



# Sri Indu Institute of Engineering & Technology

Recognized Under 2(f) of UGC Act 1956

Approved by AICTE, New Delhi

Affiliated to JNTUH, Hyderabad.

## COURSE FILE

ON

## Machine Learning Lab

Course Code -CS604PC

III B.Tech II-SEMESTER

A.Y.: 2022-2023

Prepared by

**Mrs.N.SHILPA**

**Assistant Professor**

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Sheriguda(V), Ibrahimpatnam(M), R.R.Dist-501 10.

  
**PRINCIPAL**  
Sri Indu Institute of Engineering & Techn.  
Sheriguda(VIII), Ibrahimpatnam  
R.R. Dist. Telangana-501 510.



## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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<b>Academic Year</b>	2022-2023
<b>Course Title</b>	MACHINE LEARNING LAB
<b>Course Code</b>	CS604PC
<b>Room No</b>	A-018
<b>Name of the lab incharge</b>	Mr.K.RAJINIKANTH
<b>Course Faculty</b>	Mrs.N.SHILPA, Assistant Professor

<b>S. No.</b>	<b>Name of the content</b>
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2	Department vision and mission /PEO
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4	Course Syllabus with Structure
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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### INSTITUTE VISION AND MISSION

#### Vision:

To become a premier institute of academic excellence by providing the world class education that transforms individuals into high intellectuals, by evolving them as empathetic and responsible citizens through continuous improvement.

#### Mission:

**IM1:** To offer outcome-based education and enhancement of technical and practical skills.

**IM2:** To continuous assess of teaching-learning process through institute-industry collaboration..

**IM3:** To be a centre of excellence for innovative and emerging fields in technology development with state-of-art facilities to faculty and students fraternity.

**IM4:** To create an enterprising environment to ensure culture, ethics and social responsibility among the stakeholders

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### DEPARTMENT VISION AND MISSION

#### Vision:

To become a prominent knowledge hub for learners, strive for educational excellence with innovative and industrial techniques so as to meet the global needs.

#### Mission:

- DM1 :** To provide ambience that enhances innovations, problem solving skills, leadership qualities, decision making, team-spirit and ethical responsibilities.
- DM2 :** To impart quality education with professional and personal ethics, so as to meet the challenging technological needs of the industry and society.
- DM3 :** To provide academic infrastructure and develop linkage with the world class organizations to strengthen industry-academia relationships for learners.
- DM4 :** To provide and strengthen new concepts of research in the thrust area of Computer Science and Engineering to reach the needs of Government and Society.

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### PROGRAM EDUCATIONAL OBJECTIVES

- PEO1:** To develop trained graduates with strong academic and technical skills of modern computer science and engineering.
- PEO2:** To promote trained graduates with leadership qualities and the ability to solve real time problems using current techniques and tools in interdisciplinary environment.
- PEO3:** To motivate the graduates towards lifelong learning through continuing education and professional development.

### PROGRAM SPECIFIC OUTCOMES

- PSO1 : Professional Skills:** To implement computer programs of varying complexity in the areas related to Web Design, Cloud Computing, Network Security and Artificial Intelligence.
- PSO2: Problem-Solving Skills:** To develop quality products using open ended programming environment.

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## PROGRAMME OUTCOMES (POs)

- PO1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2: Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3: 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.
- PO4: 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.
- PO5: Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- PO6: 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.
- PO7: 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.
- PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10: 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.
- PO11: 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.
- PO12: 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.

**JAWAHARLALNEHRUTECHNOLOGICALUNIVERSITYHYDERABAD**

**B.Tech.in COMPUTER SCIENCE AND ENGINEERING  
COURSE STRUCTURE & SYLLABUS(R18)  
ApplicableFrom2018-19Admitted Batch**

**III YEARISEMESTER**

S.No.	Course Code	CourseTitle	L	T	P	Credits
1	CS501PC	Formal Languages & Automata Theory	3	0	0	3
2	CS502PC	Software Engineering	3	0	0	3
3	CS503PC	Computer Networks	3	0	0	3
4	CS504PC	Web Technologies	3	0	0	3
5		Professional Elective-I	3	0	0	3
6		Professional Elective-II	3	0	0	3
7	CS505PC	Software Engineering Lab	0	0	3	1.5
8	CS506PC	Computer Networks & Web Technologies Lab	0	0	3	1.5
9	EN508HS	Advanced Communication Skills Lab	0	0	2	1
10	*MC510	Intellectual Property Rights	3	0	0	0
		<b>Total Credits</b>	<b>21</b>	<b>0</b>	<b>8</b>	<b>22</b>

