increase the accuracy of output ✓
- ○ increase the loss and decrease the accuracy of output
- ○ reduce the loss and decrease the accuracy of output
- ○ increase the loss and increase the accuracy of output

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

44. What is the function of Convolution layer in CNN *

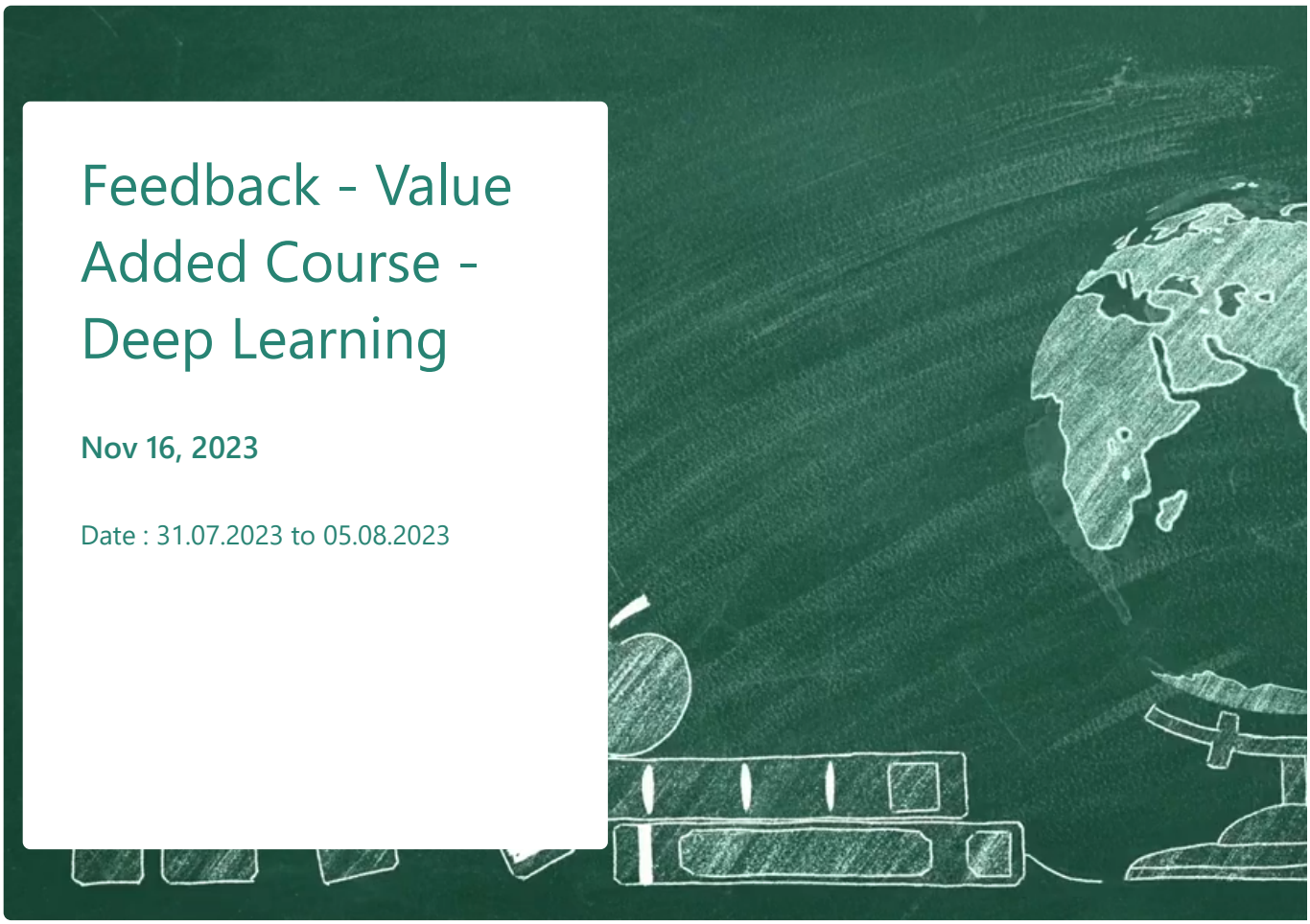
- ○ Convert the negative value into positive value
- ○ Resize the image
- ◉ Create the feature of images ✓
- ○ giving the clear images

✓ **Correct** 1/1 Points

1 / 1 pt
Auto-graded

45. What is the input of activation function? *

- ○ input of the raw data
- ◉ output of the summation function ✓
- ○ giving the value of bias
- ○ giving the value of weights



Feedback - Value Added Course - Deep Learning

Nov 16, 2023

Date : 31.07.2023 to 05.08.2023

* Required

* This form will record your name, please fill your name.

