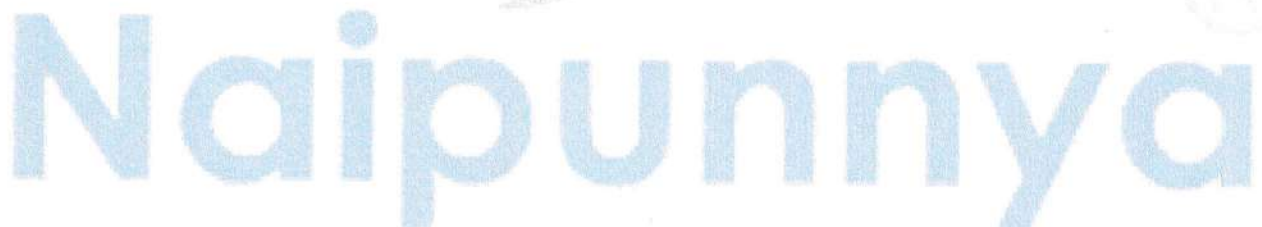


PG Department of Computer Science

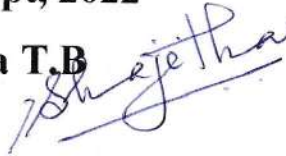
ADD COURSE ON DIGITAL IMAGE PROCESSING & MACHINE  
LEARNING

 Naipunnya®

To reach the unreachable

Date of event: 9<sup>th</sup> Sept to 11<sup>th</sup> sept, 2022

Faculty In-charge: Ms. Shajitha T.B





## ADD COURSE ON DIGITAL IMAGE PROCESSING & MACHINE LEARNING

The Annual Add-on course of the year 2022 for the students of 3rd year BSc. Computer Science was conducted from 9<sup>th</sup> September to 11<sup>th</sup> September. The students were from the Department of Computer Science and they had the session was from 9:15 am to 3:15 in the class room. Course started with the introduction of the faculty in charge of this course, Ms. Mariya. She gave an insight on the topic of the programme and its benefits also. First day she completed two modules and gave an assignment to the students. The next day she covered next two modules and for the afternoon session the students were taken to the lab. On the third day of the Add-on, she covered the rest of the portions and conducted a test. After that the students were taken to the lab. On the last day she gave a feedback of the class and three student representatives, Mr. Abdul Samad , Mr. Nikhil John and Ms. Anna Rose Thomas, from the class gave a feedback about the session. With that the Add-on course came to an end.

Prepared by



Ms. Shajitha T.B

(Faculty –in- charge)

verified by



Mr. Jayakrishnan S

(HoD, PG Department of computer science)

Approved by



Rev. Fr. Dr. Paulachan K.J

(Principal)



## **Add on Course -Image Processing and Introduction to Machine Learning**

**Duration: 35 Hours**

### **Prerequisite**

- Basic Python Programming Language

### **Syllabus**

#### **UNIT I**

**Introduction and Digital Image Fundamentals:** Examples of fields that use digital image processing, fundamental steps in digital image processing, components of image processing system. Digital Image Fundamentals: A simple image formation model, image sampling and quantization, basic relationships between pixels

#### **UNIT II**

**Image enhancement in Spatial domain:** Basic gray level Transformations, Histogram Processing Techniques, Spatial Filtering, Low pass filtering, High pass filtering

#### **UNIT III**

**Filtering in the Frequency Domain:** Preliminary Concepts, Extension to functions of two variables, Image Smoothing, Image Sharpening, Homomorphic filtering

#### **UNIT IV**

**Color Image Processing:** Color fundamentals, color models, pseudo color image processing, basics of full-color image processing, color transforms, smoothing and sharpening, color segmentation

#### **UNIT V**

**Introduction to Machine Learning:** Applications, Issues in Machine Learning, Designing a Learning system - Supervised Learning - Unsupervised Learning.

### **TEXT BOOKS:**

1. Digital Image Processing, Rafeal C.Gonzalez, Richard E.Woods, Second Edition, Pearson Education/PHI.

### **REFERENCE BOOKS:**

1. Image Processing, Analysis, and Machine Vision, Milan Sonka, Vaclav Hlavac and Roger Boyle, Second Edition, Thomson Learning.
2. Introduction to Digital Image Processing with Matlab, Alasdair McAndrew, Thomson Course Technology



3. Computer Vision and Image Processing, Adrian Low, Second Edition, B.S.Publications

4. Digital Image Processing using Matlab, Rafeal C.Gonzalez, Richard E.Woods, Steven L. Eddins, Pearson Education.

PHOTOS





**PARTICIPANT'S LIST**

Add on course - Machine learning			
Batch: B.Sc. CS-2020			Date: 9/11/22
Attendance List			
Sl.No	Name	Signature( Forenoon)	Signature( Afternoon)
1	ABDUL SAMAD. M. S	absent	absent
2	ABHIJITH M.A	Abhi	Abhi
3	ABIJITH T	Abijith	Abijith
4	AISWARIALAKSHMYK S	Aiswari	Aiswari
5	AKHIL T S	Akhil	Akhil
6	AKHILA BAIJU	Akhila	Akhila
7	ALEX JOY	Alex	Alex
8	ALVIN DAVIS	Alvin	Alvin
9	AN MARIA PAUL	An Maria	An Maria
10	ANEESH.A.S	Aneesh	Aneesh
11	ANGEL MARIYA ANTU	Angel	Angel
12	ANGSON T A	Angson	Angson
13	ANN MOHAN	Ann	Ann
14	ANNA ROSE THOMAS	Anna	Anna
15	ANNCHAL MARIYA E B	Annchal	Annchal
16	ARUN P VIJU	Arun	Arun
17	ASHIK SURENDRAN	Ashik	Ashik
18	ASWIN P KURIAN	Aswin	Aswin
19	ATLAS VARGHESE	Atlas	Atlas





