

A Seminar on AI in Agriculture

Dr. Dinesh D. Puri

MCA

Activity Report

Academic Year	2024-25
Program Driven by	
Quarter	III
Program / Activity Name	Capacity Building Program
Program Type	
Program Theme	Innovation and startups
Start Date	15-03-2025
End Date	15-03-2025
Duration of the Activity (in Mins)	60
Number of Student Participant	0
Number of Faculty Participant	70
Number of external Participant	--
Expenditure Amount in Rs.	
Any Remark	--
Mode of Session Delivery	Offline
Objective	
Benefit in terms of Learning / Skills / Knowledge obtained	
Feedback	
Video url (mp4)	
Photograph 1 (jpg)	Attached
Photograph 2 (jpg)	Attached
Overall report of the Activity (pdf)	As given below



Dr. P. H. Zope
Convener IIC



Abstract

Artificial Intelligence (AI) is revolutionizing agriculture by enabling smarter farming practices, improving productivity, and ensuring sustainability. From precision farming and pest detection to yield prediction and autonomous equipment, AI is becoming an essential tool for modern agricultural practices. This seminar report explores various AI technologies applied in agriculture, the benefits and challenges of implementation, and future prospects in the domain.

1. Introduction

Agriculture is a vital sector that feeds the global population, yet it faces numerous challenges such as climate change, water scarcity, and declining soil health. Traditional methods are no longer sufficient to meet the growing demands. AI has emerged as a transformative technology that empowers farmers with data-driven insights and automation.

2. Applications of AI in Agriculture

2.1 Precision Farming

AI enables site-specific crop management using data collected by sensors and satellites. Machine learning algorithms analyze this data to provide recommendations on irrigation, fertilization, and harvesting.

2.2 Crop and Soil Monitoring

Computer vision systems, powered by AI, analyze images captured by drones or field cameras to assess soil health and detect diseases early.

2.3 Pest and Disease Prediction

AI models trained on vast datasets can identify signs of pest infestation or disease, helping in timely intervention and reducing crop loss.

2.4 Yield Prediction

Machine learning algorithms analyze historical weather data, soil conditions, and crop traits to forecast yield, enabling better planning and logistics.

2.5 Autonomous Farming Equipment

AI is the brain behind self-driving tractors, robotic harvesters, and drones, which increase efficiency and reduce labor dependency.

3. Benefits of AI in Agriculture

- **Improved Crop Yield and Quality**
- **Efficient Use of Resources (Water, Fertilizers, Pesticides)**
- **Reduced Environmental Impact**
- **Cost Reduction and Labor Efficiency**
- **Real-time Monitoring and Predictive Analysis**

4. Challenges in Implementing AI

- High initial investment and infrastructure cost
- Lack of digital literacy among farmers
- Limited internet access in rural areas
- Data privacy and ownership concerns

5. Future Prospects


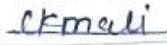

















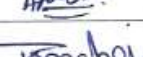
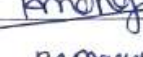
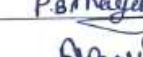

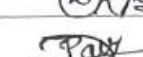

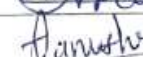
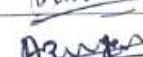
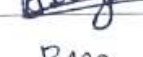


AI in agriculture is still evolving. With advancements in edge computing, 5G, and IoT integration, AI will offer even more personalized and autonomous solutions. The role of governments, educational institutions, and tech companies will be crucial in driving adoption.

6. Conclusion

AI holds immense promise for transforming agriculture into a more efficient, sustainable, and profitable sector. However, its true potential can only be realized through collaborative efforts that address the digital divide and make technology accessible to all farmers.





