



"Empowerment through quality technical education"
Dr. D. Y. Patil Educational Enterprises Charitable Trust's

Ajeenkya D. Y. Patil Group of Institution's Technical Campus
Dr. D. Y. PATIL SCHOOL OF ENGINEERING

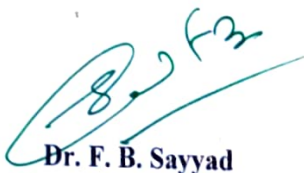
(Approved by AICTE, New Delhi Recognized by Govt. of Maharashtra, Affiliated to Savitribai Phule Pune University)
AISHE Code: C-46648 DTE Code: EN6732 SPPU PUN Code: CEGP015720
(Accredited by NAAC)

A.Y. 2021-22

Criteria 2.6.2- Attainment of Programme outcomes and course outcomes are evaluated by the institution

Attached samples of documents which shows

a) Continuous internal evaluation for calculating the attainment of COs, POs & PSOs.


Dr. F. B. Sayyad

Principal

Principal

Dr. D. Y. Patil School of Engineering
Lohegaon, Pune.

Enclosed: Records of activity done.





Empowerment Through Quality Technical Education

Dr. D. Y. Patil School of Engineering

Dr. D. Y. Patil Knowledge City, Charholi (Bk), Lohegaon, Pune – 412 105 Website:
<https://dypsoe.in/>

Department of Computer Engineering

Bloom's Taxonomy Levels

Form No. IQAC/36

Level	Particulars
1-Remember	Recall facts and basic Concepts (define, duplicate, list, memorize, repeat, state)
2-Understand	Explain ideas or concepts (classify, describe, discuss, explain, identify, locate, recognize, report, select, translate)
3-Apply	Use information in new situations (execute, implement, solve, use, demonstrate, interpret, operate, schedule, sketch)
4-Analyze	Draw connection among ideas (Differentiate, organize, relate, compare, contrast, distinguish, examine, experiment, question, test)
5-Evaluate	Justify a stand or decision (Appraise, argue, defend, judge, select, support, value, critique, weigh)
6-Create	Produce new or original work (Design, assemble, construct, conjecture, develop, formulate, author, investigate)

Amruta Chitari

Prof. Amruta Chitari
Subject Teacher



P.M. Agarkar
Dr. P.M. Agarkar
HoD

Head of the Department
Department of Computer Engineering
Dr. D. Y. Patil School of Engineering
Dr. D. Y. Patil Technical Campus
Via Lohegaon, Charholi Bk., Pune-412 105



Dr. D. Y. Patil Knowledge City,
Lohegaon, Pune – 412 105

Empowerment Through Quality Technical Education

Dr. D. Y. Patil School of Engineering

Charholi (Bk),

Website: <https://dypsoe.in/>

Department of Computer Engineering

Course Outcomes (COs):

Form No. IQAC/36

Academic Year.: 2021-22

Semester: II

Subject: Data Science and Big Data Analytics

Class:TE

Div: A

Name of Subject Teacher: Prof. Amruta Chitari

CO No.	BT level	Students will be able to
CO-1	4-Analyze	Analyze needs and challenges for Data Science Big Data Analytics
CO-2	3-Apply	Apply statistics for Big Data Analytics
CO-3	3-Apply	Apply the lifecycle of Big Data analytics to real world problems
CO-4	6-Create	Implement Big Data Analytics using Python programming
CO-5	6-Create	Implement data visualization using visualization tools in Python programming
CO-6	6-Create	Design and implement Big Databases using the Hadoop ecosystem

Prof. Amruta Chitari
Subject Teacher



Dr. P.M. Agarkar

HoD

Head of the Department

Department of Computer Engineering

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Dr. D. Y. Patil Technical Campus

Via Lohegaon, Charholi Bk., Pune-412 105

**Dr. D. Y. Patil School of Engineering**D. Y. Patil Knowledge City,
Lohegaon, Pune – 412 105

Empowerment through Quality Technical Education

Dr.

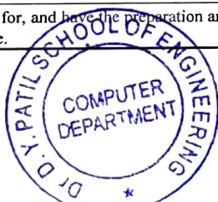
Charholi (Bk).

Website: <https://dypsoe.in/>**Department of Computer Engineering****Program Outcomes (POs):**

Form No. IQAC/36

Engineering Graduates will be able to:

1	Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2	Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9	Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12	Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Prof. Amruta Chitran
Subject Teacher

Dr. D. Y. Patil School of Engineering
Department of Computer Engineering
Dr. D. Y. Patil Technical Campus



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Charholi (Bk),

Website: <https://dypsoe.in/>

Department of Computer Engineering


Program Specific Outcomes (PSOs):

Form No. IQAC/36

PSO-1	Professional Skills-The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient design of computer-based systems of varying.
PSO-2	Problem-Solving Skills- The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.
PSO-3	Successful Career and Entrepreneurship- The ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, and a zest for higher studies.

Prof. Amruta Chitari
Subject Teacher




Dr. P.M. Agarkar
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Department of Computer Engineering

CO-PO-PSO Mapping

Form No. IQAC/36

Semester: II

Class: TE Div: A

Academic Year: 2021-22

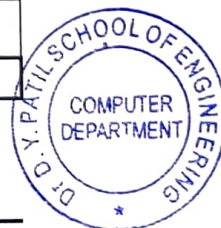
Subject: Data Science and Big Data Analytics

Name of Subject Teacher: Prof. Amruta Chitari

PO CO	BT LEVEL	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO-1	4-Analyze	1	3	2	1					1			1	2		
CO-2	3-Apply	1	2	1	2		1			1			1	1		
CO-3	3-Apply	2	1	2	1		1			1			1	1		
CO-4	6-Create	1	2	2	2	2				1			1	1	2	
CO-5	6-Create	1	2	2	1	2				1			1	1	2	
CO-6	6-Create	1	2	1	2	2				1			1	2	2	
Average		1.17	2.00	1.67	1.50	2.00	1.00	-	-	1.00	-	-	1.00	1.33	2.00	-
Rounded off		2	2	2	2	2	1			1			1	2	2	

(Strength of Correlation): 3-Strong, 2-Medium, 1-Weak, Keep Blank-if No Correlation

Justification for CO-PO Mapping.



CO No.	PO/PSO	Level	Justification of Mapping
CO-1	PO1	1	Slightly having the basic knowledge of the fundamental concepts to analyze needs and challenges for data Science that helps in solving complex engineering problems
	PO2	3	Strongly students will be able to analyse various challenges to identify concepts to solve.
	PO3	2	Moderately students will be able to design solutions for various need & Challenges of Big Data
	PO4	1	Slightly the student will be able to conduct various experiments using various techniques of Data Science for conclusion
	PO9	1	Slightly the student will be able to analyse, discuss need & Challenges of Big Data and formulate models in groups
	PSO1	2	Weakly students learns various approaches and acquire skills to design, analyse and develop algorithms and implement them
CO-2	PO1	1	Slightly students will be able to apply the knowledge of basic mathematics into statistics for Big Data Analytics for solving engineering problem
	PO2	1	Slightly students will be able to analyse problems to identify statistics
	PO3	1	Slightly the students will know Principles of mathematics and engineering sciences are used in various aspects of Big Data Analytics
	PO4	1	Slightly the student using the knowledge of linear Data Structures concepts, we can design and develop solutions for complex engineering problems
	PO5	1	Slightly having knowledge of big data analytics can be used to conduct experiments in real life problems to provide valid conclusions
	PO7	1	Slightly the student can understand the impact of Big data analytics in the societal and environment context.
	PO10	1	Slightly the student will become aware of the need for lifelong learning and the continued upgrading of technical knowledge of Big Data Analytics
	PSO1	1	Slightly the student will study of fundamental concepts of Big Data Analytics to analyse and implement them efficient design of computer-based systems of varying.
	PO1	3	Strongly the student will know Principles of mathematics and engineering sciences are used in various aspects of lifecycle of Big Data Analytics
	PO2	1	Slightly students will be able to apply lifecycle of Big Data analytics to real world problems
	PO3	2	Moderately having Knowledge of lifecycle of big data analytics can be used to conduct experiments in real life problems to provide valid conclusions



