



# Bharath

## INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)  
(Vide Notification No. F.9-5/2000 - U 3, Ministry of Human Resource Development, Govt. of India, dated 4<sup>th</sup> July 2002)

### Requisition letter

Date: 19.08.2019

#### From

Dr.K.P.Kaliyamurthie,  
Professor & Head,  
Department of CSE,  
Bharath Institute of Higher Education and Research,  
Chennai.

#### To

The Dean Engineering,  
Bharath Institute of Higher Education and Research,  
Chennai.

#### Respected Sir

**Sub:** Request of permission to conduct a value – added course on “**Business Analytics & Text Mining Modeling using python**”-Reg

With reference to above subject, I would like to bring to your kind notice that , our department interested to organize value added course “**Business Analytics & Text Mining Modeling using python**”-Reg in our campus premises on 29.08.2019, students would be participating in this course. We request you kindly to give permission to organize this event.

**Venue:** CSE smart class Room

**Timing:** 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM (AN)

Submitted to principal for approval to organize this value-added course.

HOD

HEAD OF DEPARTMENT

Department Of Computer Science & Engg.,  
Bharath Institute Of Higher Education & Research  
(Declared as Deemed to be University U/S 3 Of UGC Act, 1956)  
Chennai - 600 073. INDIA

DEAN ENGINEERING  
DEAN (Engineering)

Bharath Institute of Science & Technology  
BHARATH INSTITUTE OF HIGHER EDUCATION & RESEARCH  
(Declared as Deemed to be University U/S 3 of UGC Act. 1956)  
Selaiyur, Chennai-600 073.





# Bharath

## INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)  
(Vide Notification No. F.9-5/2000 - U.3, Ministry of Human Resource Development, Govt. of India, dated 4<sup>th</sup> July 2002)

### CIRCULAR

22.08.2019

The school of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on **Certificate Course of Business Analytics & Text Mining Modeling using python** for the benefit of students. This course is scheduled from 29.08.2019 to 09.09.2019 which includes theory and practical. The timings are 9:30 AM to 12:30 PM (FN) and 1:30 PM to 4:30 PM(AN) and Saturday (FN&AN).

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr. A.R. Arunachella	Professor
2	Mr. B. Sundaraj	Assistant Professor.

**Head of Department**

HEAD OF DEPARTMENT

Department Of Computer Science & Engg.,

Bharath Institute Of Higher Education & Research

(Declared as Deemed to be University U/S 3 Of UGC Act, 1956)

Chennai - 600 073, INDIA

To

Copy to CSE

Copy to IT



# **Bharath**

## **INSTITUTE OF HIGHER EDUCATION AND RESEARCH**

(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)  
(Vide Notification No. F.9-5/2000 - U.3. Ministry of Human Resource Development, Govt. of India, dated 4<sup>th</sup> July 2002)

### **CERTIFICATE COURSE ON BUSINESS ANALYTICS & TEXT MINING MODELLING USING PYTHON**

**Date of Introduction of the Course: 26.09.2019**

#### **COURSE SYLLABUS**

##### **1. Introduction**

The goal of this first module cover the introductory aspects of this particular course. This courses focused on the data mining aspects where we work with numerical you know data which is highly structured in nature and we apply various statistical data mining and mathematical techniques to solve you know prediction and classification problems.

##### **2. Introductory overview of Text Mining**

Describe and explain the key terms in the text mining also has significant potential for academic application and, at least when used in its basic form, benefits from being a relatively straightforward and easy tool to master.

##### **3. Python Basics**

Explain the concepts of Python programming language, Development environments. Web and web app development, Security of the web applications.

##### **4. Python for Analytics**

Describes the concepts of Python programming and gain in-depth, valuable knowledge in data analytics, machine learning, and data visualization, web scraping, and natural language processing.

##### **5. Built in Capabilities of Python**

The topic teaches you the essential concepts of Python programming, and gives you an in-depth knowledge in data analytics, machine learning, data visualization, web scraping, and natural language processing.