Roll no.	Name	Sign
54	Kalyani Bapu pati	
17	Chaitali . K. Mali	
60	Megha Manoj Patil	
45	Devayani Samadhan patil	
74	Shruti Kiran patil.	
73	Shrushti Rakesh Patil	
80	Teena Hemraj Patil	
28	Nizgala Natendra Narkhede	
33	Vishakha Pramod Nikam	
46	Devyani Pravin Patil	
38	Ankita Sanjay Patil	
41	Rutuja Ravindra Patil	
32	Lavanya Santosh Nikam	
83	Pranjal Mukunda Patil	
02	Bhagyashree Anant Khewalkar	
79	Tanvi Vinesh sing Patil	
70	Ranjana Dnyaneshwar Patil	
19	Prapti Shrawan Mali	
53	Jayshree G. Patil	
08	Bhumiika Dilip Mahajan	
10	Khushi Rajendra Mahajan	
06	Priyanka Bhagwan Magare	
39	Ankita Vilas Patil	
37	Keerti Kaduba Pordeshi	
36	Trupti Dyaneshwar Palve	
55	Khushi Vinayak Patil	
78	Tanushree Pandharinath Patil	
07	Aniket Balwant Mahajan	
05	Prajwal Vinod Machankar	
59	Mayur Sursh Patil	

Sr.No	Name of Student	Sign.	Roll No.
1)	Utkarsha S. Patil	<u>Utkarsha</u>	2
2)	Tanvi Vinod kulkarni	<u>Kulkarni</u>	62
3)	Utkarsha S. Suryawanshi	<u>US</u>	38
4)	Gayatri Tushar Shingate	<u>Shingate</u>	26
5)	Simran Shawata Tadari	<u>Tadari</u>	41
6)	Mansi suresh shirade	<u>Shirade</u>	27
7)	Snigdha Ratilal Patil	<u>Patil</u>	71
8)	Sejal Dipak Sandhanshi	<u>Sandhanshi</u>	21
9)	Pradnya Vijay Nikam	<u>Pradnya</u>	67
10)	Saniya Javed Shaikh	<u>Saniya</u>	74
11)	Gauri Vijay Sonar	<u>Gauri</u>	75
12)	Chhayashree Pralhal Patil	<u>Patil</u>	69
13)	Vaibhavi Vinayak patil	<u>Vaibhavi</u>	3
14)	Troiveni Ashok Solanki	<u>Troiveni</u>	29
15)	Abhijeet Girish Patil	<u>Patil</u>	68
16)	Shreyas Vijay Sangore	<u>Shreyas</u>	72
17)	Varad Anil Akkavadi	<u>Varad</u>	55
18)	Aryan Kamal Bajaj	<u>Aryan</u>	53
19)	Reham Akiloddin Shaikh	<u>Reham</u>	73
20)	Ganesh P. Sushir	<u>G.P. Sushir</u>	40
21)	Yogeshwar Sapan Wagh	<u>Yogeshwar</u>	51
22)	OM Rajendra Talele	<u>Talele</u>	43
23)	Chandheesant Devadas Ahire	<u>Ahire</u>	54
24)	Faizan Lukman Tadvi	<u>Faizan</u>	79
25)	Kalpesh Ananda Sonawane	<u>Kalpesh</u>	31
26)	Chiranjy Digambar Rajput	<u>Chiranjy</u>	16

Roll No	Name	Sign
23	Aditya Arun more	<u>Aditya</u>
65	Pratik Rajesh Patil	<u>Pratik</u>
66	Prathmesh Avinash Patil	<u>Prathesh</u>
26	Kunal Vasant Nannaware	<u>Kunal</u>
03	Amol Govinda Kumbhar	<u>Amol</u>
04	Ramchandra Bhatu Lohar	<u>Ramchandra</u>
50	Harshal Bharat Patil	<u>Harshal</u>
12	Pranav Bhaskar Mahajan	<u>Pranav</u>
13	Sumit Vinod Mahajan	<u>Sumit</u>