**III YEARIISEMESTER**

S. No.	Course Code	Course Title	L	T	P	Credits
1	CS601PC	Machine Learning	3	1	0	4
2	CS602PC	Compiler Design	3	1	0	4
3	CS603PC	Design and Analysis of Algorithms	3	1	0	4
4		Professional Elective–III	3	0	0	3
5		Open Elective-I	3	0	0	3
6	CS604PC	Machine Learning Lab	0	0	3	1.5
7	CS605PC	Compiler Design Lab	0	0	3	1.5
8		Professional Elective-III Lab	0	0	2	1
9	*MC609	Environmental Science	3	0	0	0
		<b>Total Credits</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>22</b>

**CS604PC: MACHINE LEARNING LAB**

III Year B.Tech. CSE II-Sem

L	T	P	C
0	0	3	1.5

**Course Objective:** The objective of this lab is to get an overview of the various machine learning techniques and can able to demonstrate them using python.

**Course Outcomes:** After the completion of the course the student can able to:

- understand complexity of Machine Learning algorithms and their limitations;
- understand modern notions in data analysis-oriented computing;
- be capable of confidently applying common Machine Learning algorithms in practice and implementing their own;
- Be capable of performing experiments in Machine Learning using real-world data.

**List of Experiments**

1. The probability that it is Friday and that a student is absent is 3 %. Since there are 5 school days in a week, the probability that it is Friday is 20 %. What is the probability that a student is absent given that today is Friday? Apply Baye's rule in python to get the result. (Ans: 15%)
2. Extract the data from database using python
3. Implement k-nearest neighbours classification using python
4. Given the following data, which specify classifications for nine combinations of VAR1 and VAR2 predict a classification for a case where VAR1=0.906 and VAR2=0.606, using the result of k-means clustering with 3 means (i.e., 3 centroids)

VAR1	VAR2	CLASS
1.713	1.586	0
0.180	1.786	1
0.353	1.240	1
0.940	1.566	0
1.486	0.759	1
1.266	1.106	0
1.540	0.419	1
0.459	1.799	1
0.773	0.186	1

5. The following training examples map descriptions of individuals onto high, medium and low credit-worthiness.

```

medium skiing design single twenties no -> highRisk
high golf trading married forties yes -> lowRisk
low speedway transport married thirties yes -> medRisk
medium football banking single thirties yes -> lowRisk
high flying media married fifties yes -> highRisk
low football security single twenties no -> medRisk
medium golf media single thirties yes -> medRisk
medium golf transport married forties yes -> lowRisk
high skiing banking single thirties yes -> highRisk
low golf unemployed married forties yes -> highRisk

```



Input attributes are (from left to right) income, recreation, job, status, age-group, home-owner. Find the unconditional probability of `golf' and the conditional probability of `single' given `medRisk' in the dataset?

6. Implement linear regression using python.
7. Implement Naïve Bayes theorem to classify the English text
8. Implement an algorithm to demonstrate the significance of genetic algorithm
9. Implement the finite words classification system using Back-propagation algorithm



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(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510

Website: <https://siiet.ac.in/>

## COURSE OUTCOMES

Course: MACHINE LEARNING LAB (C326)

Class: III – CSE-A - Section

After completing this course, the student will be able to:

C326.1 Understand complexity of Machine Learning algorithms and their limitations.(Comprehension)

C326.2 Understand modern notions in data analysis-oriented computing.(Comprehension)

C326.3 Applying common Machine Learning algorithms in practice and implementing their own.  
(Application)

C326.4 Perform experiments in Machine Learning using real-world data.(Synthesis)

C326.5: Design and develop the code for recommender system using Natural LanguageProcessing  
(Application)

C326.6: Understand the basic concepts of deep neural network model and design the same.  
(Comprehension)

### Mapping of course outcomes with program outcomes:

High -3                      Medium -2                      Low-1

PO/PSO/ CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C326.1	2	3	1	3	-	-	-	-	2	3	-	2	-	3
C326.2	3	2	3	-	-	-	-	-	3	1	-	2	2	-
C326.3	-	2	3	-	-	-	-	-	1	2	-	2	2	-
C326.4	-	-	-	2	-	-	-	--	3	3	-	2	-	-
C326.5	-	-	2	2	-	-	-	--	2	2	3	2	2	2
C371.6	3	2	1	3	-	-	-	-	-	-	-	3	-	2
C371	2.67	2.35	2.0	2.50	-	-	-	--	2.2	2.2	3.0	2.0	2	2.3



