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Affiliated to the Tamilnadu Dr. M.G.R. Medical University,
and The Directorate of Medical Education, Chennai.

REF.NO:SSIP/ REQ/2022/005

Date: 24/08/2022

#### From

Department of Pharmaceutical Analysis,

SS institute of pharmacy,

Sankari, Salem (DIST) - 637301.

To

The principal,

SS institute of pharmacy,

Sankari, Salem (DIST) – 637301.

Subject: Letter for requesting permission to conduct ADD ON COURSE -Reg.

#### Respected sir,

We are requesting you to grand permission to conduct add-on course in the seminar hall on 02/09/2022 to 26/09/2022. We wish to conduct add on course on the title "A Basic Course In Machine Learning". This add-on course program would be a great opportunity for students to learn and that would help to shape the students.

Thanking you,

Yours truly,

PRINCIPAL.
SS.INSTITUTE OF PHARMACY.
KUPPANUR (PO), SANKARI (TK).
SALEM - 637301

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#### **SYLLABUS**

#### A BASIC COURSE IN MACHINELARNIND

SI.		
No.	Topic	Date
1	Foundations of Machine Learning	2/9/2022-
	- Introduction to Machine Learning: History, applications, and basic	5/9/2022
	concepts.	
	- Supervised Learning: Classification, regression, and algorithms like	
	Decision Trees, SVMs, and k-NN.	
	- Unsupervised Learning: Clustering, dimensionality reduction, and	
	algorithms like k-Means, PCA, and hierarchical clustering	
2	Neural Networks and Deep Learning	6/9/2022-
	- Introduction to Neural Networks: Perceptron, multi-layer perceptron	12/9/2022
	(MLPs), and activation functions.	
	- Deep Learning: Convolutional Neural Networks (CNNs), Recurrent	
	Neural Networks (RNNs), and applications.	
3	Model Selection, Evaluation, and Optimization	13/9/2022-
	- Model Selection and Evaluation: Cross-validation, bias-variance	17/9/2022
	tradeoff, and performance metrics.	
	- Ensemble Methods: Bagging, boosting, and stacking techniques for	
	improving model performance	
4	Data Preparation and Feature Engineering	19/9/2022-
	- Data Preprocessing: Data cleaning, handling missing values,	20/9/2022
	normalization, and standardization.	
	- Feature Engineering: Feature selection, extraction, and creation to	
_	enhance model performance	
5	Tools, Libraries, and Advanced Topics	22/9/2022-
,	- Machine Learning Tools and Libraries: Overview of Python libraries	26/9/2022
	like scikit-learn, TensorFlow, and PyTorch.	
ul 9	- Specialized Machine Learning Topics: An introduction to	
	reinforcement learning, transfer learning, and generative models	

RESOURCE PERSON: M. Vanitha

**TOTAL HOURS:36Hrs** 

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NH-544, Kuppanur (Po), Sankari (Tk), Salem(Dt) – 637301, Tamilnadu, India

Phone: 04283 241080 | E-mail: ssip1718@gmail.com | Website: www.ssip.edu.in

SANKARI

SS INSTITUTE OF PHARMACY SANKARI

**DEPARTMENT OF** PHARMACEUTICAL **ANALYSIS** 

VEBSITE:www.ssip.edu.in



## **COURSE TITLE** A BASIC COURSE IN MACHINE LEARNING

1.Supervised Learning

2. Unsupervised Learning

3. Neural Networks and Deep Learning

4. Model Evaluation and Validation

5. Feature Engineering and Data Preproce

Topics

PHONE:9443026046 E-MAIL:ssip1718@gmail.com

VENUE: SSIP SEM DATE:02/09/2022-26/09/2022

TIME:10:00AM-01:00PA

Resource Person

Vanitha.ME

stant Profess

M.PHARM



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## ADD ON / CERTIFICATE VALUE ADDED COURSES ACADEMIC YEAR 2022-2023



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#### **ACADAMIC YEAR 2022-2023**