Attendance Sheet

Date and Sign		15/03/25	29/03/25	
SN	Name of faculty Member	Dept.		
1	Dr. P.A. Shirule	Civil		02
2	Dr. F.I. Chavan	Civil		04
3	Dr. Sonali B. Patil	Civil		03
4	Mr. J.N. Kale	Civil		03
5	Ms. Jyoti R. Mali	Civil		05
6	Pankaj Ramdas Punase	Civil		03
7	Ms. Dipika Purushottam Mali	Civil		01
8	Kalyani Ganesh Bendale	Civil		00
9	Dr. K.P. Adhiya	Computer		04
10	Dr. Manoj E Patil	Computer		04
11	Mr. Ashish T. Bhole	Computer		04
12	Dr. Akash D. Waghmare	Computer		06
13	Dr. Dnyaneshwar K. Kirange	Computer		06
14	Dr. Pankaj H. Zope	Computer		03
15	Dr. Surendra P. Ramteke	Computer		06
16	Ms. Shital A. Patil	Computer		03
17	Mr. Sarkarsinha Harshinha Rajput	Computer		05
18	Mr. Mohan Pramod Patil	Computer		05
19	Mr. Ramkrishna Hari Patil	Computer		05
20	Mr. Pramodgiri B. Gosavi	Computer		02
21	Ms. Priyanka Vinod Medhe	Computer		06
22	Mr. Krunal Chadrashekhwar Pawar	Computer		03
23	Ms. Pooja Mukundrao Khandar	Computer		03
24	Ms. Ashwini Arun Kakde	Computer		03
25	Ms. Mayuri Rajesh Chandratre	Computer		04
26	Ms. Shama S Pawar	Computer		03
27	Mr. Mohammed Shafique Shaikh	Computer		05
28	Ms. Tejashri Anil Patil	Computer		—
29	Ms. Prachi Pushkaraj Chaudhari	Computer		—
30	Ms. Utkarsha Prmod Narkhede	Computer		—
31	Ms. Soniya Premraj Chaudhari	Computer		—
32	Ms. Dipali Daulatrao Phadat	Computer		—
33	Mr. V. S. Pawar	Electrical		03
Pranesh S. Sarda		02/02		02

Attendance Sheet

SN	Date and Sign	Name of faculty Member	Dept.	15/03/25	29/03/25	
34		Mr. M. Mujtahid Ansari	Electrical			05
35		Dr. Suhas M. Shembekar	Electrical		—	04
36		Dr. Rajesh R. Karhe	Electrical			04
37		Mr. Muqem Khan	Electrical	—		04
38		Mr. Tanveer Khatik	Electrical		—	04
39		Mr. Vijay Abaji Shinde	Electrical			02
40		Dr. M.P. Deshmukh	E&TC	—		04
41		Dr. V.M. Deshmukh	E&TC			04
42		Dr. N.M. Kazi	E&TC			04
43		Dr. Atul H. Karode	E&TC		—	04
44		Mr. Sunil K. Khode	E&TC		—	03
45		Ms. Rajashri B. Patil	E&TC			05
46		Dr. P.G. Damle	Mechanical		—	04
47		Mr. N. K. Patil	Mechanical	—		04
48		Dr. K. Shrivastav	Mechanical		—	02
49		Dr. Devendra B. Sadaphale	Mechanical			04
50		Dr. P. M. Solanki	Mechanical		—	04
51		Dr. Ajay R. Bhardwaj	Mechanical			03
52		Dr. Dipak C. Talele	Mechanical			05
53		Dr. Vijay R. Diware	Chemical	—		04
54		Dr. S. A. Thakur	Chemical	—	—	03
55		Mr. V. P. Sangore	Chemical	—		04
56		Mrs. Sarika S. Pawar	Chemical		—	03
57		Mrs. Ruchita S. Naik	Chemical		—	04
58		Dr. Sandip S. Patil	First Year			05
59		Dr. K. S. Patil	First Year	—	—	02
60		Dr. Sunita S. Patil	First Year	—		04
61		Dr. Prashant N. Ulhe	First Year			05
62		Mr. Amol Chandrakan Wani	First Year	—	—	03
63		Ms. Priti Ramesh Sharma	First Year		—	02
64		C.U. Nikam	First Year		—	01

