



# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

## CERTIFICATE COURSE ON MACHINE LEARNING FOR ENGINEERING AND SCIENCE APPLICATIONS

Date of Introduction of the Course: 28.03.2019

REGISTRATION NO.

www.bharath.ac.in

Signature of the Director

Signature of the Head

Signature of the Head

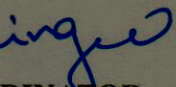
## COURSE OBJECTIVES

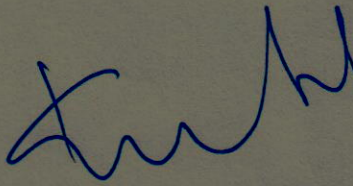
This course helps to understand Functional programming is an elegant, concise and powerful programming paradigm. This style encourages breaking up programming tasks into logical units that can be easily translated into provably correct code. Haskell brings together the best features of functional programming, and is increasingly being used in the industry, both for building rapid prototypes and for actual deployment.

**Specifically, the course has the following objectives:**

### **Students will learn**

1. Understand why and how machine learning methods may improve engineering problem-solving
2. Quantify risk and clarify salient features from data in complex systems.
3. Learn how researchers make other predictions with missing or sparse data.
4. Transfer machine learning approaches developed in one industry to another industry.
5. Assess conditions when a machine learning approach may not be helpful or worth the extra effort
6. Should be of interest to companies trying to employ engineers familiar with Machine Learning

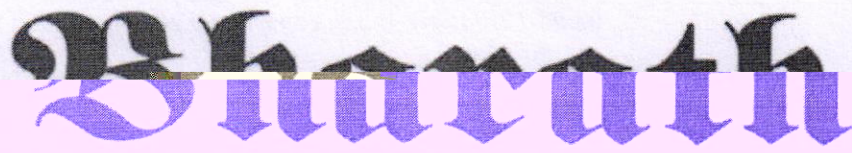
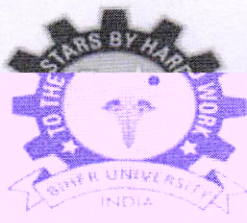
  
DINATOR

  
HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT  
Department of Computer Sci. & Eng.

  
COURSE COO





**INSTITUTE OF HIGHER EDUCATION AND RESEARCH**  
(Declared as Deemed-to-be University under section 3 of UGC Act 1956)

**CERTIFICATE COURSE ON MACHINE LEARNING FOR ENGINEERING AND SCIENCE APPLICATIONS**

**Date of Introduction of the Course: 28.03.2019**

Classes are 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM(AN)  
Saturday (FN&AN).

The timing

**Time Table & Lesson plan**

CLASS	DATE	TOPIC	CL
1,	28-03-2019(FN) Thursday	1. Mathematical Basics 1 Introduction to Machine Learning, Linear Algebra	
2	29-03-2019 (FN) Friday	2. Mathematical Basics 2 Describes about Probability and its basic	
30-03-2019 (FN) 30-03-2019 (AN) Saturday	3. Computational Basics Explains Numerical computation and optimization, Introduction to Machine Learning packages	3,4	
01-04-2019(FN) Monday	4. Linear and Logistic Regression Describes about Bias/Variance Tradeo, Regularization, Variants of Gradient Descent: MLE, MAP, Applications	5	
6	02-04-2019 (FN) Tuesday	5. Neural Networks Describes about Multilayer Perceptron, Backpropagation, Applications	
7,8	03-04-2019 (FN) 03-04-2019 (AN) Wednesday	6. Convolutional Neural Networks 1 Explains CNN Operations, CNN architectures	
9	04-04-2019 (FN) Thursday	7. Convolutional Neural Networks 2 Explains Training, Transfer Learning, Applications	
10,11	05-04-2019 (FN) 05-04-2019 (AN) Friday	8. Recurrent Neural Networks Explains RNN, LSTM, GRU, Applications	
12	06-04-2019 (FN) Saturday	9. Classical Techniques 1	

**Bharath Institute of Science and Technology**  
**Department of Computer Science and Engineering**

School of Computing

THE APPLICATIONS  
List

MACHINE LEARNING FOR ENGINEERING AND SCIENCE  
Registered Students Name


S.No	RegNo	Student Name
1	U18CS001	KICHANAGARI YASHWANTH REDDY
2	U18CS002	MUPPARAJU CHIRANJEEVI
3	U18CS003	Katam Mahendra Reddy

	4	U18CS004	KOTA VENKATA VISHNU VARDHAN REDDY
	5	U18CS005	DARAM SRINIVASAREDDY
	6	U18CS006	PEDDIGIRI JALANDHIR
	7	U18CS007	BURRA PRANAY KUMAR
	8	U18CS008	ISWARYA V
	9	U18CS010	PRANAY KUMAR REDDY SAMMIDI