1. Whether objectives of the Value Added Course Met? *

- ◯ Completely agree
- ◯ Strongly agree
- ◯ Agree
- ◯ Partly Agree
- ◯ Disagree

2. Was the Program sequence well planned? *

- ◯ Completely agree
- ◯ Strongly agree
- ◯ Agree
- ◯ Partly Agree
- ◯ Disagree

3. Were the lectures clear and easy to understand? *

- ◯ Completely Agree
- ◯ Option 2
- ◯ Strongly Agree
- ◯ Agree
- ◯ Partly Agree
- ◯ Disagree

4. Was the instructor encouraged in the interaction? *

- ◯ Completely Agree
- ◯ Strongly Agree
- ◯ Agree
- ◯ Partly Agree
- ◯ Disagree

5. Whether the information presented at this event was highly beneficial. *

- ◯ Completely Agree
- ◯ Strongly Agree
- ◯ Agree
- ◯ Partly Agree
- ◯ Disagree

6. Whether the handson given in the value added course was Good *

- ◯ Completely Agree
- ◯ Strongly Agree
- ◯ Agree
- ◯ Partly Agree
- ◯ Disagree

7. Comments / Suggestions *

Feedback - Value Added Course - Deep Learning

20	03:27	Active
Responses	Average time to complete	Status

1. Whether objectives of the Value Added Course Met? (0 point)

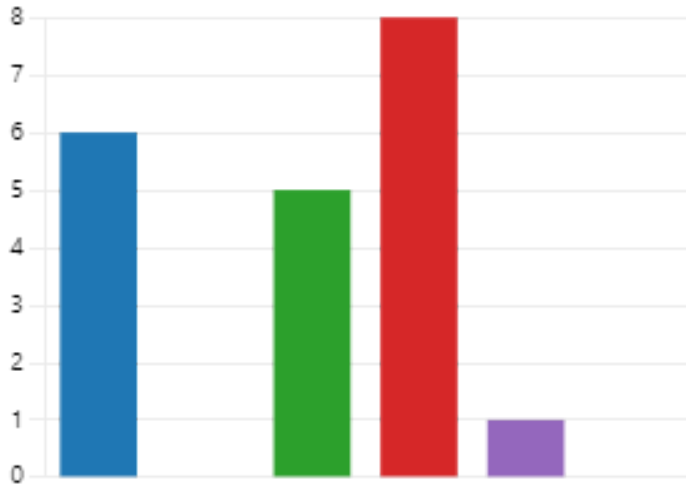
Completely agree	7
Strongly agree	5
Agree	6
Partly Agree	2
Disagree	0

2. Was the Program sequence well planned? (0 point)

Completely agree	7
Strongly agree	5
Agree	8
Partly Agree	0
Disagree	0

3. Were the lectures clear and easy to understand? (0 point)

Completely Agree	6
Option 2	0
Strongly Agree	5
Agree	8
Partly Agree	1
Disagree	0



4. Was the instructor encouraged in the interaction? (0 point)

Completely Agree	7
Strongly Agree	6
Agree	7
Partly Agree	0
Disagree	0

5. Whether the information presented at this event was highly beneficial. (0 point)

Completely Agree	5
Strongly Agree	5
Agree	8
Partly Agree	2
Disagree	0

6. Whether the handson given in the value added course was Good (0 point)

Completely Agree	6
Strongly Agree	4
Agree	8
Partly Agree	1
Disagree	1

7. Comments / Suggestions (0 point)

19
Responses

Latest Responses

"good"

"Excellent "

"Good session "

Update

6 respondents (**30**%) answered **good** for this question.