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## MACHINE LEARNING LAB

### LIST OF EXPERIMENTS AND THEIR CO, PO MAPPING

Week no.	Name of the program	CO	PO/PSO	
			PO	PSO
1	The probability that it is Friday and that a student is absent is 3 %. Since there are 5 school days in a week, the probability that it is Friday is 20 %. What is the probability that a student is absent given that today is Friday? Apply Baye’s rule in python to get the result. (Ans: 15%).	CO1	PO1,PO2,P03, P04PO9,PO10,PO12	PSO2
2	Extract the data from database using python	CO1	PO1,PO2, P03, P04 PO9, PO10, PO12	PSO1
3	Implement k-nearest neighbours classification using python.	CO1	PO1,PO2, P03, P04 PO9, PO10, PO12	PSO1
4	Given the following data, which specify classifications for nine combinations of VAR1 and VAR2 predict a classification for a case where VAR1=0.906 and VAR2=0.606, using the result of k means clustering with 3 means (i.e., 3 centroids) periments VAR1 VAR2 CLASS 1.713 1.586 0 0.180 1.786 1 0.353 1.240 1 0.940 1.566 0 1.486 0.759 1 1.266 1.106 0 1.540 0.419 1 0.459 1.799 1 0.773 0.186 1.	CO1, CO2	PO1,PO2, P03, P04 PO9, PO10, PO12	PS01, PSO2
5	The following training examples map descriptions of individuals onto high, medium and low creditworthiness. medium skiing design single twenties no ->highRisk high golf trading married forties yes ->lowRisk low speedway transport married thirties yes ->medRisk medium football banking	CO1, CO2	PO1,PO2, P03, P04 PO9, PO10, PO12	PSO1, PSO2

	<p>single thirties yes -&gt;lowRisk high flying media          married fifties yes -&gt;highRisk low football security          single twenties no -&gt;medRisk medium golf media          single thirties yes -&gt;medRisk medium golf transport          married forties yes -&gt;lowRisk high skiing banking          single thirties yes -&gt;highRisk low golf unemployed          married forties yes -&gt;highRisk</p> <p>Input attributes are (from left to right) income, recreation, job, status, age-group, home-owner. Find the unconditional probability of `golf' and the conditional probability of `single' given `medRisk' in the dataset?</p>			
6	Implement linear regression using python..	CO4	P04 PO9, PO10, PO12	PSO2
7	Implement Naïve Bayes theorem to classify the English text	CO5, CO6,	PO1,PO2, P03, P04,PO9,PO10,PO11, PO12	PSO1 ,PSO2
8	Implement an algorithm to demonstrate the significance of genetic algorithm	CO3, CO6	PO1,PO2, PO3,PO4 PO9, P010,PO12	PSO1, PSO2
9	Implement the finite words classification system using Back-propagation algorithm	CO3	PO2, PO3,PO9 P010, PO12	PSO1



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### TIME TABLE FOR A.Y 2022-23

Class: III-B, Tech CSE -A

Semester: II

LH. NO: A-201

W.E.F: 13-02-2023

Period/ Day	1	2	3	4	1:00- 1:30	5	6	7
	9:40-10:30	10:30-11:20	11:20-12:10	12:10-1:00		1:30-2:20	2:20-3:10	3:10-4:00
Monday	DAA	CD	LIB	STM	L U N C H	STM LAB(BATCH-I)/CD LAB(BATCH-II)		
Tuesday	STM	DAA	DAA/ML(T)	ML		FLOT	STM	SPORTS
Wednesday	FLOT	CD	INT	STM		ML/CD(T)	CO-C/SS/DAA	
Thursday	FLOT	ML LAB(BATCH-I)/STM LAB(BATCH-II)				DAA	CD	STM
Friday	CD	COUN	ML	FLOT		ML LAB(BATCH-II)/CD LAB(BATCH-I)		
Saturday	CD	FLOT	CD/DAA(T)	DAA		ML	DAA	

(T) - Tutorial (concern faculty)

Subject Code	Subject Name	Name of the Faculty	Subject Code	Subject Name	Name of the Faculty
CS601PC	Machine Learning	Mrs N Shilpa		Fundamentals of Internet of Things	Mrs. M Sruthi
CS602PC	Compiler Design	Dr. Sasikumar D	CS604PC	Machine Learning Lab	Mrs N Shilpa / K.Mannadha / V. Divya
CS603PC	Design and Analysis of Algorithms	Mr A Vijay Kumar	CS605PC	Compiler Design Lab	Dr. Sasikumar D / Ms K Mounika / P Sushri
CS615PE	Software Testing Methodologies	Mrs E Rupa	CS615PE	Software Testing Methodologies Lab	Mrs E Rupa / Mrs S Akhila / Mrs. M.Sruthi
	CO-C/SS-DAA/ Cyber Security	Mrs. M.Sruthi	LIB	Library	Mrs. K.Mannadha
Sports	Sports	Mr A Vijay Kumar	COUN	Counselling	Mrs.A.Sudha
Internet	Internet	Mrs.A.Sudha	CS601PC	Machine Learning	Mr M Dattatreya Goud (Adjunct)
			MC609	Environmental Science(LU)	Mr D Nagaraju
Class In-Charge : Mrs N Shilpa		Mentor 1 : Mrs N Shilpa		Mentor 2: Mrs E Rupa	