Attendance Sheet

Date and Sign		Dept		Signs 29/01/21	
Sl	Name of Faculty Member	Dept			
65	Mr. Pratik D. Patel	First Year	P	P	04
66	Mr. Dhanendra J. Doshi	First Year			04
67	Mr. Mahendra S. Patel	First Year			01
68	Mr. Manoj Prasad Kulkarni	First Year			04
69	Mr. Dharmendra Chandrakant Vagade	First Year			03
70	Dr. Anand T. Patel	First Year			03
71	Mrs. Nitesh Sawant	First Year			01
72	Mr. Tarun S. Chaudhari	First Year			07
73	Mrs. Anil Dhanraj Patel	First Year			00
74	Mr. Dhanendra S. Vagade	First Year			03
75	Mrs. Poo Manoj Mali	First Year			14
76	Mr. Dhanendra S. Chaudhari	First Year			12
77	Mr. Sachin Tejendra Bhalekar	First Year			13
78	Dr. Mahesh S. Rawlani	MBA			03
79	Dr. Rishi A. Modhyan	MBA			04
80	Mr. Farooq A. Khan	MBA			04
81	Mrs. Bharti F. Joshi	MBA			05
82	Mrs. Sakshi Manoj Kumar	MBA			04
83	Mr. Rishabh Sunil Patel	MBA			12
84	Mr. Anand Dhanraj Sawant	MBA			12
85	Dr. Pooja Dhanraj Vagade	MBA			
86	Mr. Tejendra Dhanraj Vagade	MBA			
87	Mr. Anand Dhanraj	MBA			
88	Mr. Dhanendra Dhanraj	MBA			
89	Mr. Dhanendra Dhanraj	MBA			
90	Mr. Dhanendra Dhanraj	MBA			
91	Mr. Dhanendra Dhanraj	MBA			
92	Mr. Dhanendra Dhanraj	MBA			
93	Mr. Dhanendra Dhanraj	MBA			
94	Mr. Dhanendra Dhanraj	MBA			
95	Mr. Dhanendra Dhanraj	MBA			
96	Mr. Dhanendra Dhanraj	MBA			
97	Mr. Dhanendra Dhanraj	MBA			
98	Mr. Dhanendra Dhanraj	MBA			
99	Mr. Dhanendra Dhanraj	MBA			
100	Mr. Dhanendra Dhanraj	MBA			

Attendance Sheet

SN	Name of faculty Member	Dept.	08/02/25	15/2/25	08/03/25	
1	Dr. P.A. Shirule	Civil				2
2	Dr. F.I. Chavan	Civil				2
3	Dr. Sonali B. Patil	Civil				1
4	Mr. J.N. Kale	Civil				1
5	Ms. Jyoti R. Mali	Civil				3
6	Pankaj Ramdas Punase	Civil				2
7	Ms. Dipika Purushottam Mali	Civil				0
8	Kalyani Ganesh Bendale	Civil				0
9	Dr. K.P. Adhiya	Computer				2
10	Dr. Manoj E. Patil	Computer				2
11	Mr. Ashish T. Bhole	Computer				3
12	Dr. Akash D. Waghmare	Computer				3
13	Dr. Dnyaneshwar K. Kirange	Computer				2
14	Dr. Pankaj H. Zope	Computer				2
15	Dr. Surendra P. Ramteke	Computer				3
16	Ms. Shital A. Patil	Computer				1
17	Mr. Sarkarsinha Harshinha Rajput	Computer				2
18	Mr. Mohan Pramod Patil	Computer				0
19	Mr. Ramkrishna Hari Patil	Computer				3
20	Mr. Pramodgiri B. Gosavi	Computer				
21	Ms. Priyanka Vinod Medhe	Computer				2
22	Mr. Krunal Chadrashankar Pawar	Computer				2
23	Ms. Pooja Mukundrao Khandar	Computer				2
24	Ms. Ashwini Arun Kakde	Computer				2
25	Ms. Mayuri Rajesh Chandratre	Computer				2
26	Ms. Shama S. Pawar	Computer				2
27	Mr. Mohammed Shafique Shaikh	Computer				2
28	Ms. Tejashri Anil Patil	Computer				
29	Ms. Prachi Pushkaraj Chaudhari	Computer				
30	Ms. Utkarsha Prmod Narkhede	Computer				
31	Ms. Soniya Premraj Chaudhari	Computer				
32	Ms. Dipali Daulatrao Phadat	Computer				
33	Mr. V. S. Pawar	Electrical				2