##### **6. Numerical Python**

Introduce data manipulation and cleaning techniques using the popular python pandas data science library and introduce the abstraction of the Series and Data Frame as the central data structures for data analysis, along with tutorials on how to use functions such as groupby, merge, and pivot tables effectively.

## 7. Fundamentals of Data Manipulation with Python

Demonstrate the field of data science, review common Python functionality and features which data scientists use.

## 8. Python pandas

Explain the concepts and that will learn the various features of Python Pandas and how to use them in practice.

## 9. String and Text Processing

Demonstrate about the string object, so most of the text operations that we would typically like to perform, they can be covered by string objects built-in methods.

## 10. Data visualization using Python

Discuss about the need to setup Jupyter environment to use matplotlib. So, for that we can run this particular you know magic command matplotlib space notebook %matplotlib space notebook.

## 11. Text collection and Transformation

Demonstrate the source of text data collection with the document warehouse or databases and for websites using web APIs.

## 12. Text mining and modelling

Demonstrate the concept of expanding contractions, POS tagging, lemmatization, special character removal, stop word removal and tokenization.

## COURSE OBJECTIVES

Objective of this course is to impart knowledge on use of text mining techniques for deriving business intelligence to achieve organizational goals. Use of Python based software platform to build, assess, and compare models based on real datasets and cases with an easy-to-follow learning curve

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

### **Students will learn**

1. Understand the fundamental terms and concepts of Text mining.
2. Understand the Concepts of python programming
3. Learn the general properties of Text mining and modeling.
4. Basic understanding of Visualization with python



**COURSE COORDINATOR**



**HEAD OF THE DEPARTMENT**

Department of Computer Science & Engg.,  
Ehara Institute Of Higher Education & Research  
(Declared as Deemed to be University U/S 3 Of UGC Act, 1956)  
Chennai - 600 073. INDIA



# Bharath

## INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act, 1956)  
(Vide Notification No. F.9-5/2000 - U.3, Ministry of Human Resource Development, Govt. of India, dated 4<sup>th</sup> July 2002)

### CERTIFICATE COURSE ON BUSINESS ANALYTICS & TEXT MINING MODELLING USING PYTHON

**Date of Introduction of the Course: 26.09.2019**

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

#### Time Table & Lesson plan

CLASS	DATE	TOPIC
1	29-08-2019 (FN)	<b>1. Introduction</b> The goal of this first module cover the introductory aspects of this particular course. This courses focused on the data mining aspects where we work with numerical you know data which is highly structured in nature and we apply various statistical data mining and mathematical techniques to solve you know prediction and classification problems.
2	30-08-2019 (FN)	<b>2. Introductory overview of Text Mining</b> Describe and explain the key terms in the text mining also has significant potential for academic application and, at least when used in its basic form, benefits from being a relatively straightforward and easy tool to master.
3	31-08-2019 (FN)	<b>3. Python Basics</b> Explain the concepts of Python programming language, Development environments. Web and web app development, Security of the web applications.
4	31-08-2019 (AN)	<b>4. Python for Analytics</b> Describes the concepts of Python programming and gain in-depth, valuable knowledge in data analytics, machine learning, and data visualization, web scraping, and natural language processing.
5	02-09-2019	<b>5. Built in Capabilities of Python</b>

	(FN)	The topic teaches you the essential concepts of Python programming, and gives you an in-depth knowledge in data analytics, machine learning.
6	03-09-2019 (FN)	<b>6. Numerical Python</b> Introduce data manipulation and cleaning techniques using the popular python pandas data science library.
7	04-09-2019 (FN)	<b>7. Fundamentals of Data Manipulation with Python</b> Demonstrate the field of data science, review common Python functionality and features which data scientists use.
8	05-09-2019 (FN)	<b>8. Python pandas</b> Explain the concepts and that will learn the various features of Python Pandas and how to use them in practice
9	06-09-2019 (FN)	<b>9. String and Text Processing</b> Demonstrate about the string object, so most of the text operations that we would typically like to perform, they can be covered by string objects built-in methods.
10.	07-09-2019 (FN)	<b>10. Data visualization using Python</b> Discuss about the need to setup Jupyter environment to use matplotlib. So, for that we can run this particular you know magic command matplotlib space notebook %matplotlib space notebook.
11	07-09-2019 (AN)	<b>11. Text collection and Transformation</b> Demonstrate the source of text data collection with the document warehouse or databases and for websites using web APIs.
12	09-09-2019 (FN)	<b>12. Text mining and modelling</b> Demonstrate the concept of expanding contractions, POS tagging, lemmatization, special character removal, stop word removal and tokenization