Review: Feedback - Value Added Course - Deep Learning

Respondent

1 MUTHU BHARATHI.P

01:23
Time to complete

1. Whether objectives of the Value Added Course Met? * Score / 0 pts

- ( ) Completely agree
- (•) Strongly agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

2. Was the Program sequence well planned? * Score / 0 pts

- ( ) Completely agree
- (•) Strongly agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

3. Were the lectures clear and easy to understand? * Score / 0 pts

- ( ) Completely Agree
- ( ) Option 2
- (•) Strongly Agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

4. Was the instructor encouraged in the interaction? * Score / 0 pts

- (●) Completely Agree
- ( ) Strongly Agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

5. Whether the information presented at this event was highly beneficial. * Score / 0 pts

- ( ) Completely Agree
- (●) Strongly Agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

6. Whether the handson given in the value added course was Good * Score / 0 pts

- ( ) Completely Agree
- (●) Strongly Agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

7. Comments / Suggestions * Score / 0 pts

it was totally new to learn

Review: Feedback - Value Added Course - Deep Learning

Respondent

5 FAIZARASOOL.S

00:28
Time to complete

1. Whether objectives of the Value Added Course Met? * Score / 0 pts

- (●) Completely agree
- ( ) Strongly agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

2. Was the Program sequence well planned? * Score / 0 pts

- (●) Completely agree
- ( ) Strongly agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

3. Were the lectures clear and easy to understand? * Score / 0 pts

- (●) Completely Agree
- ( ) Option 2
- ( ) Strongly Agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

4. Was the instructor encouraged in the interaction? * Score / 0 pts

- (●) Completely Agree
- ( ) Strongly Agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

5. Whether the information presented at this event was highly beneficial. * Score / 0 pts

- (●) Completely Agree
- ( ) Strongly Agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

6. Whether the handson given in the value added course was Good * Score / 0 pts

- (●) Completely Agree
- ( ) Strongly Agree
- ( ) Agree
- ( ) Partly Agree
- ( ) Disagree

7. Comments / Suggestions * Score / 0 pts

Great experience

KAMARAJ
COLLEGE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institution - Affiliated to Anna University, Chennai)
S.P.G. Chidambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K. Vellakulam - 625 701, (Near Virudhunagar), Madurai District.

Submitted to the SECRETARY for approval through the PRINCIPAL

ECE

Date 09/06/2023

Item No
S. No 4

Approval may please be granted for Conducting lue added Course for III year ECE Students for e Strength of 20 Students in "Deep Learning" y Pantech e Learning Pvt. Ltd, Chennai. The tentative date is from 11/07/2023 to 15/07/2023 & 17/07/2023

Kindly request you to provide hospitality for the resource persons during the Value added Course

Enclosed :- 1. Quotation for Value added Course - Registration Per Student Rs. 2500/-

S Alwyn 9/6/23
Signature of Faculty
[S Alwyn Prov.

HOD 9/6/23

PRINCIPAL 9/6/23

OFFICE USE

Value Added Course Exp.

1) Account Head
2) Budget allotted
3) Amount committed / Spent sofar
4) Balance available

OM

Treasurer

Secretary

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S.P.G.Chidambara Nadar - C.Nagammal Campus
S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

KAMARAJ/AO/2023-24/ 27-07-2023

CIRCULAR

Department of Electronics and Communication Engineering of Kamaraj College of Engineering and Technology organizes 6 days Value Added course for III ECE students from **31.07.2023 to 05.08.2023**. The details of course are given below

Name of Value Added Course	Conducted by	Venue
Deep Learning	Pantech eLearning Pvt. Ltd., Chennai	CAD Lab (MTRE Dept.)

PRINCIPAL

Copy to:

1. To be read in III year ECE Dept. Class Rooms
2. Circulated to all the ECE Dept. Teaching Staff Members through their Mail ID
3. Dean (Academics)
4. Superintendent / Administrative Office
5. HoD / ECE
6. File

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S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

Department of Electronics and Communication Engineering

Value Added Course on Deep Learning

Video and Oral Feedback Link

ttps://kcetvnrorg-
w.sharepoint.com/:f:/g/personal/alwynece_kamarajengg_edu_in/ElU_Tlik
SCBOi3ZaTgder1IBcsnh2lTVzd6yGC4ydpLfYA?e=96nWRa

20/11/23

Coordinator

20/11/23

HoD/ECE

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S.P.G.C. Nagar, K.Vellakulam – 625 701 (Near VIRUDHUNAGAR).

Department of Electronics and Communication Engineering

VALUE ADDED COURSE ON

"Internet of Things Using LoRaWAN Technology"
"IoT Application Design using Raspberry Pi and Python"
AND
" Deep Learning"

Resource Persons:
Dr. K. Subramanian, Enthu Technology Solution India Pvt. Ltd., Coimbatore
Mr. Jegadeswaran R, Enthu Technology Solution India Pvt. Ltd., Coimbatore
Mr. Ramachandiran R**,** Pantech eLearning Private Ltd., Chennai

----------**Inaugural Function**----------

Date: 31-07-2023 Time: 9.15 AM

Venue: CSE Conference Hall 1 (Ground Floor – D Block)

Welcome Address : Dr. T. Prathiba, Assistant Professor / ECE

Inaugural Address : Dr. R. Suresh Babu,
Professor & Head / ECE, Dean Academic (Courses)
Kamaraj College of Engineering and Technology.