Attendance Sheet

SN	Name of faculty Member	Dept.	08/02/25	15/02/25	08/03/25	
34	Mr. M. Mujtahid Ansari	Electrical				3
35	Dr. Suhas M. Shembekar	Electrical				3
36	Dr. Rajesh R Karhe	Electrical				3
37	Mr. Muqem Khan	Electrical				3
38	Mr. Tanveer Khatik	Electrical				3
39	Mr. Vijay Abaji Shinde	Electrical				3
40	Dr. M.P. Deshmukh	E&TC				3
41	Dr. V.M. Deshmukh	E&TC				2
42	Dr. N.M. Kazi	E&TC				2
43	Dr. Atul H. Karode	E&TC				3
44	Mr. Sunil K. Khode	E&TC				3
45	Ms. Rajashri B Patil	E&TC				3
46	Dr. P.G. Damle	Mechanical				3
47	Mr. N. K. Patil	Mechanical				3
48	Dr. K. Shrivastav	Mechanical				1
49	Dr. Devendra B. Sadaphale	Mechanical				2
50	Dr. P. M. Solanki	Mechanical				3
51	Dr. Ajay R. Bhardwaj	Mechanical				2
52	Dr. Dipak C. Talele	Mechanical				3
53	Dr. Vijay R. Diware	Chemical				3
54	Dr. S. A. Thakur	Chemical				3
55	Mr. V. P. Sangore	Chemical				3
56	Mrs. Sarika S. Pawar	Chemical				3
57	Mrs. Ruchita S. Naik	Chemical				3
58	Dr. Sandip S. Patil	First Year				1
59	Dr. K. S. Patil	First Year				3
60	Dr. Sunita S. Patil	First Year				3
61	Dr. Prashant N. Ulhe	First Year				3
62	Dr. Amol Chandrakan Wani	First Year				3
63	Ms. Priti Ramesh Sharma	First Year				3
64	C.U. Nikam	First Year				1

Attendance Sheet

SN	Date and Sign	Dept.	08/02/25	15/2/2025	08/03/25	
65	Mr. Pravin D. Patil	First Year	P	P	—	2
66	Ms. Deepmala I. Desai	First Year	Desai	Desai	Desai	6
67	Mr. Mahendra B. Patil	First Year	—	—	—	0
68	Ms. Meera Prassan Kulkarni	First Year	Yashwanth	—	Yashwanth	6
69	Ms. Dhanashree Shashikant Tayade	First Year	D.	—	D.	2
70	Ujawalsing T. Patil	First Year	Patil	Patil	—	2
71	Mrs. Nancy Sawhney	First Year	—	—	—	1
72	Ms. Tanuja Y. Chouhan	First Year	—	—	Tanuja	1
73	Mrs. Anjali Darshan Patil	First Year	—	—	—	0
74	Ms. Jayashree R. Tayade	First Year	R. Tayade	R. Tayade	R. Tayade	3
75	Mrs. Puja Mayur Malu	First Year	—	Malu	Malu	2
76	Mr. Dashrath U. Chaudhari	First Year	DCM	—	DCM	2
77	Mr. Sachin Topalu Bhalerao	First Year	Sachin	Sachin	Sachin	6
78	Dr. Mahesh V. Rawlani	MBA	—	—	—	1
79	Dr. Richa A. Modiyani	MBA	R.	—	R.	2
80	Ms. Farooza A. Kazi	MBA	F.	—	F.	2
81	Mrs. Bharti P. Joshi	MBA	B.P.	B.P.	B.P.	3
82	Mrs. Sakina Mujahid Husain	MBA	Sakina	Sakina	Sakina	3
83	Mr. Rohan Suresh Patil	MBA	—	R. Patil	R. Patil	2
84	Ms. Vrushali Dinkar Sonawane	MBA	V.S.	V.S.	—	2
85	Dr. Puri Dinesh Dagadu	MCA	Puri	Puri	Puri	2
86	Ms. Sapana Ananrao Fegade	MCA	Sapana	Sapana	—	2
87	Mr. Aslan Shaikh	MCA	Aslan	Aslan	—	2
88	Ms. Dhanshee Rajendra Shinde	MCA	—	—	—	0
89	Ms. Chetana Mohan Kawale	MCA	Chetana	Chetana	Chetana	2
90	Ms. Vishakha Yadonao Pande	MCA	V. Pande	V. Pande	V. Pande	2
91	Ms. Bhagyashri Suresh Patil	MCA	—	—	B. Patil	1
92	Ms. Reeta Vinod Patil	MCA	R. Patil	R. Patil	R. Patil	2
93	Dr. Sudhir S. Patil	Library	S.	S.	—	2
94	Nikita Gokul Patil	civil	—	N. Patil	N. Patil	2
95	V. S. Pawan	steriod	V. S. Pawan	V. S. Pawan	V. S. Pawan	2
96	Ganesh Sonawane	civil	G.	—	G.	1