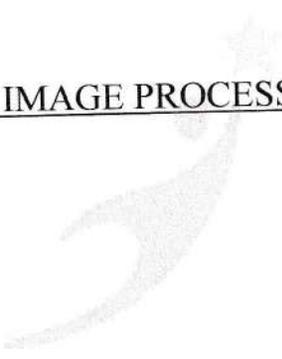


ADD COURSE ON DIGITAL IMAGE PROCESSING & MACHINE LEARNING

  
**Naipunnya**<sup>®</sup>  
To reach the unreachable

Prepared by ,

Ms. Laiby Thomas

(Faculty in charge)



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Pongam, Koiratty East, Thrissur District, Kerala State, India. Pin-680308.

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## ADD COURSE ON DIGITAL IMAGE PROCESSING & MACHINE LEARNING

The Annual Add-on course of the year 2022 for the students of 3rd year BCA 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 9:15am to 3:15 in the classroom. Course started with the introduction of the faculty incharge of this course, Ms. Mariya. She gave an insight on the topic of the program 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 from the class gave a feedback about the session. With that the Add-on course came to an end.

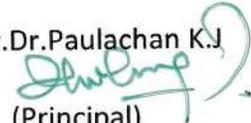
Prepared by ,

Ms. Laiby Thomas  
  
(Faculty in charge)

  
Verified by

Mr. Jayakrishnan S  
(Hod, PG Department of CS)

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

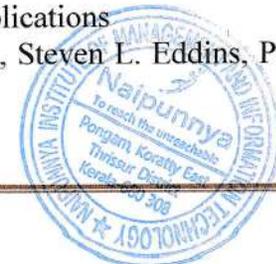
**Introduction to Machine Learning :** Applications, Issues in Machine Learning, Designing a Learning system - Supervised Learning - Unsupervised Learning.

## TEXT BOOKS:

1. Digital Image Processing, RafealC.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, RafealC.Gonzalez, Richard E.Woods, Steven L. Eddins, Pearson Education.



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Add on course - Machine learning

Date : 9/11/22

Batch BCA-2020

Attendance List

Sl.No	Name	Signature( Forenoon)	Signature( Afternoon)
1	ABHILASH JOSE	[Signature]	[Signature]
2	ABHINAND C	[Signature]	[Signature]
3	ABIJITH WILSON	[Signature]	[Signature]
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35	JOPHINE PAUL C	[Signature]	[Signature]

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# Naipunnya Institute of Management & Information Technology



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Aid on course - Machine learning

Batch: BCA 2020 Date : 10/11/22

Attendance List

Sl.No	Name	Signature( Forenoon)	Signature( Afternoon)
1	ABHILASH JOSE	<i>[Signature]</i>	<i>[Signature]</i>
2	ABHINAND C	A	A
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4	ADHUN VARGHESE	A	A
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8	AJO AUGUSTINE	A	A
9	ALAN POLY	A	A
10	ALDRIN DAVIS	A	A
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21	DELMA SHAJU	<i>[Signature]</i>	<i>[Signature]</i>
22	DIDHEEMOSE. P. S	<i>[Signature]</i>	(Absent)
23	DIGITH SHIBU	<i>[Signature]</i>	<i>[Signature]</i>
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Add on course - Machine learning

Date : 11/11/22

Batch: BCA 2020

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1	ABHILASH JOSE	[Signature]	[Signature]
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GPS Map Camera

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680308, India

Lat 10.247164°

Long 76.37281°

17/02/23 03:33 PM GMT +05:30



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