



Date: 24/3/2025

Report on Workshop on

“Machine Learning (2150602): Partial Delivery of Course by Industry” “Person:

Title of the activity:	Workshop on “ Machine Learning (2150602): Partial Delivery of Course by Industry Person ” by Department of CSE
Date of activity:	25 February 2025 (Lectures 1) and 08 February 2025 (Lectures 3 and 4)
Lecture-1 and 2	Industry Expert Name: Mr. Girdhari Lal Gupta, Software Developer Engineering Topic: Ensemble Learner with python and Unsupervised Machine Learning with python. Time: 25 February, 2025, 2-3 PM India (Lecture 1)and
Lecture-3 and 4	Industry Expert Name: Dr. Arun Kumar Singh (Data Research Scientist) Topic: Model optimization and Evaluation and Supervised Machine Learning Algorithm with python Time: 8 February, 2025 11-12 PM India (Lecture 3)and 8 February, 2025 12-01 PM India (Lecture 4)
Objectives of the Event:	• To provide all the students an opportunity to attend an Industry Expert Lectures on Machine Learning and gain knowledge about the practical use of ML in Industries. • To guide students about the projects those are developed in industries. • To allow students to interact with experts who can guide them in the best possible manner. • To develop spirit of participation. • To give exposure to IEEE and Computer Society



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Poster:



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Computer Science and Engineering Department

IS ORGANIZING

A WORKSHOP ON MACHINE LEARNING

"PARTIAL DELIVERY OF CONTENTS"

BY INDUSTRY EXPERT



EXPERT
Arun Kumar Singh
DATA RESEARCH SCIENTIST

Ph.D IIT Roorkee
NVIDIA Certified Instructor and
DLI Ambassador

Scan QR for Registration Link :



We are excited to invite you on -

SAT / 11:00 AM - 12:00 PM
08/02/2025 / 12:00 PM - 1:00 PM

MODE- ONLINE



Photographs

arun kumar singh (Presenting)

Introduction_to_Machine_Learning_sys... • Saved to this PC

File Home Insert Draw Design Transitions Animations Slide Show Record Review View Help Acrobat

Clipboard Paste New Slide Reuse Slides Layout Reset Section Slides

Font Paragraph Drawing

12

13

14

Deployment & Maintenance

- Deploying models into production environments
- Monitoring model performance and updating as needed

Orchestration Layer

Model Training

Model Deployment

Model Monitoring

Model Retraining

Model Evaluation

Model Versioning

Model Archiving

Model Deployment

Model Monitoring

Model Retraining

Model Evaluation

Model Versioning

Model Archiving

arun kumar singh (Presenting)

Introduction to Model Optimization and Evaluation

- Definition:** Model optimization and evaluation are key steps in the machine learning pipeline to enhance predictive accuracy and measure performance.
- Objective:** Minimize error and maximize performance.
- Importance:**
 - Ensures models generalize well to new data.
 - Avoids overfitting or underfitting.
 - Helps identify the best model for the problem.
- Key Concepts:**
 - Parametric vs Non-Parametric Models
 - Learner Performance Metrics
 - Optimization Algorithms

11:22 AM | yni-tqks-rah

11:49 AM | yni-tqks-rah



Supervised Machine Learning Algorithms

k-Nearest Neighbours (k-NN) Algorithm

Overview of k-NN

- Non-parametric, instance-based learning algorithm.
- Classifies based on the majority vote of nearest neighbors.
- Distance metrics: Euclidean, Manhattan, Minkowski.

k-NN Algorithm Steps

- Choose the number of neighbors (k).
- Compute the distance between input and training data points.
- Select k nearest points.
- Perform majority vote for classification or compute average for regression.

Python Code Example

```
from sklearn.neighbors import KNeighborsClassifier  
knn = KNeighborsClassifier(n_neighbors=5)  
knn.fit(X_train, y_train)  
knn.predict(X_test)
```

11:50 AM | yni-tqks-rah

aru kumar sin...

0901CS221072 ...

0901CS221081 ...

0901CS221014 ...

0901CS221050 ...

0901CS221123 ...

0901CS221090 ...

55 others

0901CS221083 ...

Smita Paro

Linear Regression Evaluation

Accuracy: 0.85, Precision: 0.82, Recall: 0.88, F1 Score: 0.85

Confusion Matrix

Actual \ Predicted

0 1

0 15 10

1 8 12

62 others

11:27 AM | yni-tqks-rah

aru kumar singh



The image is a screenshot of a Zoom meeting interface. On the left, the 'People' pane is visible, showing a list of participants. At the top of this pane are three tabs: 'People' (selected), 'Information', and 'Activities'. Below the tabs, it says 'In call'. The list of participants includes: 'Vinayak Shrivastava (You)' (Meeting host), '0901CS221148 VINAYAK S...' (Meeting host), 'Smita Parte' (Meeting host), '0901CD221018 AYUSH SI...', '0901CD231011 ANVESHA ...', '0901CE231017 ANUJ YAD...', '0901CS221002 ABHIDHA ...', '0901CS221004 ADITYA K...', '0901CS221005 AJAY KUM...', '0901CS221013 ANIKET DH...', '0901CS221014 ANJALI PA...', '0901CS221020 ANUP SIN...', '0901CS221028 ARY...', and '0901CS221040 DEVENDR...'. Each entry has a profile picture icon, a name, and a status (e.g., 'Meeting host'). To the right of the names are icons for audio and video status. In the main window, a grid of video thumbnails is displayed. The top-left thumbnail shows a person's face. Other thumbnails show various icons and text, including 'arun ki...', 'You', and 'arun ki...67'. At the bottom of the screen, a status bar shows the time '11:49 AM', the user 'yni-tqks-rah', and several icons for meeting controls like chat, mute, and video.