CO-3

PO4

1

Slightly having Knowledge of cycle of big data analytics can be used to conduct experiments in real life problems to provide valid conclusions

PO5

2

Slightly the students will study different tools used for prediction and modeling to complex engineering activities can be used to conduct experiments in real life problems to provide valid conclusions

PO12

1

Slightly the student will become aware of the need for lifelong learning and the continued upgrading of technical knowledge of big data Analytics

PSO1

1

Slightly the student will have ability to understand, analyze and develop computer programs in the areas big data analytics for efficient design of computer-based systems of varying.

PO1

3

Strongly having the Knowledge of the fundamental concepts of python that helps in solving complex engineering problems.

PO2

1

Slightly the student will know the principles of mathematics and engineering sciences used in various aspects of big Data analytics implementation

PO3

2

Moderately the student having the Knowledge of Python can design , develop, implement solutions for complex engineering problems.

PO4

1

Weakly the knowledge of various tool of python programming will help student to design and conduct experiments to provide valid conclusions

PO5

2

Moderately the students will study different tools used to implement big data analytics

PO9

1

Weakly Expertise developed, which will enable the student to become a productive member of a design team

PO11

1

Slight knowledge & understanding of the python programming to can be applied in multidisciplinary environment

PO12

1

Moderately the student will become aware of the need for lifelong learning and the continued upgrading of technical knowledge

PSO1

1

Moderately Study of regression model working acquire skills to design, analyse and develop algorithms and implement them using openCV

PSO2

2

Moderately Identification of big data analytics area contribute skills in computing and knowledge engineering domain

PO1

1

Slightly having the Knowledge of the fundamental data visualization that helps in solving complex engineering problems

PO2

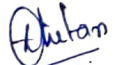
3

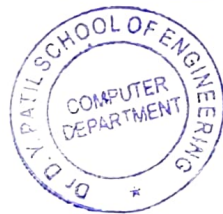
Strongly the student will know the principles of mathematics and engineering sciences used in various aspects of data visualization


CO-4



CO-5	PO5	1	Slightly the students having knowledge about data visualization techniques, resources, data visualization tools to analyze complex engineering activities with an understanding of the limitations.
	PO7	1	Slightly the student can understand the use of data visualization tool in the societal and environment context.
	PO8	1	Slightly the students will apply data visualization techniques to ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
	PSO1	1	Weakly students learn various approaches and acquire skills to design, analyse and implement data visualization tools.
	PSO2	2	Moderately student Knowledge of data visualization concepts contribute skills in computing and knowledge engineering domain
CO-6	PO1	1	Strongly student will be able to compare study of different feature selection techniques that helps in involves solving complex engineering problems
	PO3	2	Moderately having Knowledge of big database & hadoop can be used to conduct experiments in real life problems to provide valid conclusions
	PO4	1	Knowledge can be used to design & conduct experiment to provide conclusion.
	PO6	1	Slightly student Hadoop ecosystem knowledge can be used to find solutions to common social problems
	PO12	1	Slightly the student will become aware of the need for lifelong learning and the continued upgrading of technical knowledge
	PSO1	2	Moderately having knowledge about design & implementation of Big Databases will help to acquire skills to design, analyse and develop algorithms and implement them using Hadoop ecosystem
	PSO2	2	Moderately having knowledge of Hadoop can contribute skills in computing and knowledge engineering domain


 Prof. Amruta Chitari
 Subject Teacher




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Department of Computer Engineering

Summative Test Marks [Direct Assessment-Internal]

Form No. IQAC/36

Summative Test

Date: 7/2/2022

Academic Year: 21-22

Semester: II

Subject: Data Science and Big Data Analytics

Max. Marks: 20

Name of Subject Teacher: Prof. Amruta Chitari

Class: TE Div: A

CO Addressed

CO1

Marks

**Marks
Obtained**

**Marks
Out of**

Mapping level

Roll No.