Class In-Charge

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Year & Semester: III-II  
Subject Name: **MACHINE LEARNING LAB**

Branch: CSE  
Faculty Name: N.SHILPA

## Lab External Question paper

### SET 1

- The probability that it is Friday and that a student is absent is 3 %. Since there are 5 school days in a week, the probability that it is Friday is 20 %. What is the probability that a student is absent given that today is Friday? Apply Baye's rule in python to get the result. (Ans: 15%)
- Implement the finite words classification system using Back-propagation algorithm

### SET 2

- Extract the data from database using python
- Implement an algorithm to demonstrate the significance of genetic algorithm

### SET 3

- Implement k-nearest neighbors classification using python
- Implement Naïve Bayes theorem to classify the English text

### SET 4

- Given the following data, which specify classifications for nine combinations of VAR1 and VAR2 predict a classification for a case where VAR1=0.906 and VAR2=0.606, using the result of kmeans clustering with 3 means (i.e., 3 centroids)

VAR1 VAR2 CLASS

1.713 1.586 0

0.180 1.786 1

0.353 1.240 1

0.940 1.566 0

1.486 0.759 1

1.266 1.106 0

1.540 0.419 1

0.459 1.799 1

0.773186 1

- Implement linear regression using python

### SET 5

- The following training examples map descriptions of individuals onto high, medium and low credit-worthiness.

medium skiing design single twenties no ->highRisk

high golf trading married forties yes ->lowRisk

low speedway transport married thirties yes ->medRisk

medium football banking single thirties yes ->lowRisk

high flying media married fifties yes ->highRisk

low football security single twenties no ->medRisk

medium golf media single thirties yes ->medRisk

medium golf transport married forties yes ->lowRisk

high skiing banking single thirties yes ->highRisk

low golf unemployed married forties yes ->highRisk

Input attributes are (from left to right) income, recreation, job, status, age-group, home-owner. Find the unconditional probability of `golf' and the conditional probability of `single' given `medRisk' in the dataset?

B. Implement the finite words classification system using Back-propagation algorithm



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## ML LAB EXTERNAL TIME TABLE

### Examination Branch

Date	Day	Branch	Session	H T.No	Total No. of Students
3/7/2023	MONDAY	CSE-A	FN	20X31A0501 TO 20X31A0560 & 21X35A0501 TO 21X35A0505	63
30/6/2023	FRIDAY	CSE-B	FN	20X31A0561 TO 20X31A05C0 & 21X35A0506 TO 21X35A0510	65
3/7/2023	MONDAY	CSE-C	FN	20X31A05C1 TO 20X31A05H4 & 21X35A0511 TO 21X35A0517	56

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## ML LAB EXTERNAL TIME TABLE WITH EXAMINER

A.Y:2022-2023

SEM-II

SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY					
III-B.TECH II-SEM LAB EXTERNAL EXAMINATIONS EXAMS, JULY-2023					
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING					
TIMINGS FN: 10:00 AM TO 12:30 PM AN: 1:30PM TO 4:00PM					
S.NO	YEAR/ SEC	NAME OF THE LAB	DATE & SESSION	NAME OF THE INTERNAL EXAMINER	NAME OF THE EXTERNAL EXAMINER & COLLEGE
1	CSE-A	Compiler Design Lab	4/7/2023-FN	Dr.D.Sasi Kumar	Mr.P.Thirumal Reddy- VIGNAN
2		STM Lab	3/7/2023-FN	Mrs.E.Rupa	Mr.L.Balaji -VIGNAN
3		Machine learning Lab	30/06/2023-FN	Mrs.N.Shilpa	Dr.Muralidhar -VIGNAN
4	CSE-B	Compiler Design Lab	3/7/2023-AN	Ms.S.Anitha	Dr.G.Janardhan--VIGNAN
5		STM Lab	30/06/2023-FN	Mrs.R.Sravanthi	Mrs.Archana--VIGNAN
6		Machine learning Lab	4/7/2023-AN	Dr.B.G. obula Reddy	Dr.Manoj Kumar -VIGNAN
7	CSE-C	Compiler Design Lab	4/7/2023-AN	Ms.K.Mounika	Mr.K.Srinivas -VIGNAN
8		STM Lab	3/7/2023-FN	Mrs.S.Akhila	Mrs.Ravali -VIGNAN
9		Machine learning Lab	30/06/2023-AN	Mrs.P H Swarna Rekha	Mr.R.Mahesh -VIGNAN

B. Ravi Kant  
HOD

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Website: <https://siiet.ac.in/>