B. Sandeep  
COURSE COORDINATOR

  
HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT  
Department Of Computer Science & Engg.,  
Bharath Institute Of Higher Education & Research  
(Declared as Deemed to be University U/S 3 Of UGC Act, 1956)  
Chennai - 600 073, INDIA



# Bharath

## INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed-to-be University under section 3 of UGC Act. 1956)  
(vide Notification No. F.9-5/2000 - U.3 Ministry of Human Resource Development, Govt. of India dated 4<sup>th</sup> July 2002)

### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

#### B.Tech Computer Science and Engineering

Academic year 2019-20

Business Analytics & Text Mining Modeling using python

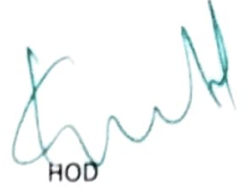
DATE OF INTRODUCTION:26.09.2019

S. No	REG.NO	NAME OF THE CANDIDATE
1	U19CB031	UPPALA SAI PRASAD
2	U19CB032	UPPALAPATI PAVAN KUMAR
3	U19CB033	UPPARI SAI RAHUL
4	U19CB034	UPPU SATHISH
5	U19CB035	UPPUTURI AKANKSHA
6	U19CB036	VADDELLI SRIJA
7	U19CB037	VADDI AKASH
8	U19CB038	VADLA SAI BHARGAVA ACHARI
9	U19CB039	VADLA SHRAVAN KUMAR
10	U19CB040	VADLA VENKAT JAYANTH ACHARI
11	U19CB041	VADLAKONDA SAI KIRAN
12	U19CB042	VADLAMUDI ANIL
13	U19CB043	VADLAMUDI MAHESH
14	U19CB044	VAKKALAGADDA BHARGAVI
15	U19CB045	VALLABHASETTI DURGA KALYAN
16	U19CB046	VALLEPU KISHAN SAI
17	U19CB047	VANKAYALAPATI DIVYA NANDHU
18	U19CB048	VANKAYALAPATI SAI KUMAR
19	U19CB049	VANNEMREDDY DINESH
20	U19CB050	VARDHINENI SAI CHARAN
21	U19CB051	VARIKOLLU TEJASSU
22	U19CB052	VASANTHAN SELVAKUMAR
23	U19CB053	VASIREDDY PRASHANTH
24	U19CB054	VATHSAVAYI SAI CHARAN RAJEEV V
25	U19CB055	VATTE ABHINAV REDDY
26	U19CB056	VATTIKUNTA MAHITHA
27	U19CB057	VEERA BOBBY VELUGUBANTLA
28	U19CB058	VEERAKUMAR A
29	U19CB059	VEERAMALLA ABHINAV RAO

30	U19CB060	VEERANKI KRISHNA SAI
31	U19CB061	VEERANKI S RAMA KRISHNA
32	U19CB062	VEERAREDDYGARI BHARATH SIMHA REDDY
33	U19CB063	VEERASAHITHYAN A
34	U19CB064	VELLANKI VENKATA PHANINDRA KUMAR NAIDU
35	U19CB065	VELPULA RISHIKESH
36	U19CB066	VELPURI SUBBARAO
37	U19CB067	VELPURI UPENDRA BABU
38	U19CB068	VELURU NITHISH REDDY
39	U19CB069	VEMAVARAPU SAI RADHESH
40	U19CB070	VEMIREDDY MONIKA
41	U19CB071	VEMIREDDY SAI KRISHNA REDDY
42	U19CB072	VEMIREDDY UPENDRA REDDY
43	U19CB073	VEMPA SURYA PRATHAP
44	U19CB074	VEMULA SAISAMYUKTHA
45	U19CB075	VEMULA SANTHOSH BABU