Name of student

20

10

A-1

ADAGALE KUNAL DEEPAK

16

8

3

A-2

ADARSH KUMAR JHA

19

10

3

A-3

ADARSH RAI

19

10

3

A-4

ADE SAHADEV SUKHADEV

AB

NA

NA

A-5

ADITYA SHIVAJI BHOR

15

8

3

A-6

ADITYA SINHA

19

10

3

A-7

AKASH KANAR

14

7

3

A-8

HARJOT KAUR

18

9

3

A-9

ANIKET SANDEEP WANKHEDE

17

9

3

A-10

ANJALI PARMAR

14

7

3

A-11

ARYAN

13

7

3

A-12

ATHARV RAJENDRA PATIL

16

8

3

A-13

AYUSH BALIYAN

18

9

3

A-14

BAHIRAT POOJA AVINASH

18

9

3

A-15

BALJEET SINGH KATOCH

19

10

3

A-16

BELGE ANUJA GOVINDRAO

15

8

3

A-17

BHARATI SHIVAM SANJAY

16

8

3

A-18

BHOSALE PRATIK RAMACHANDRA

16

8

3

A-19

BHOSALE SHWETA RAJENDRA

18

9

3

A-20

BOMBE KRUSHNAKANT RAMESH

15

8

3

A-21

BORKAR RUPESH DATTATRAY

19

10

3

A-22

CHAUDHARI SUYOG JITENDRA

AB

NA

NA

A-23

CHAUHAN KHUSHI YASHWANTRAO

13

7

3

A-25

CHAVAN PRANOTI HANUMANT

12

6

3

A-26

CHHATRAPAND NIKHIL RAJESH

15

8

3

A-27

CHINCHMALATPOKE SIDDHESH

19

10

3

A-28

CHORDIYA RIYA NILAM

18

9

3

A-29

CHOUGHULE RAHUL DASHRATH

AB

NA

NA

A-30

CHRISTOPHER

18

9

3

A-31

DESHMUKH SHIVAM ASHOK

15

8

3

A-32

DHAMAL MAYANK PRASHANT

18

9

3

A-33

DUBUKWAD SHIVRATNA SHIVLING

18

9

3

A-34

FARANDE ABHISHEK VITTHAL

15

8

3

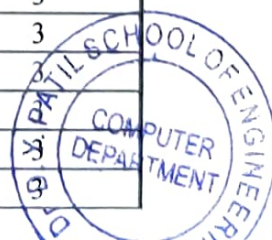
A-35

FUTANE GANESH DINKAR

18

9

3




A-36	GADGE PRANAV ASHOK	19	10	3
A-37	GAIKWAD MANSI SANJAY	18	9	3
A-38	GAIKWAD SHUBHAM SUBHASH	17	9	3
A-39	GAWALI ANAND GORAKH	18	9	3
A-40	HARI SHANKAR BHUYAN	16	8	3
A-41	HEMADE VAISHNAVI BHASKAR	16	8	3
A-42	HIWRALE PRATIK RAJU	17	9	3
A-43	INGLE KIRAN VIJAY	16	8	3
A-44	ISHIKA SINHA	19	10	3
A-45	JADHAV PRATHAMESH SURESH	19	10	3
A-46	JAGTAP RUTUJA BHAUSAHEB	14	7	3
A-47	JAMAL KIARA AMIR	16	8	3
A-48	JOSHI YASH GIRISH	18	9	3
A-49	KADAM ADITYA AVINASH	4	2	0
A-50	KADAM PRAJAKTA BHARAT	16	8	3
A-51	KAMBLE POOJA ANANT	16	8	3
A-52	KAMDI PRAJWAL MILINDKUMAR	18	9	3
A-53	KANADE PRATIKSHA SANTOSH	17	9	3
A-54	KANCHANGIRE SHUBHAM	19	10	3
A-55	KANDGE VIPUL GORAKH	17	9	3
A-56	KAPOOR VANSHIKA SHASHI	16	8	3
A-57	KARAN KAUL	15	8	3
A-58	KARIMKHAN MOHIUDDIN MASOOD	18	9	3
A-59	KHAMKAR AKASH JITENDRA	19	10	3
A-60	KIRAN KISAN CHAVAN	15	8	3
A-62	MAHANT GOPI GOURDAS	19	10	3
A-63	MALI AJAY VINOD	17	9	3
A-64	MANE AKSHADA BANSILAL	16	8	3
A-65	MANE PALLAVI ANIL	16	8	3
A-66	KIRAN DEVASI	17	9	3
A-67	CHETAN DINESH NAGANE	19	10	3
A-68	YADAV ABHISHEK PRADIP	19	10	3
A-69	YASH DINKAR BAHIRAT	AB	NA	NA
A-70	CHOUDHARY JYOTI	13	7	3
A-71	PATIL ADITYA LALIT	19	10	3
A-72	KASHISH RAJIV KUMAR	19	10	3
A-73	PRANALI CHAUDHARI	13	7	3
A-74	ROHIT KUMAR	19	10	3
A-75	AMAN ATTAR	18	9	3
A-76	MUSKAN KASHINATH SAWANT	19	10	3
A-77	BATTULA SUSHMA LAXMINARAYANA	18	9	3
A-78	HIMANSHU AGARWAL	16	8	3
A-79	ROHAN PAWAR	17	9	3
A-80	GOURAV SUNIL MAHAJAN	13	7	3
A-81	OMKAR SHARAD NANDODE	18	9	3
A-82	SHUBHAM GHADGE	17	9	3
A-83	SANDHYA RANMALE	16	8	3
A-84	ASHAR SHAIKH	17	9	3
A-85	ARBAZ SAYYED	19	10	3
A-86	MAYUR KONDHARE	19	10	3
A-88	NIKHILRAJ DESALE	AB	NA	NA
A-89	SHRINATH KADAM	14	7	3
A-90	KOUSTUBH JUVEKAR	19	10	3




A-91	ROHAN AWATE	16	8	3
A-92	KETAN MHASKE	AB	NA	NA
A-93	SIDDHARTH GAIKWAD	18	9	3
A-94	PUSHPANJALI DABADE	19	10	3
Total no of students attempted the question		85	43	
Total no of students securing more than 60%				84
Total no of students securing more than 50%				0
Total no of students securing more than 40%				0
Percentage		98.82		
CO Addressed		CO-1		

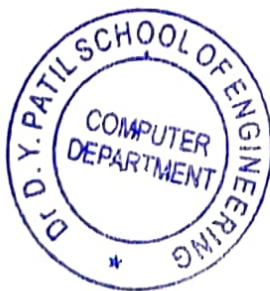
Criteria (marks Obtained)	Mapping Level
>=60%	3
>=50%	2
>=40%	1

CO Addressed	Avg	Mapping
CO1	98.82	3
CO2	NOT Addressed	
CO3		
CO4		
CO5		
CO6		


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Department of Computer Engineering

Test Marks [Direct Assessment-Internal]

Form No. IQAC/36

Unit Test Number: 1

Date: 22/02/2022

Academic Year: 2021-22

Semester: II

Subject: Data Science and Big Data Analytics

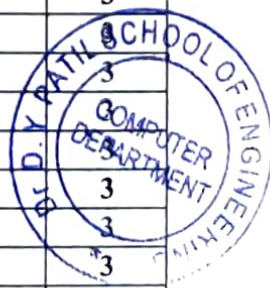
Max. Marks: 20

Name of Subject Teacher: Prof. Amruta Chitari

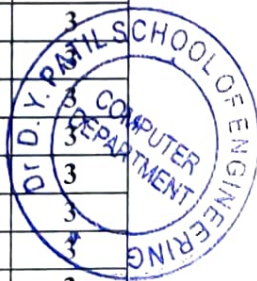
Class: TE

Div: A

Question Number		Q.1 Or Q.2		Q.3 Or Q.4	
CO Addressed		CO2		CO3	
Marks		10	Mapping level	10	Mapping level
Roll No.	Name of the Student	Marks Obtained		Marks Obtained	
A-1	ADAGALE KUNAL DEEPAK	9	3	9	3
A-2	ADARSH KUMAR JHA	9	3	9	3
A-3	ADARSH RAI	9	3	9	3
A-4	ADE SAHADEV SUKHADEV	8	3	8	3
A-5	ADITYA SHIVAJI BHOR	9	3	9	3
A-6	ADITYA SINHA	9	3	9	3
A-7	AKASH KANAR	7	3	7	3
A-8	HARJOT KAUR	9	3	9	3
A-9	ANIKET SANDEEP WANKHEDE	10	3	10	3
A-10	ANJALI PARMAR	8	3	8	3
A-11	ARYAN	7	3	7	3
A-12	ATHARV RAJENDRA PATIL	9	3	9	3
A-13	AYUSH BALIYAN	9	3	9	3
A-14	BAHIRAT POOJA AVINASH	10	3	10	3
A-15	BALJEET SINGH KATOCH	10	3	10	3
A-16	BELGE ANUJA GOVINDRAO	8	3	8	3
A-17	BHARATI SHIVAM SANJAY	10	3	10	3
A-18	BHOSALE PRATIK RAMACHANDRA	9	3	9	3
A-19	BHOSALE SHWETA RAJENDRA	7	3	7	3
A-20	BOMBE KRUSHNAKANT RAMESH	9	3	9	3
A-21	BORKAR RUPESH DATTATRAY	10	3	10	3
A-22	CHAUDHARI SUYOG JITENDRA	9	3	9	3
A-23	CHAUHAN KHUSHI YASHWANTRAO	8	3	8	3
A-25	CHAVAN PRANOTI HANUMANT	8	3	8	3
A-26	CHHATRABAND NIKHIL RAJESH	8	3	8	3
A-27	CHINCHMALATPURE SIDDHESH SAND	10	3	10	3
A-28	CHORDIYA RIYA NILAM	8	3	8	3
A-29	CHOUGHULE RAHUL DASHRATH	8	3	8	3
A-30	CHRISTOPHER	9	3	9	3
A-31	DESHMUKH SHIVAM ASHOK	9	3	9	3
A-32	DHAMAL MAYANK PRASHANT	10	3	10	3
A-33	DUBUKWAD SHIVRATNA SHIVLING	9	3	9	3
A-34	FARANDE ABHISHEK VITTHAL	8	3	8	3
A-35	FUTANE GANESH DINKAR	10	3	10	3
A-36	GADGE PRANAV ASHOK	9	3	9	3