## LAB OCCUPANCY CHART

### MACHINE LEARNING LAB

ROOM NO: A-018

BLOCK: A

FLOOR: GROUND

Period/ Day	1	2	3	4	1:00- 1:30	5	6	7
	9:40-10:30	10:30-11:20	11:20-12:10	12:10-1:00		1:30-2:20	2:20-3:10	3:10-4:00
Monday					L U N C H			
Tuesday						ML LAB(BATCH-I)-B		
Wednesday						LAB MAINTENANCE		
Thursday			ML LAB(BATCH-I)-A			ML LAB(BATCH-I)-C		
Friday			ML LAB(BATCH-I)-C			ML LAB(BATCH-I)-A		
Saturday			ML LAB(BATCH-I)-B			LAB MAINTENANCE		

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## MACHINE LEARNING LAB

### Do's and Don'ts

#### Do's

1. Come with completed observation and record.
2. Remove your shoes or wear foot socks before you enter the lab.
3. **Always keep quiet. Be considerate to other lab users.**
4. **Report any problems with the computer to the person in charge.**
5. **Shut down the computer properly.**
6. Wear ID card before entering into the lab.
7. Read and understand how to carry out an activity thoroughly before coming to the laboratory.
8. Write In time, Out time and system details in the login register

#### Don'ts

1. Do not touch any part of the computer with wet hands.
2. Do not change system settings.
3. Do not hit the keys on the computer too hard.
4. Don't damage, remove, or disconnect any labels, parts, cables or equipment.
5. Do not install or download any software or modify or delete any system files on any lab computers.
6. Do not disturb your neighbouring students. They may be busy in completing tasks.
7. Do not remove anything from the computer laboratory without permission.
8. Do not use pen drives.



# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Accredited by NAAC with A+ Grade, Recognized under 2(f) of UGC Act 1956