Felicitation : Dr. S. Senthil
Principal
Kamaraj College of Engineering and Technology.

----------Valedictory Function----------

Date: 05-08-2023 Time: 3.00 PM

Venue: CSE Conference Hall 1 (Ground Floor – D Block)

Valedictory Address : Dr. R. Suresh Babu, Professor & Head / ECE

Vote of Thanks : Dr. S. Nisha Rani, Assistant Professor / ECE

Pantech eLearning Pvt Ltd

II Floor, Kotta Srinivasiah Charities Building, Thanjavur St
Near Duraisamy Subway, T.Nagar
Chennai Tamil Nadu 600017
India
GSTIN 33AALCP7900L1Z5

TAX INVOICE

#	**: INV-000040**	Place Of Supply	**: Tamil Nadu (33)**
Invoice Date	**: 09/08/2023**		
Terms	**: Due on Receipt**		
Due Date	**: 09/08/2023**		

Bill To

Kamaraj College of Engineering and Technology
SPGC Nagar, K Vellakulam
Madurai
Tamil
India

#	Item & Description	HSN /SAC	Qty	Rate	CGST		SGST		Amount
					%	Amt	%	Amt	
1	Value Added Course on Deep Learning	999924	20.00	2,120.00	9%	3,816.00	9%	3,816.00	42,400.00

Total In Words
Indian Rupee Fifty Thousand Only

Thanks for your business.

Please make the payment to the following Bank Address.

Bank Account Details:
Pantech eLearning Private Limited.,
Account No: 777705141464
Account Type: Current Account
Bank: ICICI Bank
Branch: T.Nagar, Chennai
IFSC Code: ICIC0006026

Sub Total	42,400.00
CGST9 (9%)	3,816.00
SGST9 (9%)	3,816.00
Advance Received	(-) 32.00
Total	**₹50,000.00**
Balance Due	**₹50,000.00**

Authorized Signature

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FACE RECOGNITION USING DEEP LEARNING IN OPEN CV

DONE BY

MUTHU BHARATHI.P(21UEC052)

ABISHEK BABU.R.J(21UEC002)

AGENDA:

1)ABSTRACT

2)INTRODUCTION

3)BLOCK DIAGRAM

4)TECHNOLOGY USED

5)RESULTS AND DISCUSSION

ABSTRACT:

The " Face Recognition with OpenCV and Flask" is an application designed to automate and modernize traditional face detection management in corporate environments. Leveraging the power of computer vision and web technologies, this system offers a more efficient and accurate way to record and manage attendance.