A-37	GAIKWAD MANSI SANJAY	8	3	8	3
A-38	GAIKWAD SHUBHAM SUBHASH	8	3	8	3
A-39	GAWALI ANAND GORAKH	9	3	9	3
A-40	HARI SHANKAR BHUYAN	8	3	8	3
A-41	HEMADE VAISHNAVI BHASKAR	9	3	9	3
A-42	HIWRALE PRATIK RAJU	7	3	7	3
A-43	INGLE KIRAN VIJAY	10	3	10	3
A-44	ISHIKA SINHA	8	3	8	3
A-45	JADHAV PRATHAMESH SURESH	10	3	10	3
A-46	JAGTAP RUTUJA BHAUSAHEB	8	3	8	3
A-47	JAMAL KIARA AMIR	9	3	9	3
A-48	JOSHI YASH GIRISH	9	3	9	3
A-49	KADAM ADITYA AVINASH	7	3	7	3
A-50	KADAM PRAJAKTA BHARAT	9	3	9	3
A-51	KAMBLE POOJA ANANT	8	3	8	3
A-52	KAMDI PRAJWAL MILINDKUMAR	10	3	10	3
A-53	KANADE PRATIKSHA SANTOSH	8	3	8	3
A-54	KANCHANGIRE SHUBHAM	10	3	10	3
A-55	KANDGE VIPUL GORAKH	8	3	8	3
A-56	KAPOOR VANSHIKA SHASHI	8	3	8	3
A-57	KARAN KAUL	9	3	9	3
A-58	KARIMKHAN MOHIUDDIN MASOOD	10	3	10	3
A-59	KHAMKAR AKASH JITENDRA	10	3	10	3
A-60	KIRAN KISAN CHAVAN	8	3	8	3
A-62	MAHANT GOPI GOURDAS	9	3	9	3
A-63	MALI AJAY VINOD	8	3	8	3
A-64	MANE AKSHADA BANSILAL	8	3	8	3
A-65	MANE PALLAVI ANIL	9	3	9	3
A-66	KIRAN DEVASI	9	3	9	3
A-67	CHETAN DINESH NAGANE	10	3	10	3
A-68	YADAV ABHISHEK PRADIP	9	3	9	3
A-69	YASH DINKAR BAHIRAT	8	3	8	3
A-70	CHOUDHARY JYOTI	7	3	7	3
A-71	PATIL ADITYA LALIT	10	3	10	3
A-72	KASHISH RAJIV KUMAR	9	3	9	3
A-73	PRANALI CHAUDHARI	8	3	8	3
A-74	ROHIT KUMAR	10	3	10	3
A-75	AMAN ATTAR	8	3	8	3
A-76	MUSKAN KASHINATH SAWANT	8	3	8	3
A-77	BATTULA SUSHMA LAXMINARAYANA	9	3	9	3
A-78	HIMANSHU AGARWAL	9	3	9	3
A-79	ROHAN PAWAR	10	3	10	3
A-80	GOURAV SUNIL MAHAJAN	8	3	8	3
A-81	OMKAR SHARAD NANDODE	8	3	8	3
A-82	SHUBHAM GHADGE	9	3	9	3
A-83	SANDHYA RANMALE	8	3	8	3
A-84	ASHAR SHAIKH	9	3	9	3
A-85	ARBAZ SAYYED	10	3	10	3
A-86	MAYUR KONDHARE	10	3	10	3
A-88	NIKHILRAJ DESALE	10	3	10	3
A-89	SHRINATH KADAM	10	3	10	3
A-90	KOUSTUBH JUVEKAR	10	3	10	3
A-91	ROHAN AWATE	9	3	9	3



A-92	KETAN MHASKE	10	3	10	3
A-93	SIDDHARTH GAIKWAD	9	3	9	3
A-94	PUSHPANJALI DABADE	10	3	10	3
Total no of students attempted the question		91		91	
Total no of students securing more than 60%			91		91
Total no of students securing more than 50%			0		0
Total no of students securing more than 40%			0		0
Percentage		100.00		100.00	
CO Addressed		CO-2		CO-3	

Criteria (marks Obtained)	Mapping Level
$\geq 60\%$	3
$\geq 50\%$	2
$\geq 40\%$	1

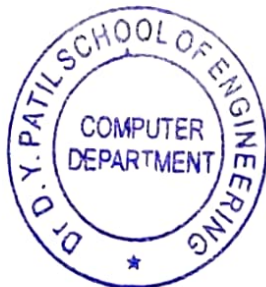
CO Addressed	Avg	Mapping
CO1	NOT Addressed	
CO2	100.00	3
CO3	100.00	3
CO4	NOT Addressed	
CO5		
CO6		

Amruta

Prof. Amruta Chitari
Subject Teacher

P.M. Agarkar
Dr. P.M. Agarkar
HoD

Head of the Department
Department of Computer Engineering
Dr. D. Y. Patil School of Engineering
Dr. D. Y. Patil Technical Campus
Via. Lohegaon, Charholi Bk., Pune-412 105





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Dr. D. Y. Patil Knowledge City,
Charholi (Bk), Lohegaon, Pune – 412 105

Website: <https://dypsoe.in/>

Department of Computer Engineering

Test Marks [Direct Assessment- Internal]

Form No. IQAC/

Unit Test Number: 2

Date: 30/05/2022

Academic Year: 2021-22

Semeste II

Subject: Data Science and Big Data Analytics

Max. Marks:20

Name of Subject Teacher: Prof. Amruta Chit:

Class: TE

Div: A

Question Number		Q.1 Or Q.2		Q.3 Or Q.4		Q.5 Or Q.6	
CO Addressed		CO4		CO5		CO6	
Marks		10	Mapping level	10	Mapping level	10	Mapping level
Roll No.	Name of the Student	Marks Obtained		Marks Obtained		Marks Obtained	
A-1	ADAGALE KUNAL DEEPAK	7	3	7	3	7	3
A-2	ADARSH KUMAR JHA	9	3	9	3	9	3
A-3	ADARSH RAI	9	3	9	3	9	3
A-4	ADE SAHADEV SUKHADEV	9	3	9	3	9	3
A-5	ADITYA SHIVAJI BHOR	10	3	10	3	10	3
A-6	ADITYA SINHA	9	3	9	3	9	3
A-7	AKASH KANAR	9	3	9	3	9	3
A-8	HARJOT KAUR	9	3	9	3	9	3
A-9	ANIKET SANDEEP WANKHEDE	9	3	9	3	9	3
A-10	ANJALI PARMAR	8	3	8	3	8	3
A-11	ARYAN	9	3	9	3	9	3
A-12	ATHARV RAJENDRA PATIL	9	3	9	3	9	3
A-13	AYUSH BALIYAN	9	3	9	3	9	3
A-14	BAHIRAT POOJA AVINASH	10	3	10	3	10	3
A-15	BALJEET SINGH KATOCH	10	3	10	3	10	3
A-16	BELGE ANUJA GOVINDRAO	9	3	9	3	9	3
A-17	BHARATI SHIVAM SANJAY	10	3	10	3	10	3
A-18	BHOSALE PRATIK RAMACHANDR	9	3	9	3	9	3
A-19	BHOSALE SHWETA RAJENDRA	7		7		7	
A-20	BOMBE KRUSHNAKANT RAMESH	9	3	9	3	9	3
A-21	BORKAR RUPESH DATTATRAY	10	3	10	3	10	3
A-22	CHAUDHARI SUYOG JITENDRA	7	3	7	3	7	3
A-23	CHAUHAN KHUSHI YASHWANTR	10	3	10	3	10	3
A-25	CHAVAN PRANOTI HANUMANT	10	3	10	3	10	3
A-26	CHHATRABAND NIKHIL RAJESH	9	3	9	3	9	3
A-27	CHINCHMALATPURE SIDDHESH S	10	3	10	3	10	3
A-28	CHORDIYA RIYA NILAM	10	3	10	3	10	3
A-29	CHOUGHULE RAHUL DASHRATH	8	3	8	3	8	3
A-30	CHRISTOPHER	6	3	6	3		
A-31	DESHMUKH SHIVAM ASHOK	6	3	6	3		
A-32	DHAMAL MAYANK PRASHANT	10	3	10	3		
A-33	DUBUKWAD SHIVRATNA SHIVLIN	9	3	9	3		
A-34	FARANDE ABHISHEK VITTHAL	8	3	8	3		
A-35	FUTANE GANESH DINKAR	8	3	8	3		
A-36	GADGE PRANAV ASHOK	9	3	9	3		