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510

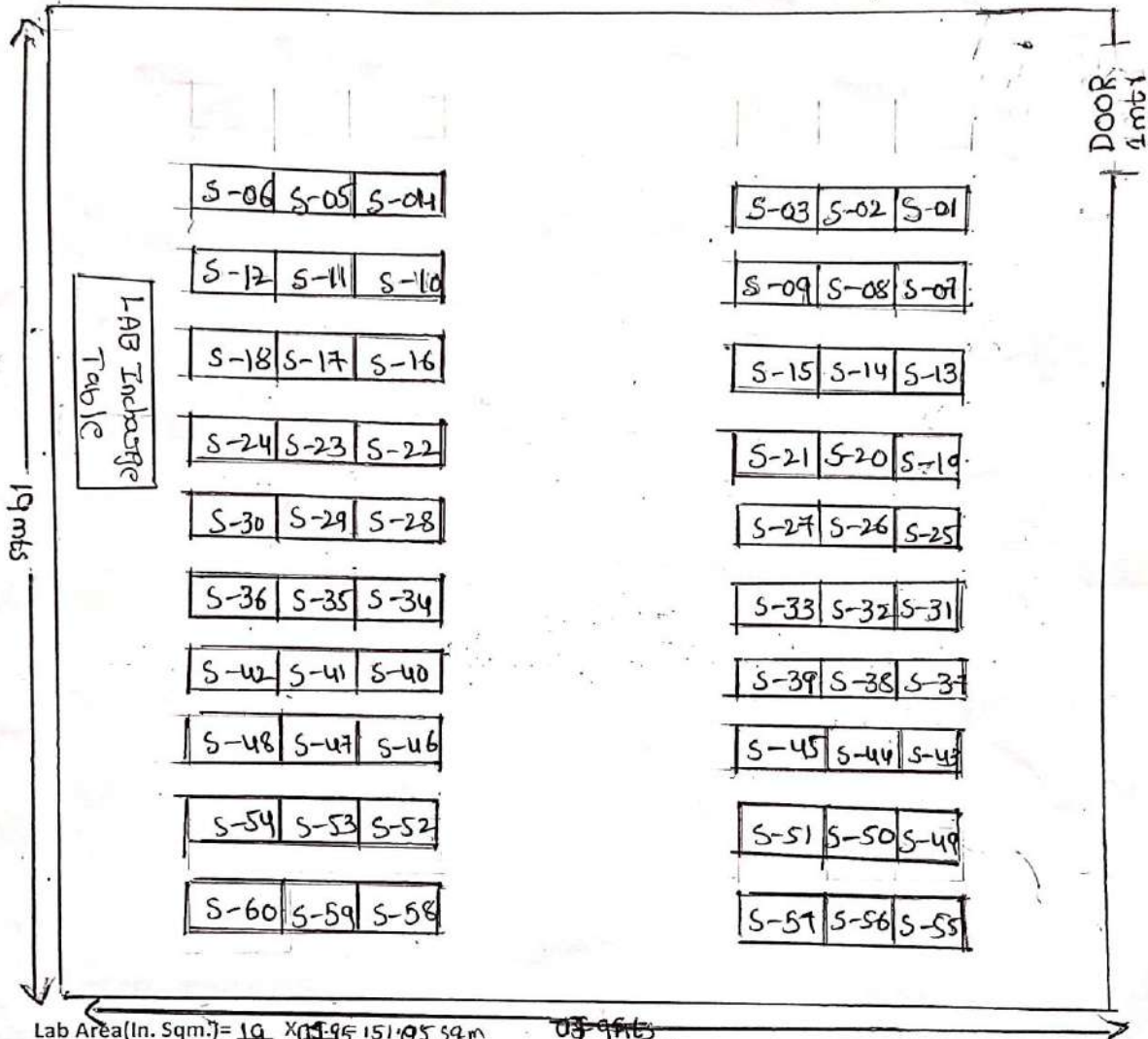
Website: <https://siiet.ac.in/>

## MACHINE LEARNING LAB PHYSICAL LAB-1 FLOOR PLAN

ROOM NO:

BLOCK:D

FLOOR:2



LAB In-charge

Head of the Department

Computer Science & Engg. Dept.  
SRI INDU INSTITUTE OF ENGG & TECH.  
Sheriguda(V), Ibrahimpatnam(M), R.R. Dist-501 1C.



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## **MACHINE LEARNING LAB**

### **LAB MANUAL LINK:**

[https://drive.google.com/file/d/1iuN\\_7y5AeQKFizXYINHjmtBRHB6Q4LBF/view?usp=sharing](https://drive.google.com/file/d/1iuN_7y5AeQKFizXYINHjmtBRHB6Q4LBF/view?usp=sharing)



## SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Computer Science And Engineering

### Course Outcome Attainment (Internal Examination-1)

Name of the faculty : N.SHILPA 2022-2023  
Branch & Section: CSE-A I Internal  
Course Name: MACHINE LEARNING LAB Year/Semester III/II

S.No	HT No.	A+A+CD+MG	T+P+C+R	DDE
<b>Max. Marks ==&gt;</b>		<b>5</b>	<b>5</b>	<b>15</b>
1	20X31A0501	5	5	10
2	20X31A0502	4	5	15
3	20X31A0503	4	5	9
4	20X31A0504	4	4	15
5	20X31A0506	3	3	14
6	20X31A0507	4	4	12
7	20X31A0508	4	4	13
8	20X31A0509	5	5	10
9	20X31A0510	4	3	15
10	20X31A0511	3	3	8
11	20X31A0512	5	5	12
12	20X31A0513	4	3	15
13	20X31A0514	4	4	12
14	20X31A0515	5	3	15
15	20X31A0516	4	4	13
16	20X31A0517	4	4	14
17	20X31A0518	4	3	15
18	20X31A0519	3	3	14
19	20X31A0520	3	2	15
20	20X31A0521	4	5	11
21	20X31A0522	5	4	14
22	20X31A0523	5	4	15
23	20X31A0524	5	4	11
24	20X31A0525	4	4	14
25	20X31A0526	3	3	12
26	20X31A0527	4	4	10
27	20X31A0528	5	5	11
28	20X31A0529	5	5	11
29	20X31A0530	4	4	10
30	20X31A0531	5	3	10
31	20X31A0532	4	4	11
32	20X31A0533	4	4	13
33	20X31A0534	3	4	15
34	20X31A0535	5	5	15
35	20X31A0536	4	4	12
36	20X31A0537	5	4	15
37	20X31A0538	4	5	13
38	20X31A0539	4	3	18
39	20X31A0540	3	3	15
40	20X31A0541	3	3	15
41	20X31A0542	5	5	15

42	20X31A0543	2	2	20
43	20X31A0544	5	5	14
44	20X31A0545	4	4	15
45	20X31A0546	5	4	11
46	20X31A0547	5	5	10
47	20X31A0548	5	2	15
48	20X31A0549	5	5	14
49	20X31A0550	3	4	15
50	20X31A0551	5	5	13
51	20X31A0552	5	4	13
52	20X31A0553	3	4	15
53	20X31A0554	4	3	13
54	20X31A0555	5	5	12
55	20X31A0556	4	5	11
56	20X31A0557	5	4	15
57	20X31A0558	4	5	11
58	20X31A0559	5	5	11
59	20X31A0560	5	5	15
60	21X35A0501	2	2	10
61	21X35A0502	5	5	14
62	21X35A0503	5	5	15
63	21X35A0504	5	5	12
Target set by the faculty / HoD		3.00	3.00	9.00
Number of students performed above the target		61	59	51
Number of students attempted		63	63	51
Percentage of students scored more than target		97%	94%	100%