S.NO	NAME OF ADD ON CERTIFICATES	COURSE CODE	NO OF STUDEN ENROLLED	ON CERTIFICATE
1	PROGRAMS			PROGRAMS
1.	Advanced Thermodynamics And Combustion	22ATC01	59	Self-framed course
	Combustion			r
2.	Applied Computational Fluid  Dynamics.	22ACFD02	56	Self-framed course
3.	Advanced Research Techniques in Homeopathic System of Medicine.	22ARTHSM03	30	Self-framed course
4.	An Introduction to Indian Literacy Theory.	22IILT04	29	Self-framed course
5.	A Basic Course in Machine Learning.	22BCML05	55	Self-framed course
6.	Adolescent Nutrition.	22AN06	57	Self-framed course
7.	Analytical Techniques in Biochemistry.	22ATB07	59	Self-framed course
8.	Artificial Intelligence Using Prolog Programming.	22AIUPP08	58	Self-framed course
9.	Mobile Health Application in Pharmacy.	23MHAP09	116	Self-framed course

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22

DATE: 24/08/2022

#### **CIRCULAR**

This is to inform that will B.PHARM students have the schedule of following value - added course to be conducted by our SS Institute of Pharmacy and it as mentioned below.

COURSE NAME	SCHEDULE	DURATION	VENUE	RESOURCE PERSON
A BASIC COURSE IN MACHINE LEARNING	02/09/2022 to 26/09/2022	36 HOURS	SEMINAR HALL	M.VANITHA

All the above-mentioned students must enroll and actively participate in the course without fail.

**Note**: Certificates will be issued for the eligible students after completion of the course and examination.

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PRINCIPAL, SS INSTITUTE OF PHARMACY, KUPPANUR (PO), SANKARI (TX), SALEM - 637301 PRINCIPAL.
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KUPPANUR (PO), SANKARI (TK).
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NH-544, Kuppanur (Po), Sankari (Tk), Salem(Dt) – 637301, Tamilnadu, India Phone: 04283 241080 | E-mail: ssip1718@gmail.com | Website: www.ssip.edu.in



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#### ADD ON COURSE - ENROLLMENT LIST

NAME OF ADD ON COURSE: A BASIC COURSE IN MACHINE LEARNING

**COURSE INSTRUCTORS** 

: VANITHA.M

YEAR OFFERED

: 6<sup>th</sup> SEM B.PHARM

COURSE DURATION

: 36 hrs

S.NO	NAME OF THE STUDENT	REGISTER NO	COURSE
1.	ANUSUYA .N	561997202	3 <sup>rd</sup> B.PHARM
2.	ARTHI .A	561997203	3 <sup>rd</sup> B.PHARM
3.	ARUN .S	561997204	3 <sup>rd</sup> B.PHARM
4.	ARUN KUMAR .D	561997205	3 <sup>rd</sup> B.PHARM
5.	ARUN KUMAR .K	561997206	3 <sup>rd</sup> B.PHARM
6.	AZHAGIRI .T.K	561997207	3 <sup>rd</sup> B.PHARM
7.	DEEPASREE .M	561997208	3 <sup>rd</sup> B.PHARM
8.	DHANASEKARAN .A	561997209	3 <sup>rd</sup> B.PHARM
9.	DHARUN .A	561997210	3 <sup>rd</sup> B.PHARM
10.	DINESH .T	561997212	3 <sup>rd</sup> B.PHARM
1.1.	ELAVARASAN .E	561997213	3 <sup>rd</sup> B.PHARM
12.	GOKULPRASATH .M	561997214	3 <sup>rd</sup> B.PHARM
13.	GOKULNATH .M	561997215	3 <sup>rd</sup> B.PHARM
14.	HEMAVATHI .D	561997216	3 <sup>rd</sup> B.PHARM
15.	KAMALESH .S	561997217	3 <sup>rd</sup> B.PHARM
16.	KARTHICK .D	561997218	3 <sup>rd</sup> B.PHARM
17.	KARTHIKEYAN .R	561997219	3 <sup>rd</sup> B.PHARM
18.	KARTHICKRAJA .T	561997220	3 <sup>rd</sup> B.PHARM
19.	KUMANAN .N.V	561997221	3 <sup>rd</sup> B.PHARM
20.	MADESHWARAN .B	561997222	3 <sup>rd</sup> B.PHARM
21.	MANIKANDAN .S	561997223	3 <sup>rd</sup> B.PHARM
22.	MUTHUKANNAN .S	561997224	3 <sup>rd</sup> B.PHARM
23.	PAVENDHIRAN SE OS	561997226	3 <sup>rd</sup> B.PHARM
24.	PRADEEP .B PRADEEP .T ≥	561997227	B.PHARM
25.	PRADEEP .T	561997228TITU	PO, SANKARI (TX).