B. Sundry

Course Coordinator



HOD

HEAD OF DEPARTMENT

Department Of Computer Science & Engg  
Bharath Institute Of Higher Education & Research  
(Declared as Deemed to be University U/S 3 OF UGC Act,  
Chennai - 600 073, INDIA



## COURSE FEEDBACK FORM

Academic Year	2019-20			
Term				
Course Number				
Course Title	<b>BUSINESS ANALYTICS &amp; TEXT MINING MODELING USING PYTHON</b>			
Number of Credits				
Type of Course	Regular		Elective	Add-on
				<input checked="" type="checkbox"/>

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

**1. Percentage of classes attended**

0-20		20-40		40-60		60-80	<input checked="" type="checkbox"/>	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	<input checked="" type="checkbox"/>
-----	--	-----	--	-----	--	-----	--	------	-------------------------------------

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

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

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

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

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

	A	B	C	D	E
1. Pace of the Teaching/lecture	<input checked="" type="checkbox"/>				
2. Content of the Subject	<input checked="" type="checkbox"/>				
3. Clarity of expression		<input checked="" type="checkbox"/>			
4. Level of preparation		<input checked="" type="checkbox"/>			
5. Level of interaction	<input checked="" type="checkbox"/>				
6. Accessibility outside the class	<input checked="" type="checkbox"/>				
7. Others (please specify)		<input checked="" type="checkbox"/>			

<b>A: Excellent</b>	<input checked="" type="checkbox"/>	<b>B: Very Good</b>		<b>C: Good</b>		<b>D: Satisfactory</b>		<b>E: Poor</b>	
---------------------	-------------------------------------	---------------------	--	----------------	--	------------------------	--	----------------	--

**HEAD OF THE DEPARTMENT**

**HEAD OF DEPARTMENT**  
 Department Of Computer Science & Engg.,  
 Bharath Institute Of Higher Education & Research  
 (Declared as Deemed to be University U/S of UGC Act, 1956)  
 Chennai - 600 073, INDIA

## COURSE FEEDBACK FORM

Academic Year		2019-20					
Term							
Course Number							
Course Title		<b>BUSINESS ANALYTICS &amp; TEXT MINING MODELING USING PYTHON</b>					
Number of Credits							
Type of Course	Regular		Elective		Add-on	<input checked="" type="checkbox"/>	
<b>I. Information on the Respondent: (Tick (✓) Appropriately)</b>							
<b>1. Percentage of classes attended</b>							
0-20		20-40		40-60		60-80	<input checked="" type="checkbox"/>
<b>2. Number of hours per week spent on the course (Other than lecture hours)</b>							
0-2		2-4		4-6		6-8	<input checked="" type="checkbox"/>
<b>3. Preparation for the course by the student:</b>							
(i)	Have done part of this course earlier						No
(ii)	Has adequate prior exposure to the prerequisites						Yes
(iii)	Had to pickup relevant additional topics through concurrent study						No
(iv)	Have no exposure to the background material						Yes
<b>4. The expectations for taking the course by the student are:</b>							
(a)	Enhance by skill base in the area of specializations						Yes
(b)	Get exposed to a relevant subject						Yes
(c)	Curiosity						Yes
(d)	Better Employment Opportunity						Yes
(e)	Complete Course requirements						Yes
(f)	To Improve CGPA						Yes
<b>About the Instructor: Information on the Respondent: (Tick (✓) Appropriately)</b>							
		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	
1.	Pace of the Teaching/lecture	<input checked="" type="checkbox"/>					
2.	Comment of the Subject	<input checked="" type="checkbox"/>					
3.	Clarity of expression		<input checked="" type="checkbox"/>				
4.	Level of preparation		<input checked="" type="checkbox"/>				
5.	Level of interaction						
6.	Accessibility outside the class	<input checked="" type="checkbox"/>					
7.	Others (please specify)	<input checked="" type="checkbox"/>					
<b>A: Excellent</b>		<input checked="" type="checkbox"/>	<b>B: Very Good</b>			<b>C: Good</b>	
						<b>D: Satisfactory</b>	
						<b>E: Poor</b>	