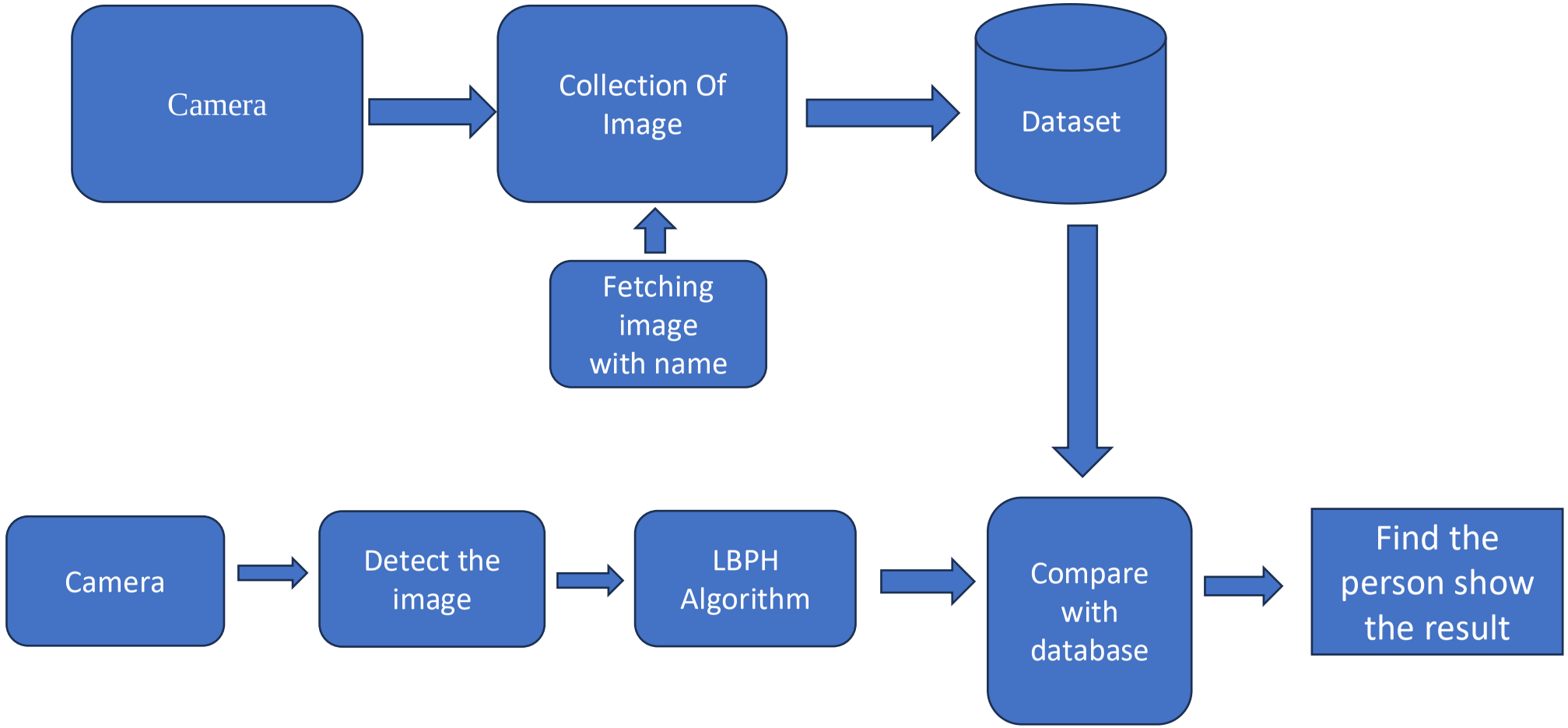
INTRODUCTION:

The objective of face recognition is, from the incoming image, to find a series of data of the same face in a set of training images in a database. The great difficulty is ensuring that this process is carried out in real-time, something that is not available to all biometric facial recognition software providers.

Deep Learning and OpenCV (Open Source Computer Vision Library) are two fundamental pillars of modern computer vision and image processing. Together, they have revolutionized the way we perceive, analyse and manipulate visual data.

Deep Learning algorithms are designed to automatically learn and represent data through multiple layers of abstraction.

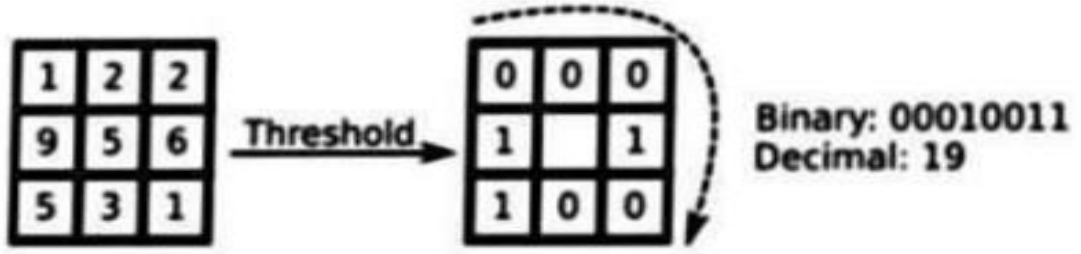
BLOCK DIAGRAM:



TECHNOLOGY USED:

- For the face recognition process, Local Binary Pattern Histogram(LBPH) algorithm is applied.
- The LBP operator uses Local Binary Patterns to decrease the local spatial distribution of a face image.
- The LBP operator is a collection of binary pixel value ratios in the center at regular pixel intervals and is around eight pixels.