A-37	GAIKWAD MANSI SANJAY	8	3	8	3	8	3
A-38	GAIKWAD SHUBHAM SUBHASH	9	3	9	3	9	3
A-39	GAWALI ANAND GORAKH	9	3	9	3	9	3
A-40	HARI SHANKAR BHUYAN	3	0	3	0	3	0
A-41	HEMADE VAISHNAVI BHASKAR	9	3	9	3	9	3
A-42	HIWRALE PRATIK RAJU	7	3	7	3	7	3
A-43	INGLE KIRAN VIJAY	10	3	10	3	10	3
A-44	ISHIKA SINHA	9	3	9	3	9	3
A-45	JADHAV PRATHAMESH SURESH	10	3	10	3	10	3
A-46	JAGTAP RUTUJA BHAUSAHEB	8	3	8	3	8	3
A-47	JAMAL KIARA AMIR	9	3	9	3	9	3
A-48	JOSHI YASH GIRISH	9	3	9	3	9	3
A-49	KADAM ADITYA AVINASH	10	3	10	3	10	3
A-50	KADAM PRAJAKTA BHARAT	9	3	9	3	9	3
A-51	KAMBLE POOJA ANANT	8	3	8	3	8	3
A-52	KAMDI PRAJWAL MILINDKUMAR	10	3	10	3	10	3
A-53	KANADE PRATIKSHA SANTOSH	8	3	8	3	8	3
A-54	KANCHANGIRE SHUBHAM	8	3	8	3	8	3
A-55	KANDGE VIPUL GORAKH	8	3	8	3	8	3
A-56	KAPOOR VANSHIKA SHASHI	10	3	10	3	10	3
A-57	KARAN KAUL	9	3	9	3	9	3
A-58	KARIMKHAN MOHIUDDIN MASOC	6	3	6	3	6	3
A-59	KHAMKAR AKASH JITENDRA	8	3	8	3	8	3
A-60	KIRAN KISAN CHAVAN	9	3	9	3	9	3
A-62	MAHANT GOPI GOURDAS	9	3	9	3	9	3
A-63	MALI AJAY VINOD	10	3	10	3	10	3
A-64	MANE AKSHADA BANSILAL	8	3	8	3	8	3
A-65	MANE PALLAVI ANIL	9	3	9	3	9	3
A-66	KIRAN DEVASI	9	3	9	3	9	3
A-67	CHETAN DINESH NAGANE	10	3	10	3	10	3
A-68	YADAV ABHISHEK PRADIP	9	3	9	3	9	3
A-69	YASH DINKAR BAHIRAT	10	3	10	3	10	3
A-70	CHOUDHARY JYOTI	5	2	5	2	5	2
A-71	PATIL ADITYA LALIT	10	3	10	3	10	3
A-72	KASHISH RAJIV KUMAR	9	3	9	3	9	3
A-73	PRANALI CHAUDHARI	8	3	8	3	8	3
A-74	ROHIT KUMAR	8	3	8	3	8	3
A-75	AMAN ATTAR	6	3	6	3	6	3
A-76	MUSKAN KASHINATH SAWANT	8	3	8	3	8	3
A-77	BATTULA SUSHMA LAXMINARAY	9	3	9	3	9	3
A-78	HIMANSHU AGARWAL	9	3	9	3	9	3
A-79	ROHAN PAWAR	10	3	10	3	10	3
A-80	GOURAV SUNIL MAHAJAN	8	3	8	3	8	3
A-81	OMKAR SHARAD NANDODE	8	3	8	3	8	3
A-82	SHUBHAM GHADGE	9	3	9	3	9	3
A-83	SANDHYA RANMALE	8	3	8	3	8	3
A-84	ASHAR SHAIKH	5	2	5	2	5	2
A-85	ARBAZ SAYYED	8	3	8	3	8	3
A-86	MAYUR KONDHARE	10	3	10	3	10	3
A-88	NIKHILRAJ DESALE	10	3	10	3	10	3
A-89	SHRINATH KADAM	10	3	10	3	10	3
A-90	KOUSTUBH JUVEKAR	10	3	10	3	10	3
A-91	ROHAN AWATE	10	3	10	3	10	3

A-92	KETAN MHASKE	10	3	10	3	10	3
A-93	SIDDHARTH GAIKWAD	2	0	2	0	2	0
A-94	PUSHPANJALI DABADE	7	3	7	3	7	3
Total no of students attempted the question		91		91		91	
Total no of students securing more than 60%			86		86		86
Total no of students securing more than 50%			2		2		2
Total no of students securing more than 40%			0		0		0
Percentage		94.51		94.51		94.51	
CO Addressed		CO-4		CO-5		CO-6	

Crit eria	Mapping Level
>=60%	3
>=50%	2
>=40%	1

CO Addressed	Avg	Mapping
CO1	NOT Addressed	
CO2		
CO3		
CO4	94.51	3
CO5	94.51	3
CO6	94.51	3

Amruta

Prof. Amruta Chitari
Subject Teacher

P.M. Agarkar

Dr. P.M Agarkar
HoD

Head of the Department
Department of Computer Engineering
Dr. D. Y. Patil School of Engineering
Dr. D. Y. Patil Technical Campus
Via Lohegaon, Charholi Bk., Pune-412 105





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Website: <https://dypsoe.in/>

Department of Computer Engineering

Continuous Assessment (CA) [Direct Assessment -Internal] Form No. IQAC/36

Academic Year: 2021-22

Semester:II

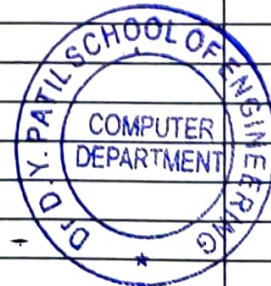
Subject: Data Science and Big Data Analytics