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Attendance					
	Timestamp	Name	Enrollment No.	Did you attend the	event?
	2/8/2025 12:16:28	Utkarsh Nagar	0901CS221142	Yes	
	2/8/2025 12:16:30	Priyansh Raj	0901CS221103	Yes	
	2/8/2025 12:16:32	Kunal Jain	0901CS221075	Yes	
	2/8/2025 12:16:36	Sneha Jareniya	0901CS221131	Yes	
	2/8/2025 12:16:37	kartik Indapurkar	0901CS221158	Yes	
	2/8/2025 12:16:37	Abhay Chokotiya	0901CS221001	Yes	
	2/8/2025 12:16:37	Ajay Kumar Gupta	0901CS221005	Yes	
	2/8/2025 12:16:39	Vaishali Gunkar	0901ET211065	Yes	
	2/8/2025 12:16:41	Pratham Sharma	0901CS221101	Yes	
	2/8/2025 12:16:41	Anjali Parihar	0901CS221014	Yes	
	2/8/2025 12:16:41	Anvesha Gupta	0901CD231011	Yes	
	2/8/2025 12:16:42	Ravi Raj	0901CS221110	Yes	
	2/8/2025 12:16:44	Utkarst Dawar	0901CS221144	Yes	
	2/8/2025 12:16:44	Karan Singh Gurana	0901CS221063	Yes	
	2/8/2025 12:16:46	Devendra patidar	0901CS221040	Yes	
	2/8/2025 12:16:48	Krishna sharma	0901cs221072	Yes	
	2/8/2025 12:16:49	Abhidha Joshi	0901CS221002	Yes	
	2/8/2025 12:16:50	Anup Singh Lodh	0901CS221020	Yes	
	2/8/2025 12:16:51	Yogesh	0901CS221154	Yes	
	2/8/2025 12:16:51	Ansh Jain	0901CS221018	Yes	
	2/8/2025 12:16:53	Mohit Umraiya	0901CS221082	Yes	
	2/8/2025 12:16:54	Krishna Agrawal	0901CS221071	Yes	
	2/8/2025 12:16:56	Khushi Dhakad	0901CS221068	Yes	
	2/8/2025 12:16:57	Varsha Dhakad	0901CS221146	Yes	
	2/8/2025 12:16:57	Kartik	0901CS221064	Yes	
	2/8/2025 12:17:01	Harshit Sharma	0901CS221054	Yes	
	2/8/2025 12:17:01	Maitri Gupta	0901CS221077	Yes	
	2/8/2025 12:17:02	Abhishek	0901CS233D01	Yes	



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	2/8/2025 12:17:02	Mayank Purohit	0901CS221078	Yes	
	2/8/2025 12:17:03	Yashraj Sherke	0901CS221152	Yes	
	2/8/2025 12:17:04	Tanishq Uchariya	0901CD221062	Yes	
	2/8/2025 12:17:04	Nancy Gupta	MCCA24O1034	Yes	
	2/8/2025 12:17:05	Harsh Jain	0901CS221050	Yes	
	2/8/2025 12:17:07	Neeraj Patel	0901CS221084	Yes	
	2/8/2025 12:17:08	Utkarsh Pachouri	0901CS221143	Yes	
	2/8/2025 12:17:08	Umesh Jamra	0901CS221141	Yes	
	2/8/2025 12:17:19	Yugal Burde	0901CS221156	Yes	
	2/8/2025 12:17:23	Khushboo Tagore	0901ET221032	Yes	
	2/8/2025 12:17:26	Harshit Kumar	0901CS221053	Yes	
	2/8/2025 12:17:26	Ishaan sharma	0901CS221057	Yes	
	2/8/2025 12:17:26	Aman Goyal	0901CS221011	Yes	
	2/8/2025 12:17:39	Satish Kumar Dhurve	0901CS221123	Yes	
	2/8/2025 12:17:47	Shreya Gaur	0901CS233D11	Yes	
	2/8/2025 12:17:49	Anurag Singh kushwah	MCCA24O1015	Yes	
	2/8/2025 12:17:59	Swati	0901CS221137	Yes	
	2/8/2025 12:18:00	Moses lal	0901CS221083	Yes	
	2/8/2025 12:18:02	Nancy Gupta	MCCA24O1034	Yes	
	2/8/2025 12:18:08	Yashvi Nikhare	0901EE221102	Yes	
	2/8/2025 12:18:16	Riddhi sharma	0901CS221113	Yes	
	2/8/2025 12:18:40	Shikha soni	MCCA24O1059	Yes	
	2/8/2025 12:18:46	Yash Kumar Singh	0901CS221150	Yes	
	2/8/2025 12:18:49	Palak Dixit	0901CS233D10	Yes	
	2/8/2025 12:19:29	Karan Chhabda	0901CS221062	Yes	
	2/8/2025 12:19:33	Vinayak Shrivastava	0901CS221148	Yes	
	2/8/2025 12:19:56	SURENDRA PRATAP AHIRWAR	0901CS221135	Yes	
	2/8/2025 12:19:58	RISHITA MUKHERJEE	0901CS231115	Yes	
	2/8/2025 12:20:01	Tanishq Uchariya	0901CD221062	Yes	
	2/8/2025 12:20:16	Lokesh garothiya	0901CS233D09	Yes	