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	<i>b</i>		
26.	PRAMESHWARAN .A	561997229	3 <sup>rd</sup> B.PHARM
27.	PRIYANKA .P	561997230	3 <sup>rd</sup> B.PHARM
28.	RAJAGURU .A	561997231	3 <sup>rd</sup> B.PHARM
29.	SANTHOSHKUMAR .N	561997234	3 <sup>rd</sup> B.PHARM
30.	SARANKUMAR .T	561997235	3 <sup>rd</sup> B.PHARM
31.	SHALINI .M	561997236	3 <sup>rd</sup> B.PHARM
32.	SHANMUGAM .G	561997237	3 <sup>rd</sup> B.PHARM
33.	SREEJITH .S	561997238	3 <sup>rd</sup> B.PHARM
34.	SRINIVASAN .M	561997239	3 <sup>rd</sup> B.PHARM
35.	SRITHER .R	561997240	3 <sup>rd</sup> B.PHARM
36.	SUBASHINI .M	561997241	3 <sup>rd</sup> B.PHARM
37.	SURESH .M	561997242	3 <sup>rd</sup> B.PHARM
38.	SURYAPRAKASH .M	561997243	3 <sup>rd</sup> B.PHARM
39.	TAMILSELVAN .R	561997244	3 <sup>rd</sup> B.PHARM
40.	THANGAPANDIYAMMAL.T	561997245	3 <sup>rd</sup> B.PHARM
41.	VEERASELVAN .V	561997246	3 <sup>rd</sup> B.PHARM
42.	VIJAYAKUMAR .A	561997247	3 <sup>rd</sup> B.PHARM
43.	VIJAYKUMAR .M	561997248	3 <sup>rd</sup> B.PHARM
44.	VINITHA .A	561997249	3 <sup>rd</sup> B.PHARM
45.	VINOTHKUMAR .R	561997250	3 <sup>rd</sup> B.PHARM
46.	ANANDHKUMAR.M	560020523557	3 <sup>rd</sup> B.PHARM
47.	GNANAVEL.S	560020523558	3 <sup>rd</sup> B.PHARM
48.	GOKUL.K	560020523559	3 <sup>rd</sup> B.PHARM
49.	MYVIZHIKANNAN.R	560020523560	3 <sup>rd</sup> B.PHARM
50.	NANDHAKUMAR.D	560020523561	3 <sup>rd</sup> B.PHARM
51.	NANDHA <b>KUMAR.S</b>	560020523562	3 <sup>rd</sup> B.PHARM
52.	PRAKASH.V	560020523563	3 <sup>rd</sup> B.PHARM
53.	SATHISHKUMAR.V	560020523564	3 <sup>rd</sup> B.PHARM
54.	SUGAVARSAN.C	560020523565	3 <sup>rd</sup> B.PHARM
55.	VETRIVEL. <b>R</b>	560020523566	3 <sup>rd</sup> B.PHARM



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#### ADD ON COURSE - ENROLLMENT LIST