**HEAD OF THE DEPARTMENT**

**HEAD OF DEPARTMENT**  
 Department Of Computer Science & Engg.  
 Bharath Institute Of Higher Education & Research  
 (Declared as Deemed to be University U/S 3 Of UGC Act, 1956)  
 Chennai - 600 073, INDIA

## COURSE FEEDBACK FORM

Academic Year		2019-20					
Term							
Course Number							
Course Title		<b>BUSINESS ANALYTICS &amp; TEXT MINING MODELING USING PYTHON</b>					
Number of Credits							
Type of Course	Regular		Elective		Add-on		<input checked="" type="checkbox"/>
<b>I. Information on the Respondent: (Tick (✓) Appropriately)</b>							
<b>1. Percentage of classes attended</b>							
0-20		20-40		40-60		60-80	<input checked="" type="checkbox"/>
<b>2. Number of hours per week spent on the course (Other than lecture hours)</b>							
0-2		2-4		4-6		6-8	
						8-10	<input checked="" type="checkbox"/>
<b>3. Preparation for the course by the student:</b>							
(i)	Have done part of this course earlier						No
(ii)	Has adequate prior exposure to the prerequisites						Yes
(iii)	Had to pickup relevant additional topics through concurrent study						No
(iv)	Have no exposure to the background material						Yes
<b>4. The expectations for taking the course by the student are:</b>							
(a)	Enhance by skill base in the area of specializations						Yes
(b)	Get exposed to a relevant subject						Yes
(c)	Curiosity						Yes
(d)	Better Employment Opportunity						Yes
(e)	Complete Course requirements						Yes
(f)	To Improve CGPA						Yes
<b>About the Instructor: Information on the Respondent: (Tick (✓) Appropriately)</b>							
		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	
1.	Pace of the Teaching/lecture	<input checked="" type="checkbox"/>					
2.	Comment of the Subject	<input checked="" type="checkbox"/>					
3.	Clarity of expression		<input checked="" type="checkbox"/>				
4.	Level of preparation		<input checked="" type="checkbox"/>				
5.	Level of interaction	<input checked="" type="checkbox"/>					
6.	Accessibility outside the class	<input checked="" type="checkbox"/>					
7.	Others (please specify)			<input checked="" type="checkbox"/>			
<b>A: Excellent</b>		<b>B: Very Good</b>	<input checked="" type="checkbox"/>	<b>C: Good</b>		<b>D: Satisfactory</b>	<b>E: Poor</b>

**HEAD OF THE DEPARTMENT**

**HEAD OF DEPARTMENT**  
 Department Of Computer Science & Engg.  
 Bharath Institute Of Higher Education & Research  
 (Declared as Deemed to be University U.S.O Of UGC Act 1956)  
 Chennai - 600 077 INDIA



**Bharath**

**INSTITUTE OF HIGHER EDUCATION AND RESEARCH**

(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)

**SHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

NO.173, Ashram Road, Selayur, Chennai. T.N - 600 073.



## CERTIFICATE OF PARTICIPATION



**Mr. VEERAKUMAR A**

For actively participating in the value added course "**Business Analytics & Text Mining Modelling using python**" Conducted by School of Computing,

BIHER

from 29-08-2019 to 09.09.2019 .

*B.Sudhij*

Course Coordinator

Head of the Department

Director

**CERTIFICATE COURSE ON BUSINESS ANALYTICS & TEXT MINING**  
**MODELLING USING PYTHON**

**Introduction of the Course: 26.09.2019**



*B. Sudhij*

**Course Coordinator**

**Head of the Department**

**HEAD OF DEPARTMENT**

Department Of Computer Science & Engg.,  
Bharath Institute Of Higher Education & Research  
(Declared as Deemed to be University U/S 3 OF UGC Act, 1956)  
Chennai - 600 073, INDIA