**CO Mapping with Exam Questions:**

CO - 1	y	y	Y
CO - 2	y	y	Y
CO - 3	y	y	Y
CO - 4	y	y	Y
CO - 5	y	y	Y
CO - 6	y	y	Y

**CO Attainment based on Exam Questions:**

CO - 1	97%	97%	100%
CO - 2	97%	94%	100%
CO - 3	97%	94%	100%
CO - 4	97%	94%	100%
CO - 5	97%	94%	100%
CO - 6	97%	94%	100%

CO	Intrnal practical	DDE	Overall	Level
CO-1	97%	100%	98%	3
CO-2	95%	100%	98%	3
CO-3	95%	100%	98%	3
CO-4	95%	100%	98%	3
CO-5	95%	100%	98%	3
CO-6	95%	100%	98%	3

Attainment Level	
1	40%
2	50%
3	>60%

Attainment (Internal 1 Examination) = 3





# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Computer Science And Engineering

## Course Outcome Attainment (Internal Examination-2)

Name of the faculty : N.SHILPA 2022-2023  
Branch & Section: CSE-A II Internal  
Course Name: MACHINE LEARNING LAB Semester: II

S.No	HT No.	A+A+CD+MG	T+P+C+R	DDE
<b>Max. Marks ==&gt;</b>		<b>5</b>	<b>5</b>	<b>15</b>
1	20X31A0501	4	4	12
2	20X31A0502	4	4	16
3	20X31A0503	4	5	9
4	20X31A0504	4	4	15
5	20X31A0506	3	3	14
6	20X31A0507	4	4	12
7	20X31A0508	4	4	13
8	20X31A0509	5	5	10
9	20X31A0510	4	3	15
10	20X31A0511	3	3	8
11	20X31A0512	5	5	12
12	20X31A0513	4	3	15
13	20X31A0514	4	4	12
14	20X31A0515	5	3	15
15	20X31A0516	4	4	13
16	20X31A0517	4	4	14
17	20X31A0518	4	3	15
18	20X31A0519	3	3	14
19	20X31A0520	3	2	15
20	20X31A0521	4	5	11
21	20X31A0522	5	4	14
22	20X31A0523	5	4	15
23	20X31A0524	5	4	11
24	20X31A0525	4	4	14
25	20X31A0526	3	3	12
26	20X31A0527	4	4	10
27	20X31A0528	5	5	11
28	20X31A0529	5	5	11
29	20X31A0530	4	4	10
30	20X31A0531	5	3	10
31	20X31A0532	4	4	11
32	20X31A0533	4	4	13
33	20X31A0534	3	4	15
34	20X31A0535	5	5	15
35	20X31A0536	4	4	12
36	20X31A0537	5	4	15
37	20X31A0538	4	5	13
38	20X31A0539	4	3	18
39	20X31A0540	3	3	15
40	20X31A0541	3	3	15
41	20X31A0542	5	5	15

42	20X31A0543	2	2	20
43	20X31A0544	5	5	14
44	20X31A0545	4	4	15
45	20X31A0546	5	4	11
46	20X31A0547	5	5	10
47	20X31A0548	5	2	15
48	20X31A0549	5	5	14
49	20X31A0550	3	4	15
50	20X31A0551	5	5	13
51	20X31A0552	5	4	13
52	20X31A0553	3	4	15
53	20X31A0554	4	3	13
54	20X31A0555	5	5	12
55	20X31A0556	4	5	11
56	20X31A0557	5	4	15
57	20X31A0558	4	5	11
58	20X31A0559	5	5	11
59	20X31A0560	5	5	15
60	21X35A0501	2	2	10
61	21X35A0502	5	5	14
62	21X35A0503	5	5	15
63	21X35A0504	5	5	12
Target set by the faculty/ HoD		3.00	3.00	9.00
Number of students performed above the target		61	59	62
Number of students attempted		63	63	63
Percentage of students scored more than target		97%	94%	98%

**CO Mapping with Exam Questions:**

CO - 1	y	y	Y
CO - 2	y	y	Y
CO - 3	y	y	Y
CO - 4	y	y	Y
CO - 5	y	y	Y
CO - 6	y	y	Y

**CO Attainment based on Exam Questions:**

CO - 1	97%	97%	98%
CO - 2	97%	94%	98%
CO - 3	97%	94%	98%
CO - 4	97%	94%	98%
CO - 5	97%	94%	98%

CO - 6	97%	94%	98%
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CO	Intrnal practical	DDE	Overall	Level
CO-1	97%	98%	98%	3
CO-2	95%	98%	97%	3
CO-3	95%	98%	97%	3
CO-4	95%	98%	97%	3
CO-5	95%	98%	97%	3
CO-6	95%	98%	97%	3

Attainment Level	
1	40%
2	50%
3	>60%

Attainment (Internal 2 Examination) = **3**



# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Computer Science And Engineering