NAME OF ADD ON COURSE: A BASIC COURSE IN MACHINE LEARNING

**COURSE INSTRUCTORS** 

: VANITHA.M

YEAR OFFERED

: 6th SEM B.PHARM

COURSE DURATION

: 36 hrs

5.40	NAME OF THE STUDENT	REGISTER NO	TER ATTENDA					NDAN	NCE		
	STUDENT		2/09/22	3/9/22	5/9/22	6/9/22	9/9/22	10/9/22	12/9/22	13/9/22	14/9/22
1.	ANUSUYA .N	561997202	New	- نسل	Sw	Hur.	Sans	Lew	Am.	Am.	Am
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3.	ARUN .S	561997204	Lame	ACO.X	Busch	Aurel	feelal	4 supra	Acura	dura	de la companya del companya de la companya del companya de la comp
4.	ARUN KUMAR .D	561997205	(V.F.	メヤ	A.F.	e. F .	4.6	A.K	ΔΙΑ	A·k	Δ . ίσ
5.	ARUN KUMAR .K	561997206	1 6 B B	10.64	D. KUN	-489 <b>y</b>	2/12w	B.N.	24m	D.A.	DAN
-6.	AZHAGIRI .T.K	561997207	Spice	ed to come	Show	Span	عفحال	Kw	فاصلها	833	ghose
7.	DEEPASREE .M	561997208	(W)	W.	WED.	- FUD	W.D.	4.0	1750	50	15:00
8.	DHANASEKARAN .A	561997209	DADY	Doey	-	onus	phu	Dh4	DLAU	7hu	Dh14
9.	DHARUN .A	561997210	Desid	2 Jew	Door	Down	Dhave		-		Dave
10.	DINESH .T.	561997212	DINU	12024	DIN	7004-	DVP	<b>711</b> 1	balf	かり	2010
11.	ELAVARASAN .E	561997213	ES)E	6)E-	F2	(F.)E	6.2	C =2	0.0	(E : 3)	F. D.
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15.	KAMALESH .S	561997217	Da-	our	\$ con	10em	dem	for	tam	rain	bour
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18.	KARTHICKRAJA .T	561997220	(Cai)	Ros	Cir	Roy	Ray	Car	Roy	Rai	1
19.	KUMANAN .N.V	561997221	burys	Down	mys	Doub	curs	tom.	tumo	Low	1 my
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22.	MUTHUKANNAN .S	561997224	nution	unter	rudh	wheel	4 will	futh	Julu	with	
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ADD ON COURSE	A BASIC COURSE IN MACHINE LEARNING
DEPARTMENT	PHARMACEUTICAL ANALYSIS
ACADEMIC YEAR	2022-2023
DATE	02/09/2022 to26/09/2022
VENUE	SEMINAR HALL
NAME: B. Prodop	COURSE: 11-8em

#### ANSWER ALL THE QUESTIONS:

#### MULTIPLE CHOICE QUESTIONS

- 1. What is the primary goal of supervised learning?
  - a. To discover patterns in data
  - To predict outcomes based on input data
    - To group similar data points together
    - To reduce the dimensionality of data
- 2. Which algorithm is an example of a decision tree classifier?
  - a. Linear Regression
  - b. K-Nearest Neighbors
  - Random Forest
    - d. Support Vector Machine
- 3. What is the purpose of activation functions in neural networks?
  - To introduce non-linearity
    - b. To reduce dimensionality
    - To increase accuracy
    - To decrease training time

4. Which technique is used to evaluate the performance of a machine learning model?

Cross-validation

b. Hyperparameter tuning

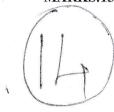
c. Feature selection

d. Data preprocessing



DATE:26/09/22

MARKS:15



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- 5. What is the term for the process of selecting the most informative features in a dataset?
  - a. Feature extraction
  - ♦ Feature selection
  - c. Dimensionality reduction
  - d. Data transformation
- 6. Which ensemble method combines multiple models to improve accuracy?
  - a. Bagging
  - Boosting
  - c. Random Forest
  - d. Gradient Boosting
- 7. What is the purpose of data preprocessing in machine learning?
  - a. To improve model accuracy
  - b. To reduce training time
  - c. To handle missing values and normalize data
  - A. To increase dimensionality
- 8. Which algorithm is an example of an unsupervised learning technique?
  - a. Linear Regression
  - ▶ 1 K-Means Clustering
  - c. Decision Trees
  - d. Support Vector Machine
- 9. What is the term for the trade-off between model complexity and accuracy?