Class:TE

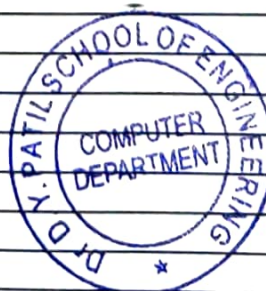
Div: A

Name of Subject Teacher:Prof. Amruta Chitari

Roll No.	Name of the Student	CA (out of 50)
A-1	ADAGALE KUNAL DEEPAK	34
A-2	ADARSH KUMAR JHA	40
A-3	ADARSH RAI	39
A-4	ADE SAHADEV SUKHADEV	29
A-5	ADITYA SHIVAJI BHOR	41
A-6	ADITYA SINHA	40
A-7	AKASH KANAR	38
A-8	HARJOT KAUR	44
A-9	ANIKET SANDEEP WANKHEDE	37
A-10	ANJALI PARMAR	36
A-11	ARYAN	38
A-12	ATHARV RAJENDRA PATIL	36
A-13	AYUSH BALIYAN	35
A-14	BAHIRAT POOJA AVINASH	43
A-15	BALJEET SINGH KATOCH	41
A-16	BELGE ANUJA GOVINDRAO	39
A-17	BHARATI SHIVAM SANJAY	38
A-18	BHOSALE PRATIK RAMACHANDRA	38
A-19	BHOSALE SHWETA RAJENDRA	35
A-20	BOMBE KRUSHNAKANT RAMESH	33
A-21	BORKAR RUPESH DATTATRAY	44
A-22	CHAUDHARI SUYOG JITENDRA	23
A-23	CHAUHAN KHUSHI YASHWANTRAO	40
A-25	CHAVAN PRANOTI HANUMANT	40
A-26	CHHATRABAND NIKHIL RAJESH	39
A-27	CHINCHMALATPURE SIDDHESH SANDEEP	42
A-28	CHORDIYA RIYA NILAM	43
A-29	CHOUGHULE RAHUL DASHRATH	26
A-30	CHRISTOPHER	31
A-31	DESHMUKH SHIVAM ASHOK	30
A-32	DHAMAL MAYANK PRASHANT	40
A-33	DUBUKWAD SHIVRATNA SHIVLING	41
A-34	FARANDE ABHISHEK VITTHAL	39
A-35	FUTANE GANESH DINKAR	35
A-36	GADGE PRANAV ASHOK	39



A-37	GAIKWAD MANSI SANJAY	40
A-38	GAIKWAD SHUBHAM SUBHASH	41
A-39	GAWALI ANAND GORAKH	37
A-40	HARI SHANKAR BHUYAN	23
A-41	HEMADE VAISHNAVI BHASKAR	38
A-42	HIWRALE PRATIK RAJU	37
A-43	INGLE KIRAN VIJAY	41
A-44	ISHIKA SINHA	42
A-45	JADHAV PRATHAMESH SURESH	40
A-46	JAGTAP RUTUJA BHAUSAHEB	36
A-47	JAMAL KIARA AMIR	40
A-48	JOSHI YASH GIRISH	38
A-49	KADAM ADITYA AVINASH	38
A-50	KADAM PRAJAKTA BHARAT	36
A-51	KAMBLE POOJA ANANT	38
A-52	KAMDI PRAJWAL MILINDKUMAR	38
A-53	KANADE PRATIKSHA SANTOSH	39
A-54	KANCHANGIRE SHUBHAM	37
A-55	KANDGE VIPUL GORAKH	36
A-56	KAPOOR VANSHIKA SHASHI	45
A-57	KARAN KAUL	41
A-58	KARIMKHAN MOHIUDDIN MASOOD	32
A-59	KHAMKAR AKASH JITENDRA	36
A-60	KIRAN KISAN CHAVAN	38
A-62	MAHANT GOPI GOURDAS	39
A-63	MALI AJAY VINOD	42
A-64	MANE AKSHADA BANSILAL	39
A-65	MANE PALLAVI ANIL	35
A-66	KIRAN DEVASI	38
A-67	CHETAN DINESH NAGANE	41
A-68	YADAV ABHISHEK PRADIP	39
A-69	YASH DINKAR BAHIRAT	38
A-70	CHOUDHARY JYOTI	22
A-71	PATIL ADITYA LALIT	42
A-72	KASHISH RAJIV KUMAR	41
A-73	PRANALI CHAUDHARI	35
A-74	ROHIT KUMAR	35
A-75	AMAN ATTAR	30
A-76	MUSKAN KASHINATH SAWANT	38
A-77	BATTULA SUSHMA LAXMINARAYANA	40
A-78	HIMANSHU AGARWAL	39
A-79	ROHAN PAWAR	38
A-80	GOURAV SUNIL MAHAJAN	38
A-81	OMKAR SHARAD NANDODE	35
A-82	SHUBHAM GHADGE	34
A-83	SANDHYA RANMALE	38
A-84	ASHAR SHAIKH	25
A-85	ARBAZ SAYYED	35



A-86	MAYUR KONDHARE	40
A-88	NIKHILRAJ DESALE	34
A-89	SHRINATH KADAM	39
A-90	KOUSTUBH JUVEKAR	43
A-91	ROHAN AWATE	42
A-92	KETAN MHASKE	36
A-93	SIDDHARTH GAIKWAD	22
A-94	PUSHPANJALI DABADE	35
TOTAL COUNT OF STUDENTS		91
TOTAL MARKS OF STUDENTS		3380
AVERAGE MARKS		37.14
% ASSESSMENT OF AVERAGE MARKS (out of 50)		74.29



Prof. Amruta Chitari
Subject Teacher



Dr. P.M. Agarkar
HoD

Head of the Department
Department of Computer Engineering
Dr. D. Y. Patil School of Engineering
Dr. D. Y. Patil Technical Campus
Via Lohegaon, Charholi Bk., Pune-412 105





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Website: <https://dypsoe.in/>

Department of Computer Engineering

Course Exit Survey [Indirect Assessment]

Form No. IQAC/36

Academic Year: 2021-22

Subject: Data Science and Big Data Analytics

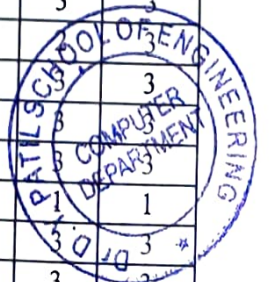
Semester: II

Name of Subject Teacher: Prof. Amruta Chitari


Class: TE

Div: A


Roll No.	Name of student	CO-1	CO-2	CO-3	CO-4	CO-5	CO-6
A-1	ADAGALE KUNAL DEEPAK	3	3	3	3	3	3
A-2	ADARSH KUMAR JHA	3	3	3	3	3	3
A-3	ADARSH RAI	2	1	3	2	2	2
A-6	ADITYA SINHA	3	3	3	3	3	3
A-7	AKASH KANAR	3	3	3	3	3	3
A-8	HARJOT KAUR	3	3	3	3	3	3
A-10	ANJALI PARMAR	3	3	3	3	3	3
A-11	ARYAN	3	3	2	3	3	3
A-12	ATHARV RAJENDRA PATIL	3	3	3	3	3	3
A-13	AYUSH BALIYAN	3	1	3	3	3	2
A-14	BAHIRAT POOJA AVINASH	2	3	3	2	1	1
A-15	BALJEET SINGH KATOCH	2	3	3	3	3	3
A-16	BELGE ANUJA GOVINDRAO	3	3	3	3	3	3
A-18	BHOSALE PRATIK RAMACHANDRA	3	3	2	3	3	3
A-19	BHOSALE SHWETA RAJENDRA	3	3	3	3	2	3
A-20	BOMBE KRUSHNAKANT RAMESH	3	3	3	3	3	3
A-21	BORKAR RUPESH DATTATRAY	3	3	3	3	3	3
A-22	CHAUDHARI SUYOG JITENDRA	3	3	2	3	3	3
A-23	CHAUHAN KHUSHI YASHWANTRAO	2	3	3	2	2	3
A-26	CHHATRABAND NIKHIL RAJESH	3	3	2	3	3	3
A-27	CHINCHMALATPURE SIDDHESH SAN	3	3	3	3	3	3
A-29	CHOUGHULE RAHUL DASHRATH	2	3	3	2	2	2
A-30	CHRISTOPHER	2	3	3	3	3	3
A-31	DESHMUKH SHIVAM ASHOK	3	3	3	3	3	3
A-32	DHAMAL MAYANK PRASHANT	2	2	3	2	2	2
A-33	DUBUKWAD SHIVRATNA SHIVLING	3	3	2	3	3	3
A-34	FARANDE ABHISHEK VITTHAL	3	3	3	3	2	3
A-35	FUTANE GANESH DINKAR	3	3	3	3	3	3
A-36	GADGE PRANAV ASHOK	3	3	3	3	3	3
A-37	GAIKWAD MANSI SANJAY	3	3	2	3	3	3
A-38	GAIKWAD SHUBHAM SUBHASH	2	3	3	2	3	3
A-40	HARI SHANKAR BHUYAN	3	3	2	3	3	3
A-41	HEMADE VAISHNAVI BHASKAR	3	3	3	3	3	3
A-42	HIWRALE PRATIK RAJU	3	3	3	3	3	3
A-43	INGLE KIRAN VIJAY	2	3	3	2	3	3
A-44	ISHIKA SINHA	2	3	3	3	3	3
A-45	JADHAV PRATHAMESH SURESH	3	3	3	3	3	3
A-46	JAGTAP RUTUJA BHAUSAHEB	2	1	3	2	2	2