$$s(x) = \begin{cases} 1, & x \geq 0 \\ 0, & x < 0 \end{cases} \qquad (1)$$



LBPH ALGORITHM,

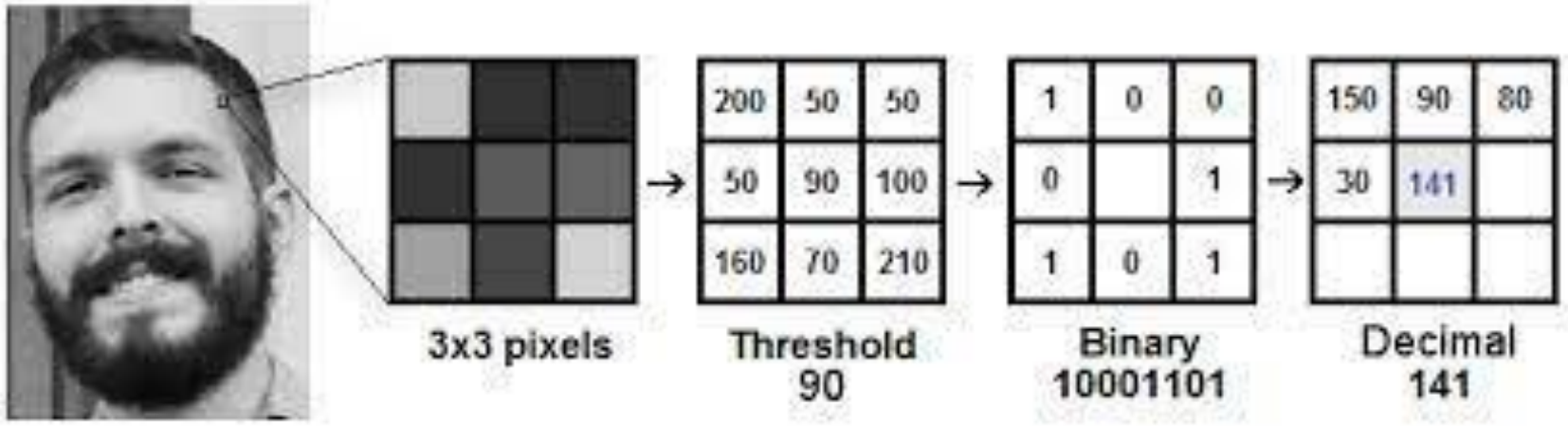
- Extracting the facial features from Image the LBP operation is used that compares the intensity value of every component with the 8 nearest neighbor pixel values .
- If the value of the neighboring pixel is more than the value of the centered pixel, it will assign 1 to its neighboring pixel, otherwise it will assign 0.
- A decimal value of an 8-bit pixel string determines the LBP value

$$LBP(x_c, y_c) = \sum_{n=0}^{7} S(i_n - i_c)2^n$$

LBP of Algorithm:

LBPH uses 4 parameters:

- **Radius**: the radius is used to build the circular local binary pattern and represents the radius around the central pixel. It is usually set to 1.
- **Neighbors**: the number of sample points to build the circular local binary pattern. Keep in mind: the more sample points you include, the higher the computational cost. It is usually set to 8.
- **Grid X,Y**: the number of cells in the horizontal direction. The more cells, the finer the grid, the higher the dimensionality of the resulting feature vector. It is usually set to 8.