A. Bias-variance tradeoff

- b. Overfitting-underfitting tradeoff
- c. Precision-recall tradeoff
- d. Accuracy-F1 score tradeoff

10. Which library is widely used for machine learning in Python?

.a.\ Scikit-learn

- b. TensorFlow
- c. PyTorch
- d. Keras

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- 11. What is the purpose of hyperparameter tuning in machine learning?
  - a. To improve model accuracy
  - b. To reduce training time
  - To select the best model parameters
  - d. To increase dimensionality
- 12. Which technique is used to reduce the dimensionality of high-dimensional data?
  - , al PCA
    - b. t-SNE
    - c. Feature selection
    - d. Data transformation
- 13. What is the term for the process of training multiple models on different subsets of data?
  - a. Cross-validation
  - b. Hyperparameter tuning
  - Ensemble learning
  - d. Transfer learning
- 14. Which algorithm is an example of a deep learning architecture?
  - a. Linear Regression
  - b. Decision Trees
  - Convolutional Neural Network (CNN)
  - d. Support Vector Machine
- 15. What is the purpose of ethics and fairness in machine learning?
  - a. To improve model accuracy
  - To reduce bias in models
    - c. To increase transparency in models
    - d. To reduce training time

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DEPARTMENT	PHARMACEUTICAL ANALYSIS
ACADEMIC YEAR	2022-2023
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#### **ANSWER KEY:**

DATE:26/09/22

#### MULTIPLE CHOICE QUESTIONS

MARKS:15

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  - d. Data preprocessing



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  - b. Overfitting-underfitting tradeoff
  - c. Precision-recall tradeoff
  - d. Accuracy-F1 score tradeoff

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a. Scikit-learn

- b. TensorFlow
- c. PyTorch
- d. Keras



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  - a. To improve model accuracy
  - b. To reduce bias in models
  - c. To increase transparency in models

d. To reduce training time

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#### ADD ON COURSE - MARK LIST

NAME OF ADD ON COURSE : A BASIC COURSE IN MACHINE LEARNING

**COURSE INSTRUCTORS** :

: VANITHA.M

YEAR OFFERED

: 6<sup>th</sup> SEM B.PHARM

**COURSE DURATION** 

: 36hrs

S.NO	NAME OF STUDENT	REGISTER NO	MARKS (15)	PERCENTAGE (%
1.	ANUSUYA .N	561997202	12	80%
2.	ARTHI .A	561997203	15	100%
3.	ARUN .S	561997204	15	100%
4.	ARUN KUMAR .D	561997205	13	86%
5.	ARUN KUMAR .K	561997206	13	86%
6.	AZHAGIRI .T.K	561997207	14	93%
7.	DEEPASREE .M	561997208	14	93%
8.	DHANASEKARAN .A	561997209	15	100%
9.	DHARUN .A	561997210	13	86%
10.	DINESH .T	561997212	13	86%
11.	ELAVARASAN .E	561997213	13	86%
12.	GOKULPRASATH .M	561997214	13	86%
13.	GOKULNATH .M	561997215	15	100%
14.	HEMAVATHI .D	561997216	13	86%
15.	KAMALESH .S	561997217	14	93%
16.	KARTHICK .D	561997218	15	100%
17.	KARTHIKEYAN .R	561997219	13	86%
18.	KARTHICKRAJA .T	561997220	13	86%
19.	KUMANAN .N.V	561997221	12	80%
20.	MADESHWARAN .B	561997222	13	86%
21.	MANIKANDAN .S	561997223	15	100%
22.	MUTHUKANNAN .S	561997224	2	80%
23.	PAVENDHIRAN .S	561997226	nellen	86%

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26.	PRAMESHWARAN .A	561997229	15	100%
27.	PRIYANKA .P	561997230	15	100%
28.	RAJAGURU .A	561997231	13	86%
29.	SANTHOSHKUMAR .N	561997234	13	86%
30.	SARANKUMAR .T	561997235	14	93%
31.	SHALINI .M	561997236	14	93%
32.	SHANMUGAM .G	561997237	15	100%
33.	SREEJITH .S	561997238	13	86%
34.	SRINIVASAN .M	561997239	13	86%
35.	SRITHER .R	561997240	13	86%
36.	SUBASHINI .M	561997241 .	13	86%
37.	SURESH .M	561997242	15	100%
38.	SURYAPRAKASH .M	561997243	13	86%
39.	TAMILSELVAN .R	561997244	14	93%
40.	THANGAPANDIYAMMAL.T	561997245	15	100%
41.	VEERASELVAN .V	561997246	13	86%
42.	VIJAYAKUMAR .A	561997247	13	86%
43.	VIJAYKUMAR .M	561997248	12	80%
44.	VINITHA .A	561997249	13	86%
45.	VINOTHKUMAR .R	561997250	12	80%
46.	ANANDHKUMAR.M	560020523557	15	100%
47.	GNANAVEL.S	560020523558	15	100%
48.	GOKUL.K	560020523559	13	86%
49.	MYVIZHIKANNAN.R	560020523560	13	86%
50.	NANDHAKUMAR.D	560020523561	14	93%
51.	NANDHAKUMAR.S	560020523562	14	93%
52.	PRAKASH.V	560020523563	15	100%
53.	SATHISHKUMAR.V	560020523564	13	86%
54.	SUGAVARSAN.C	560020523565	13	86%
55.	VETRIVEL.R	560020523566	13	<b>86%</b>