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	2/8/2025 12:21:41	Anurag singh kushwah	0901cs221023	Yes
	2/8/2025 12:23:08	Saurabh solanki	0901AM231058	Yes
	2/8/2025 12:23:50	PURNIMA PURE	BTAI24O1055	Yes
	2/8/2025 12:24:22	Anurag singh kushwah	0901cs221023	Yes
	2/8/2025 12:24:50	Shreya Chaturvedi	0901CS221128	Yes
	2/8/2025 12:27:09	SURENDRA PRATAP AHIRWAR	0901CS221135	Yes
	2/8/2025 12:27:54	Jitendra Adiwasi	0901CS221061	Yes
	2/8/2025 12:28:05	PURNIMA PURE	BTAI24O1055	Yes
	2/8/2025 12:31:14	Sachin parashar	0901cs221120	Yes
	2/8/2025 12:31:40	Ayush Tripathi	0901CS233D05	Yes
	2/8/2025 12:33:27	Nancy Gupta	0901AM231041	Yes
	2/8/2025 12:34:04	Tanmay Sawankar	0901CS221139	Yes
	2/8/2025 12:35:23	Lovejeet singh	0901CS221076	Yes
	2/8/2025 12:42:20	Sumit Singh Sengar	0901CS221133	Yes
	2/8/2025 12:43:28	Anshika Agrawal	0901CS221019	Yes
	2/8/2025 12:49:30	Abhishek Agrawal	0901CS221157	Yes
	2/8/2025 12:52:35	Amit singh ghosh	0901Io221013	Yes
	2/8/2025 12:53:34	Ayush Gupta	0901IO221019	Yes
	2/8/2025 12:55:07	Neeraj Prajapati	0901AD221052	Yes
	2/8/2025 14:30:51	Asmi Saxena	0901CS221033	Yes
	2/8/2025 14:40:54	Shivam upadhyay	0901EE221076	Yes



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Attendance

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Proforma-III

Conducted online
8/2/2025 11-12 pm.
8/2/2025 12-1 pm.

REMUNERATION & LOCAL CONVEYANCE BILL

Expert Lectures

Code: Name of Exam June/Dec. 20..... Voucher No. Ledger No.

Name: Dr. Arun Kumar Singh Designation: Data Research Scientist Address:

PAN No. : Name of Internal/External Examiner: Dr. Smita Parate

To,
The Vice Chancellor,
MITS-DU Gwalior

Sir,

I submit my bill of remuneration for the work done by me as under, payment of which may be made to me at your earliest convenience.

Assignment/Work Executed with date (Practical Exam/Expert meetings/Lecture) (Mention whichever is applicable)	Subject & Code	Number of Examinee	Rate of Remuneration	Total Amount	Less 5% T.W.F.	Total Amount Claimed
<u>Partial Delivery of Content by Industry Expert</u> <u>2 Lectures on 8/2/2025</u>	<u>2150601 Machine Learning</u>	<u>11</u>	<u>1000/-</u>	<u>2000/-</u>	<u>5% 100/-</u>	<u>1900/-</u>
Tax Deduction at source (in Rs.)						
Local Conveyance Allowance (if any): <u>ONLINE</u>						
Travelled From: <u>M.D.</u> To: <u>M.D.</u> Vehicle No. <u>412</u> (Two Wheeler/Car)						
Net Amount Payable (Rs. <u>Nineteen hundred only</u> only)						

Certified that claim has been preferred for the first time in accordance with the schedule of remuneration approved by MITS-DU Gwalior

Pre-Receipt of the payment

Verified & Forwarded By:

(HOD/Section In-charge)

Dr. Arun Kumar Singh
(Signature of Claimant with date)

(Account Officer)

Approved By:-

(Vice Chancellor)

Details for RTGS/NEFT (To be filled by claimant)

A/C No.: 33190513338

A/C Name: ARUN KUMAR SINGH

Beneficiary Bank & Branch Name: SBI - IITROORKEE IFSC Code: SBIIN0001069

For Office Use Only:

Remitter Detail	Payment Details	Cheque No. & Date	Debit A/C	Amount in Rs.	Amount in words
Name: Vice Chancellor MITS-DU, Gwalior Address: Gole Ka Mandir, Gwalior-474005 PAN No.: AABAT3827A					