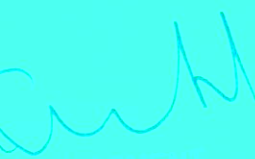
VIKRISHNA	10	U18CS011	NARAYANAM VAMS
	11	U18CS012	VIKAS RAJ R
	12	U18CS013	JOTHIKA K
	13	U18CS014	CALVIN JOSHVUA R
	14	U18CS015	DUGGINENI MOUNIK
	15	U18CS016	KAKI SIDDHU SRINI
	16	U18CS017	NEETU

	17	U18CS018	UDAGANDLA HIMAJA
	18	U18CS019	POTHIREDDY YOGESWARA REDDY
	19	U18CS021	VIKASH KUMAR SINGH
	20	U18CS022	UTHAYA A
	21	U18CS023	TELLAKULA SAI RAM
	22	U18CS024	PEDDI GNANA SURYA

U18CS027	SURAPAREDDY MANASA			25
U18CS028	SARAN P I			24
U18CS029	Shiva Dhuru Vel S			25
U18CS020	DEVI CHANDANA D			26
U18CS032	VISHWANATH J			27
U18CS033	KANDULA CHAITANYA SAI			28
U18CS034	SHARAVATH GIRIDHAR			29

SARATH KRISHNA

30	U18CS035	DOMMETI
----	----------	---------

  
 DEPARTMENT  
 Machine Learning for Engineering and Science  
 Bharath Institute of Science and Technology  
 Hyderabad, India

  
 HEAD OF DEPARTMENT  
 Department of Computer Science and Engineering  
 Bharath Institute of Science and Technology  
 Hyderabad, India





# Bharath UNIVERSITY

பாரத் பல்கலைக்கழகம்

BHARATH INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be-University, u/s 3 of the UGC Act, 1956)



## CERTIFICATE OF PARTICIPATION



# COURSE FEEDBACK FORM

Academic Year	2018-2019		
Term			
Course Number			
Course Title	Machine Learning for Engineering and Science Applications		
Number of Credits			
Type of Course	Regular	Elective	Advisory

**I. Information on the Respondent: (Tick (√) Appropriately)**

**1. Percentage of classes attended**

0-20		20-40		40-60		60-80		80-100	
------	--	-------	--	-------	--	-------	--	--------	--

**2. Number of hours per week spent on the course (Other than lecture hours)**

0-2		2-4		4-6		6-8		8-10	
-----	--	-----	--	-----	--	-----	--	------	--

**3. Preparation for the course by the student:**

- (i) Have done part of this course earlier
- (ii) Has adequate prior exposure to the prerequisites
- (iii) Had to pick up relevant additional topics through concurrent study
- (iv) Have no exposure to the background material

**4. The expectations for taking the course by the student:**

- (a) Enhance by skill base in the area of specialization
- (b) Get exposed to a relevant subject
- (c) Curiosity
- (d) Better Employment Opportunity
- (e) Complete Course requirements
- (f) To Improve CGPA

**About the Instructor: Information on the Respondent: (Tick (√) Appropriately)**

B	C	D	E	A	A	A	A	A	A

1. Pace of the Teaching/Lecturing



# COURSE FEEDBACK FORM

Academic Year		2018-2019			
Term					
Course Number					
Course Title		Machine Learning for Engineering and Science Applications			
Number of Credits					
Type of Course	Regular		Elective		Add-on

**I. Information on the Respondent: (Tick (√) Appropriately)**

1.	<b>Percentage of classes attended</b>							
	0-20		20-40		40-60		60-80	
2.	<b>Number of hours per week spent on the course (Other than lecture hours)</b>							
	0-2		2-4		4-6		6-8	

**Preparation for the course by the student:**

(i)	Have done part of this course earlier
(ii)	Has adequate prior exposure to the prerequisites
(iii)	Had to pickup relevant additional topics through concurrent study
(iv)	Have no exposure to the background material

**The expectations for taking the course by the student are:**

(a)	Enhance by skill base in the area of specializations
(b)	Get exposed to a relevant subject
(c)	Curiosity
(d)	Better Employment Opportunity

**Course requirements**

ave CGPA

**Information on the Respondent: (Tick (√) Appropriately)**

	A	B	C	D	E
ng/lecture	√				
subject		√			
ion		√			
ion	√				
side the class		√			
ecify	√				

(e) Complet

(f) To Impro

**About the Instructor: I**

1.	Pace of the Teach
2.	Comment of the S
3.	Clarity of expres
4.	Level of prepara
5.	Level of interact
6.	Accessibility ou
7.	Others (please sp

B: Very Good

C: Good

D: Satisfact

A: Excellent

CERTIFICATE COURSE ON MACHINE LEARNING FOR  
ENGINEERING AND SCIENCE APPLICATIONS

*[Handwritten signature]*      *[Handwritten signature]*

HEAD OF DEPARTMENT  
Department of Computer Science and Engineering  
Mumbai Institute of Technology  
Mumbai - 400 075