TOTAL NUMBER OF STUDENT: 55

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TOTAL NUMBER OF I

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#### ADD ON COURSE: SUMMARY REPORT

Course code and Name: 22BCML05/ A Basic Course In Machine Learning

**Date Of Add On Programme**: 02/09/2022 to 26/09/2022

**Course Duration**: 36 Hours

Year Offered: 6th Sem B.Pharm

Course Instructors: M. Vanitha., M. Pharm.

#### **Course Outcomes:**

Feature engineering: Learn techniques for feature selection and engineering to improve model performance. Understand how to create new features and choose the most relevant ones for your models.

➤ Overfitting and underfitting: Understand the concepts of overfitting and underfitting, and learn techniques to address these issues, such as regularization, dropout, and ensemble methods.

➤ Basic data visualization: Develop skills in visualizing data and model results using tools like matplotlib or seaborn to better understand data distributions and model performance.

Course Type: Add on Course

**Assessment Mode:** 

**Total Duration**: 36 Hours

**Number of Participants: 55** 

Scheme of Exam : MCQ type, offline Mode

**Date of Exam**: 26/09/2022

Course Coordinator

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S. PAVENDHIRAN

HAS APPRICATED FOR HIS / HER
PARTICIPATION IN ONE DAY SEMINAR ON
A BASIC COURSE IN MACHINE LEARNING



COORDINATOR

02/09/2022 TO 26/09/2022

MACY. PI

PRINCIPAL



# SS INSTITUTE OF PHARMACY CERTIFICATE OF PARTICIPATION



ONE DAY WORKSHOP

Organized by

Department of

PHARMACEUTICAL ANALYSIS

N.V. KUMANAN

HAS APPRICATED FOR HIS / HER
PARTICIPATION IN ONE DAY SEMINAR ON
A BASIC COURSE IN MACHINE LEARNING



COORDINATOR

02/09/2022 TO 26/09/2022

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#### STUDENT FEEDBACK FORM

STUDENT NAME: A. Arthu.

DATE: 26.09.2022

YEAR/COURSE:

B. pharm 6th Sem

NAME OF THE ADD ON COURSE: A BASIC COURSE IN MACHINE LEARNING.

COURSE CODE: 22B CM LOS

DURATION: 36 has.

#### **EVALUATE HONESTLY:**

Questions	Excellent	Good	Fair	Poor
How was the objectives of the training	A	***************************************		
How satisfied are you with our seminar		1		
How would you rate the clarity and effectiveness of the presenter's delivery	1	*	* .	
Was the seminar duration appropriate		1		
How engaging and interactive was the seminar				
Usefulness of the information provided		1		,
Overall quality of session	1			

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#### **PHOTOGRAPH**

**DATE:** 5/9/22

#### A BASIC COURSE IN MACHINE LEARNING

NAME OF ADD ON COURSE: A BASIC COURSE IN MACHINE LEARNING

COURSE INSTRUCTORS : VANITHA.M

YEAR OFFERED : 6<sup>th</sup> SEM B.PHARM

COURSE DURATION : 36 hrs



Add-on course regarding the Topic Application of Basic Course In Machine Learning 5/9/22 the speech delivered By **M.Vanitha.,M.Pharm.**which was an interactive session and students could able to understand the Application of Basic Course In Machine Learning in the fields of pharmaceutical sciences

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