## Course Outcome Attainment (University Examinations)

Name of the faculty : N.SHILPA Academic Year: 2022-2023  
Branch & Section: CSE-A Year / Semester: III/II  
Course Name: MACHINE LEARNING LAB

S.No	Roll Number	Marks Secured
1	20X31A0501	71
2	20X31A0502	71
3	20X31A0503	61
4	20X31A0504	71
5	20X31A0506	70
6	20X31A0507	70
7	20X31A0508	70
8	20X31A0509	71
9	20X31A0510	70
10	20X31A0511	62
11	20X31A0512	69
12	20X31A0513	68
13	20X31A0514	70
14	20X31A0515	68
15	20X31A0516	70
16	20X31A0517	68
17	20X31A0518	68
18	20X31A0519	70
19	20X31A0520	70
20	20X31A0521	71
21	20X31A0522	72
22	20X31A0523	71
23	20X31A0524	68
24	20X31A0525	70
25	20X31A0526	68
26	20X31A0527	68
27	20X31A0528	69
28	20X31A0529	70
29	20X31A0530	68
30	20X31A0531	68
31	20X31A0532	68
32	20X31A0533	70
33	20X31A0534	69
34	20X31A0535	71

S.No	Roll Number	Marks Secured
35	20X31A0536	70
36	20X31A0537	71
37	20X31A0538	70
38	20X31A0539	71
39	20X31A0540	68
40	20X31A0541	68
41	20X31A0542	71
42	20X31A0543	70
43	20X31A0544	71
44	20X31A0545	69
45	20X31A0546	70
46	20X31A0547	70
47	20X31A0548	69
48	20X31A0549	70
49	20X31A0550	68
50	20X31A0551	69
51	20X31A0552	69
52	20X31A0553	69
53	20X31A0554	71
54	20X31A0555	69
55	20X31A0556	70
56	20X31A0557	69
57	20X31A0558	68
58	20X31A0559	69
59	20X31A0560	71
60	21X35A0501	
61	21X35A0502	70
62	21X35A0503	71
63	21X35A0504	68

Max Marks	75
Class Average mark	
Number of students performed above the target	
Number of successful students	
Percentage of students scored more than target	

Attainment Level	% students
1	40%
2	50%
3	>60%

<b>Attainment level</b>	<b>3</b>
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# SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Computer Science And Engineering

## Course Outcome Attainment

Name of the faculty :N.SHILPA

Academic Year 2022-2023

Branch & Section: CSE-A

Examination: I Internal

Course Name: MACHINE LEARNING LAB

Year: III

Semester: II

Course Outcomes	1st Internal Exam	2nd Internal Exam	Internal Exam	University Exam	Attainment Level
CO1	3.00	3.00	3.00	3.00	3.00
CO2	3.00	3.00	3.00	3.00	3.00
CO3	3.00	3.00	3.00	3.00	3.00
CO4	3.00	3.00	3.00	3.00	3.00
CO5	3.00	3.00	3.00	3.00	3.00
CO6	3.00	3.00	3.00	3.00	3.00
<b>Internal &amp; University Attainment:</b>			3.00	3.00	
<b>Weightage</b>			70%	30%	
<b>CO Attainment for the course (Internal, University)</b>			2.10	0.90	
<b>CO Attainment for the course (Direct Method)</b>			3.00		

Overall course attainment level

**3.00**



# SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Computer Science And Engineering

## Program Outcome Attainment (from Course)

Name of Faculty: N.SHILPA Academic Year: 2022-2023  
 Branch & Section: CSE-A Year: III  
 Course Name: MACHINE LEARNING LAB Semester: II

### CO-PO mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	3	1	3		-	-	-	2	3	-	2	-	3
CO2	3	2	3				-	-	3	1		2	2	-
CO3		2	3				-	-	1	2		2	2	-
CO4	-			2	-		-	-	3	3		2		-
CO5			2	2	-	-	-	-	2	2	3	2	2	2
CO6	3	2	1	3		-	-	-	-	-		3		2
<b>Course</b>	<b>2.67</b>	<b>2.25</b>	<b>2.00</b>	<b>2.50</b>					<b>2.2</b>	<b>2.2</b>	<b>3.0</b>	<b>2.0</b>	<b>2</b>	<b>2.3</b>

CO	Course Outcome Attainment
	3.00
CO1	3.00
CO2	3.00
CO3	3.00
CO4	3.00
CO5	3.00
CO6	3.00
<b>Overall course attainment level</b>	<b>3.00</b>

### PO-ATTAINMENT

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO Attainment	2.67	2.25	2.00	2.50		1.50			2.20	2.20	3.00		2.00	2.33

CO contribution to PO - 33%, 67%, 100% (Level 1/2/3)