A-47	JAMAL KIARA AMIR	3	3	2	3	3	3
A-48	JOSHI YASH GIRISH	3	3	3	3	2	3
A-49	KADAM ADITYA AVINASH	3	3	3	3	3	3
A-50	KADAM PRAJAKTA BHARAT	3	3	3	3	3	3
A-51	KAMBLE POOJA ANANT	3	3	2	3	3	3
A-52	KAMDI PRAJWAL MILINDKUMAR	2	3	3	2	2	3
A-53	KANADE PRATIKSHA SANTOSH	3	3	3	3	3	2
A-55	KANDGE VIPUL GORAKH	3	3	3	3	3	3
A-56	KAPOOR VANSHIKA SHASHI	2	2	2	3	3	2
A-57	KARAN KAUL	2	3	3	2	1	1
A-58	KARIMKHAN MOHIUDDIN MASOOD	3	3	2	3	3	3
A-60	KIRAN KISAN CHAVAN	3	3	3	3	3	2
A-63	MALI AJAY VINOD	3	3	3	3	3	3
A-64	MANE AKSHADA BANSILAL	3	3	3	3	3	3
A-65	MANE PALLAVI ANIL	2	3	3	2	2	3
A-66	KIRAN DEVASI	2	3	3	2	2	3
A-68	YADAV ABHISHEK PRADIP	2	2	3	2	2	2
A-69	YASH DINKAR BAHIRAT	3	3	3	2	3	3
A-70	CHOUDHARY JYOTI	3	3	3	2	2	3
A-72	KASHISH RAJIV KUMAR	3	3	3	2	3	3
A-78	HIMANSHU AGARWAL	3	3	3	2	3	3
A-79	ROHAN PAWAR	3	3	3	2	3	3
A-81	OMKAR SHARAD NANDODE	3	3	3	2	3	3
A-82	SHUBHAM GHADGE	3	3	3	2	3	3
A-83	SANDHYA RANMALE	3	3	3	2	3	3
A-84	ASHAR SHAIKH	3	3	3	2	3	3
A-85	ARBAZ SAYYED	3	3	3	2	3	3
A-89	SHRINATH KADAM	3	3	3	2	3	3
A-90	KOUSTUBH JUVEKAR	3	3	3	2	3	3
A-91	ROHAN AWATE	3	3	3	2	3	3
A-92	KETAN MHASKE	3	3	3	2	3	3
A-93	SIDDHARTH GAIKWAD	3	3	3	2	3	3
A-94	PUSHPANJALI DABADE	3	3	3	2	3	3
Total count of students		71	3	3	3	3	3
%		92.02	95.77	94.84	86.38	90.61	92.49
Course Outcome-->		CO1	CO2	CO3	CO4	CO5	CO6



Prof. Amruta Chitari
Subject Teacher




Dr. P.M Agarkar
HoD
Head of the Department
Department of Computer Engineering
Dr. D. Y. Patil School of Engineering
Dr. D. Y. Patil Technical Campus
Via Lohagaon, Charholi Bk., Pune-412 105



Semester: V sem-2021-22		CO-PO-PSO Attainment																				Form No. SPAC/20										Semester: II										
Subject: Data Science and Big Data Analytics																																										
Name of Subject Teacher: Prof. Ananta Chatur																																										
CO No.	Statement of COs	Scheme Termwise	Direct Assessment (Internal) (40%)					Direct Assessment (External) (20%) University Exam					Direct Assessment (20%) Internal End-Semester Continuous Assessment 100% (Two marks/100-120 Units and result)	Indirect Assessment (20%) Course Exit Survey	CO Attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14	PO15	PO16	PO17	PO18	PO19	PO20							
			Unit Test		(40%)		CA (20%)	Subject Exam (20%)		PU (20%)																																
			Session Test	CT1	CT2	Mapping	CA	Mapping	% result of Unit Test	% result of CA	% result of PU Exam	% result of PU Exam																														
CO-1	Analyse trends and challenges for Data Science Big Data Analytics	1-Remember	98.32		3.0	74.29	3	86.44	3.0	92.09	3.0	3.00	92.82	3.0	3.00	1	1	3	3	2	2	1	1																			
CO-2	Apply statistics for Big Data Analytics	2-Understand	100.00		3.0	74.29	3	86.44	3.0	92.09	3.0	3.0	95.77	3.0	3.00	1	1	2	2	1	1	2	2																			
CO-3	Apply the blocks of Big Data analytics to real world problems	4-Analyze	100.00		3.0	74.29	3	86.44	3.0	92.09	3.0	3.0	94.84	3.0	3.00	2	2	1	1	2	2	1	1																			
CO-4	Implement Big Data Analytics using Python programming	3-Apply		94.51	3.0	74.29	3	86.44	3.0	92.09	3.0	3.0	86.28	3.0	3.00	1	1	2	2	2	2	2	2																			
CO-5	Implement data visualization using visualization tools in Python programming	4-Analyze		94.51	3.0	74.29	3	86.44	3.0	92.09	3.0	3.0	98.61	3.0	3.00	1	1	2	2	2	2	1	1	2	2																	
CO-6	To apply clustering algorithms and identify its applicability to real life problems	3-Apply		94.51	3.0	74.29	3	86.44	3.0	92.09	3.0	3.0	92.49	3.0	3.00	1	1	2	2	1	1	2	2	2	2																	
Mapping Criteria ->			Marks >=40: Level 3					Marks >=50: Level 2					Marks >=60: Level 1					Avg. Attainment of PO1					Avg. Attainment of PO2					Avg. Attainment of PO3					Avg. Attainment of PO4									
																		1.23					1.40					1.57					1.50									