20	CHRISTO SHAJU		
21	DAIL P D		
22	DAISON THOMAS		
23	DEVIKA M S		
24	DIYON JOSE		
25	ELIO SHIBU	absent	absent
26	EMMANUVAL PAUL P		
27	FIRDHOUS K H		
28	JOSEPH JOHNSON		
29	JULIYA V S		
30	JUNA ROSE BIJU		
31	NAVYA WILSON		
32	NIKHIL JOHN		
33	POORNIMA PRAKASAN		
34	ROBINS SOJAN		
35	SALMON STANLY		
36	SAM CHRISTY SAJU		
37	SANIKA RAPHEL		
38	SIRAJ K A		
39	SONA SIJO		
40	TOM BENEDICT		
41	TREESA SABU		
42	PAYYAPILLY NIDHI WILSON	absent	absent



Add on course - Machine			
learning+A1:D20A4A1:D15A1:D28A1:D36A4A1:D15A1:D38A4A1:D15A1:D40A1:D38A1:D40A1:D39A1:D38A1:D37A1:D36A1:D37A1:D38A1:D40A1:E39A1:D38			
Batch:B.Sc.CS-2020			Date : 10/11/22
Attendance List			
Sl.No	Name	Signature( Forenoon)	Signature( Afternoon)
1	ABDUL SAMAD M. S	<i>Samad</i>	<i>Samad</i>
2	ABHIJITH M.A	<i>Abhi</i>	<i>Abhi</i>
3	ABIJITH T	<i>Abijith</i>	<i>Abijith</i>
4	AISWARI LAKSHMY K S	<i>Aishwari Lakshmy</i>	<i>Aishwari Lakshmy</i>
5	AKHIL T S	<i>Akhil T.S</i>	<i>Akhil T.S</i>
6	AKHILA BAIJU	<i>Akhila</i>	<i>Akhila</i>
7	ALEX JOY	<i>Alex</i>	<i>Alex</i>
8	ALVIN DAVIS	<i>Alvin</i>	<i>Alvin</i>
9	AN MARIA PAUL	<i>An Maria</i>	<i>An Maria</i>
10	ANEESH A.S	<i>Aneesh</i>	<i>Aneesh</i>
11	ANGEL MARIYA ANTU	<i>Angel</i>	<i>Angel</i>
12	ANGSON T A	<i>Angson</i>	<i>Angson</i>
13	ANN MOHAN	<i>Ann</i>	<i>Ann</i>
14	ANNA ROSE THOMAS	<i>Anna</i>	<i>Anna</i>
15	ANNCHAL MARIYA E B	<i>Annchal</i>	<i>Annchal</i>
16	ARUN P VIJU	<i>Arun</i>	<i>Arun</i>
17	ASHIK SURENDRAN	<i>Ashik</i>	<i>Ashik</i>
18	ASWIN P KURIAN	<i>Aswin</i>	<i>Aswin</i>
19	ATLAS VARGHESE	<i>Atlas</i>	<i>Atlas</i>





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20	CHRISTO SHAJU	Christo	Christo
21	DAIL P D	Dail	Dail
22	DAISON THOMAS	Daison	Daison
23	DEVIKA M S	Devi	Devi
24	DIYON JOSE	Diyon	Diyon
25	ELIO SHIBU	absent	absent
26	EMMANUVAL PAUL P	Emmanuel	Emmanuel
27	FIRDHOUS K H	Firdous	Firdous
28	JOSEPH JOHNSON	Joseph	Joseph
29	JULIYA V S	Juliya	Juliya
30	JUNA ROSE BIJU	Juna	Juna
31	NAVYA WILSON	Navya	Navya
32	NIKHIL JOHN	Nikhil	Nikhil
33	POORNIMA PRAKASAN	Poornima	Poornima
34	ROBINS SOJAN	Robins	Robins
35	SALMON STANLY	absent	absent
36	SAM CHRISTY SAJU	Sam	Sam
37	SANIKA RAPHEL	Sanika	Sanika
38	SIRAJ K A	Siraj	Siraj
39	SONA SIJO	Sona	Sona
40	TOM BENEDICT	Tom	Tom
41	TREESA SABU	Treesa	Treesa
42	PAYYAPILLY NIDHI WILSON	absent	absent





Add on course - Machine learning			
Batch: B.Sc.CS-2020		Date : 11/11/22	
Attendance List			
Sl.No	Name	Signature( Forenoon)	Signature( Afternoon)
1	ABDUL SAMAD. M. S	<i>[Signature]</i>	<i>[Signature]</i>
2	ABHIJITH M.A	<i>[Signature]</i>	<i>[Signature]</i>
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6	AKHILA BAIJU	<i>[Signature]</i>	<i>[Signature]</i>
7	ALEX JOY	<i>[Signature]</i>	<i>[Signature]</i>
8	ALVIN DAVIS	<i>[Signature]</i>	<i>[Signature]</i>
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14	ANNA ROSE THOMAS	<i>[Signature]</i>	<i>[Signature]</i>
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24	DIYON JOSE	<i>[Signature]</i>	<i>[Signature]</i>
25	ELJO SHIBU	absent	absent
26	EMMANUVAL PAUL P	<i>[Signature]</i>	<i>[Signature]</i>
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