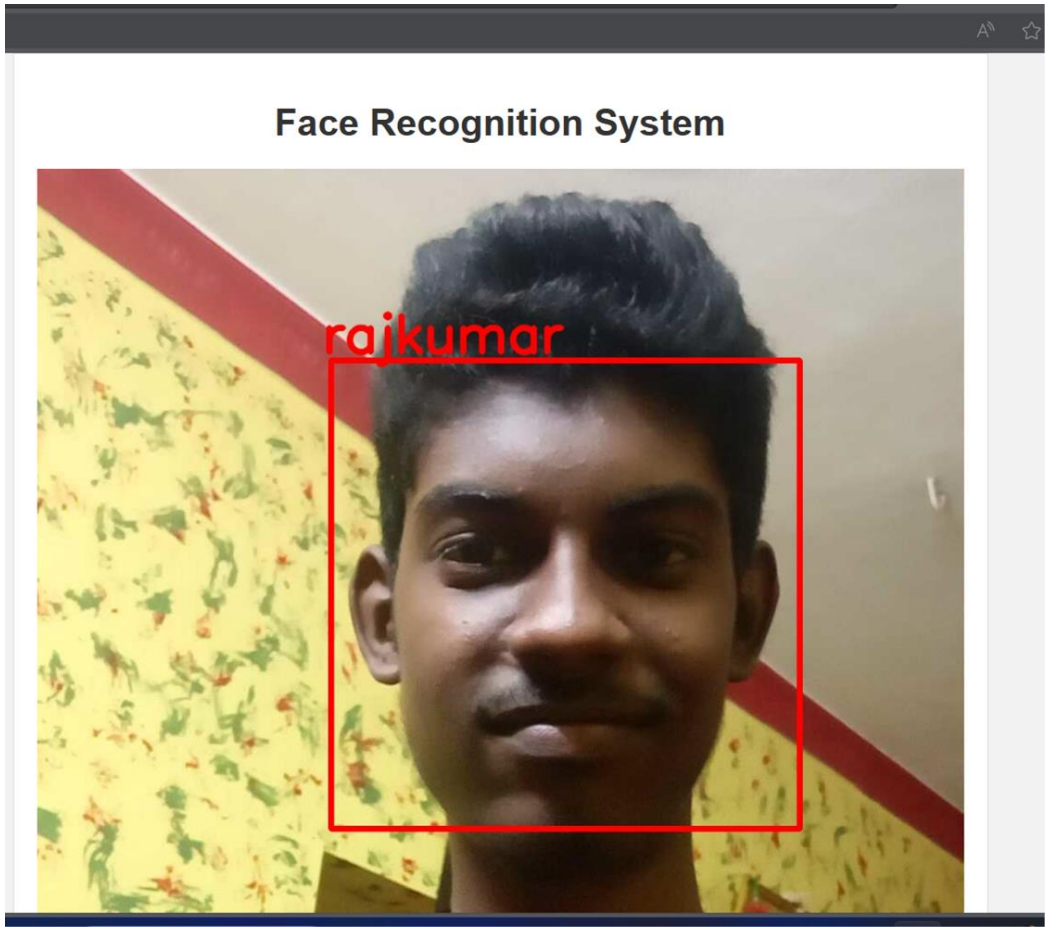
ALGORITHM:

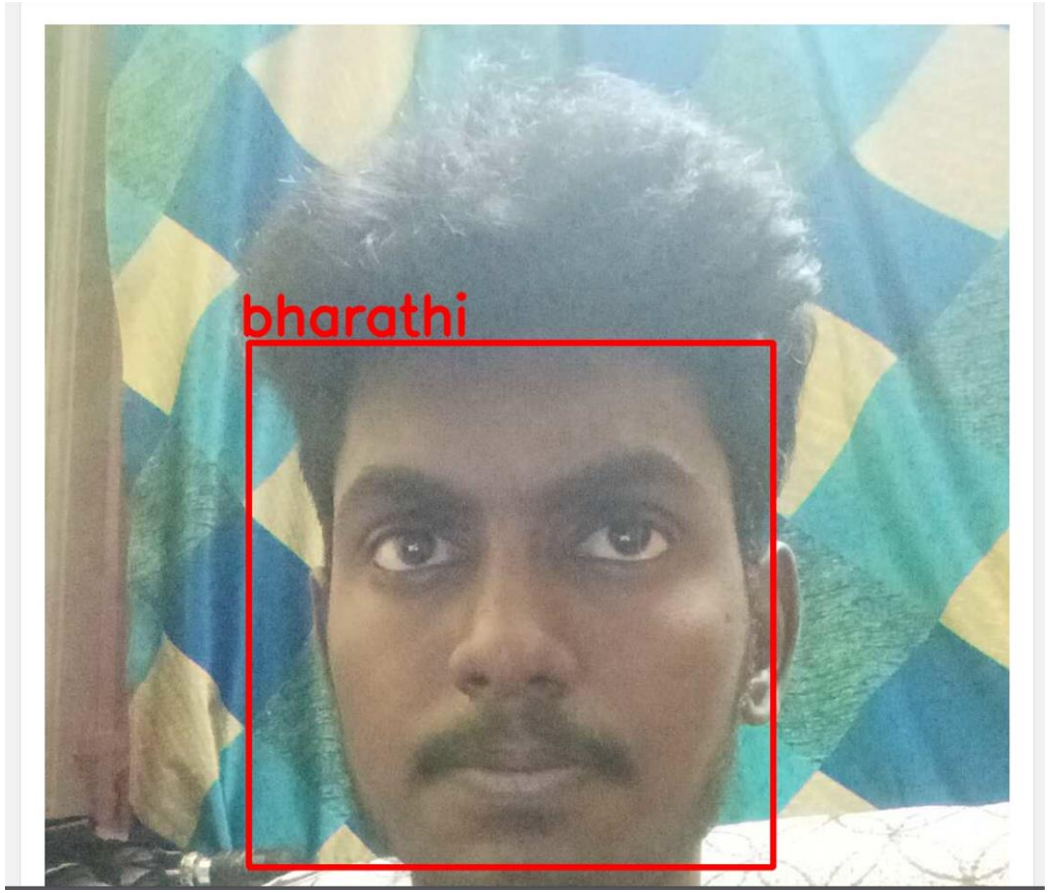
- We have a facial image in grayscale.
- We can get part of this image as a window of 3x3 pixels.
- It can also be represented as a 3x3 matrix containing the intensity of each pixel (0~255).
- Then, we need to take the central value of the matrix to be used as the threshold.
- This value will be used to define the new values from the 8 neighbors.
- For each neighbor of the central value (threshold), we set a new binary value. We set 1 for values equal or higher than the threshold and 0 for values lower than the threshold.
- Now, the matrix will contain only binary values (ignoring the central value).
- Then, we convert this binary value to a decimal value and set it to the central value of the matrix, which is actually a pixel from the original image.
- At the end of this procedure (LBP procedure), we have a new image which represents better the characteristics of the original image.