		Improvement Through Quality Technical Education Dr. D. Y. Patil School of Engineering Dr. D. Y. Patil Knowledge City, Charholi (DA), Lohangon, Pune - 412 105 Website: http://dypte.ac/																																
		Department of Computer Engineering																								Form No. IQAC/16								
Sr. No.	Class (Div) & Subject	CO No.	CO Attainment	PO1	Attainment	PO2	Attainment	PO3	Attainment	PO4	Attainment	PO5	Attainment	PO6	Attainment	PO7	Attainment	PO8	Attainment	PO9	Attainment	PO10	Attainment	PO11	Attainment	PO12	Attainment	PSO1	Attainment	PSO2	Attainment	PSO3	Attainment	
1	TE (A)- Data Science and Big Data Analytics	CO-1	3.00	1.00	1.00	3.00	3.00	2.00	2.00	1.00	1.00					1.00	1.00			1.00	1.00					1.00	1.00	2.00	2.00					
		CO-2	3.00	1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00					1.00	1.00			1.00	1.00					1.00	1.00	1.00	1.00					
		CO-3	3.00	2.00	2.00	1.00	1.00	2.00	2.00	1.00	1.00					1.00	1.00			1.00	1.00					1.00	1.00	1.00	1.00				1.00	1.00
		CO-4	3.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00							1.00	1.00					1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	
		CO-5	3.00	1.00	1.00	2.00	2.00	2.00	2.00	1.00	1.00	2.00	2.00							1.00	1.00					1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	
		CO-6	3.00																	1.00	1.00					1.00	1.00	2.00	2.00	2.00	2.00	1.00	1.00	
				1.00	1.00	2.00	2.00	1.00	1.00	2.00	2.00	2.00	2.00							1.00	1.00					1.00	1.00	1.00	1.00	2.00	2.00	1.00	1.00	
				Avg. Attainment of PO-1		Avg. Attainment of PO-2		Avg. Attainment of PO-3		Avg. Attainment of PO-4		Avg. Attainment of PO-5		Avg. Attainment of PO-6		Avg. Attainment of PO-7		Avg. Attainment of PO-8		Avg. Attainment of PO-9		Avg. Attainment of PO-10		Avg. Attainment of PO-11		Avg. Attainment of PO-12		Avg. Attainment of PSO-1		Avg. Attainment of PSO-2		Avg. Attainment of PSO-3		
				1.17		2.00		1.67		1.50		2.00		1.00						1.00				1.00		1.00		1.33		2.00		1.00		


 Prof. Anurag Chaturvedi
 Subject Teacher


 Dr. P. M. Agarkar
 HOD

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Empowerment Through Quality Technical Education
Dr. D. Y. Patil School of Engineering

D. Y. Patil Knowledge City,
Lohegaon, Pune – 412 105

Dr.

Charholi (Bk),

Website: <https://dypsoe.in/>

Department of Computer Engineering

Course Outcomes (COs):

Academic Year.:2021-22

Form No. IQAC/36

Subject: Elective III(Cloud Security)

Semester: III


Name of Subject Teacher: Prof.Minal C.Toley

Class: M.E.

CO No.	BT level	Students will be able to
CO-1	3-Apply	Use various services offered for cloud environment
CO-2	3-Apply	Apply computing security fundamentals confined to cloud environment
CO-3	4-Analyze	Analyze the cloud system for vulnerabilities, threats and attacks
CO-4	6-Create	Propose feasible security solution for cloud security
CO-5	1-Remember	Learn and Explore Cloud Infrastructures
CO-6	2-Understand	Know various issues related to the security of information in cloud environment


Prof.Minal Toley
Sub Incharge




Dr.Pankaj Agarkar

HOD

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Dr. D. Y. Patil Technical Campus
Via Lohegaon, Charholi Bk., Pune-412 105



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Dr. D. Y. Patil Knowledge City,

Charholi (Bk), Lohegaon, Pune - 412 105

Website: <https://dypsoe.in/>

Department of Computer Engineering

CO-PO-PSO Mapping

Form No. IQAC/36

Academic Year: 2021-22

Subject: Elective III(Cloud Security)

Semester: II

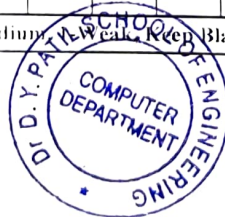
Name of Subject Teacher: Prof.Minal C.Toley

Class: M.E

PO CO	BT LEVEL	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO-1	3-Apply	3	3	3		2	2									
CO-2	3-Apply	3	3	3		3	3									
CO-3	4-Analyze	3	3	3		3	3									
CO-4	6-Create	3	3	3		3	3									
CO-5	1-Remember	3	3	3		3	3									
CO-6	2-Understand	3	3	3		1	1									
Average		3.00	3.00	3.00	-	2.50	2.50	-	-	-	-	-	-	-	-	-
Rounded off		3	3	3		3	3									

(Strength of Correlation): 3-Strong, 2-Medium, 1-Weak, 0-None, Blank-Blank if No Correlation

Minal C. Toley
Prof. Minal C. Toley
Sub Incharge



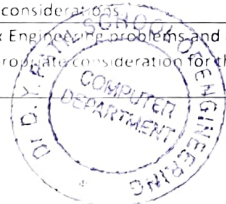
Dr. Parikaj Asarkar
Head of the Department
Department of Computer Engineering
Dr. D. Y. Patil School of Engineering

Justification for CO-PO Mapping.

CO No.	PO/PSO	Level	Justification of Mapping
CO-1	PO1	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO2	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO3	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO5	2	Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences
	PO6	2	Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences
	PO1	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
CO-2	PO2	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO3	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO5	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO6	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO1	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO2	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
CO-3	PO3	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.



CO-4	PO5	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO6	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO1	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO2	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO3	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO5	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO6	3	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
CO-5	PO1	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO2	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO3	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO5	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO6	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.



CO-6	PO1	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO2	3	Design solutions for complex Engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and
	PO3	3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
	PO5	1	Apply the knowledge of mathematics, science, Engineering fundamentals, and an Engineering specialization to the solution of complex Engineering problems.
	PO6	1	Apply the knowledge of mathematics, science, Engineering fundamentals, and an Engineering specialization to the solution of complex Engineering problems.



Prof. Minal Toley
Sub Incharge

Dr. Pankaj Agarkar
HOD

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Empowerment Through Quality Technical Education

Dr. D. Y. Patil School of Engineering

Dr. D. Y. Patil Knowledge City,
Charholi (HK), Lohagaoon, Pune - 412 105

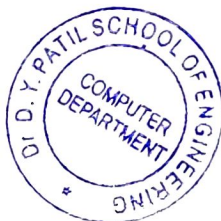
Website: <https://dypse.in>

Department of Computer Engineering

Form No. IQAC/36

Sr. No.	Class (Div) & Subject	CO No.	CO Attainment	PO1	Attainment	PO2	Attainment	PO3	Attainment	PO4	Attainment	PO5	Attainment	PO6	Attainment	PO7	Attainment	PO8	Attainment	PO9	Attainment	PO10	Attainment	PO11	Attainment	PO12	Attainment	PSO1	Attainment	PSO2	Attainment	PSO3	Attainment
M.E. Machine Learning		CO-1	3.00	3.00	3.00	3.00	3.00	3.00	3.00			2.00	2.00	2.00	2.00																		
		CO-2	2.52	3.00	3.00	3.00	3.00	3.00	3.00			3.00	3.00	3.00	3.00																		
		CO-3	3.00	3.00	3.00	3.00	3.00	3.00	3.00			3.00	3.00	3.00	3.00																		
		CO-4	3.00	3.00	3.00	3.00	3.00	3.00	3.00			3.00	3.00	3.00	3.00																		
		CO-5	3.00	3.00	3.00	3.00	3.00	3.00	3.00			3.00	3.00	3.00	3.00																		
		CO-6	3.00	3.00	3.00	3.00	3.00	3.00	3.00			1.00	1.00	1.00	1.00																		
			Avg Attainment of PO-1		Avg Attainment of PO-2		Avg Attainment of PO-3		Avg Attainment of PO-4		Avg Attainment of PO-5		Avg Attainment of PO-6		Avg Attainment of PO-7		Avg Attainment of PO-8		Avg Attainment of PO-9		Avg Attainment of PO-10		Avg Attainment of PO-11		Avg Attainment of PO-12		Avg Attainment of PSO-1		Avg Attainment of PSO-2		Avg Attainment of PSO-3		
			3.00		3.00		3.00		2.50		2.50																						

Dr. Mind C. Toley
Sub Incharge



Dr. pankaj Agarkar

Head of the Department
Department of Computer Engineering
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