RESULT AND CONCLUSION:

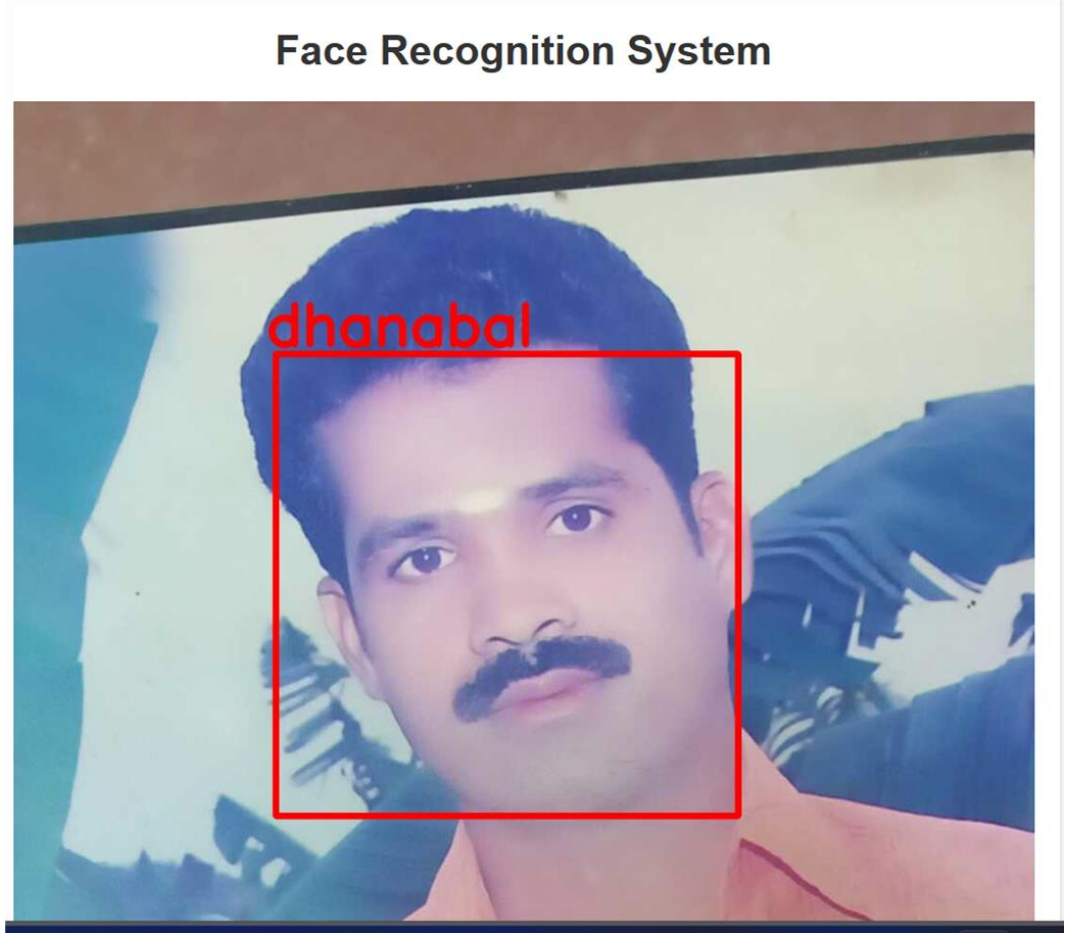
Datasets

RESULT AND CONCLUSION:





RESULT



THANK YOU