

6.3.3 Details of professional development / administrative training programmes organized by the Institution for teaching and non-teaching staff during the year

Title of the professional development programme organised for teaching staff	Title of the administrative training programme organised for non-teaching staff	No. of participants	Dates (from-to) (DD-MM-YYYY)
Two days FDP on NBA Accreditation as per SAR-2024	-	35	19-06-2025 to 20-06-2025
Five-Day Faculty Development Programme on "Power of Active Learning and AI in Engineering Education"	-	35	30-06-2025 to 04-07-2025
One week Handson FDP on Industrial Automation and Collaborative Robots	-	38	23-06-2025 to 28-06-2025
Research Challenges & Opportunities in Electrical Engineering	-	160	26-05-2025 to 31-05-2025
Faculty Development Program on DevOps	-	25	08-03-2025 to 11-03-2025
one week FDP Mastering AI Tools for Faculty Excellence	-	40	23-12-2024 to 27-12-2024
Deep Learning with Modern Intel® Architectureheld at the Intel® Unnati Lab	-	50	14-10-2024 to 18-10-2024
FDP on "Data Science"	-	34	08-05-2025 to 08-05-2025
FDP on "NBA ORIENTATION" for Mentee Intstitutes	-	39	22-01-2025 to 24-01-2025
Five Days FDP on “Advancements in AI with IOT for Sustainability”	-	45	16-12-2024 to 20-12-2024



JAYAWANT SHIKSHAN PRASARAK MANDAL'S
RAJARSHI SHAHU COLLEGE OF ENGINEERING

An Empowered Autonomous Institute Affiliated to Savitribai Phule Pune University-I.D. No.: PU/PN/Engg./173(2001)

AISHE CODE C - 41614

Prof. Dr. T. J. Sawant
 B.E.(Elec.) PGDM, Ph.D
 Founder Secretary

S. No. 80, Pune-Mumbai By Pass Highway, Tathawade, Pune - 411033.
 Ph.: 020-67127777 / 67127778 / 67127779 / 67127780 / 67127780
 Email : principal@jspmrscoe.edu.in Website : www.jspmrscoe.edu.in



Dr. Santosh P. Bhosle
 M.Tech.(Prod.) Gold Medallist,
 Ph.D. (Mech.), M.B.A. (H.R.)
 Director

6.3.3 Details of professional development / administrative training programmes organized by the Institution for teaching and non-teaching staff during the year

Professional Development Programme Organised for Teaching Staff

Sr. No	Title of the professional development programme organised for teaching staff	No. of participants	Dates (from-to) (DD-MM YYYY)	Page No
1	Two days FDP on NBA Accreditation as per SAR-2024	35	19-06-2025 to 20-06-2025	2
2	Five-Day Faculty Development Programme on "Power of Active Learning and AI in Engineering Education"	35	30-06-2025 to 04-07-2025	10
3	One week Handson FDP on Industrial Automation and Collaborative Robots	38	23-06-2025 to 28-06-2025	21
4	Research Challenges & Opportunities in Electrical Engineering	160	26-05-2025 to 31-05-2025	27
5	Faculty Development Program on DevOps	25	08-03-2025 to 11-03-2025	30
6	one week FDP Mastering AI Tools for Faculty Excellence	40	23-12-2024 to 27-12-2024	34
7	Deep Learning with Modern Intel® Architecture held at the Intel® Unnati Lab	50	14-10-2024 to 18-10-2024	39
8	FDP on "Data Science"	34	08-05-2025 to 08-05-2025	42
9	FDP on "NBA ORIENTATION" for Mentee Institutes	39	22-01-2025 to 24-01-2025	47
10	Five Days FDP on "Advancements in AI with IOT for Sustainability"	45	16-12-2024 to 20-12-2024	70



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



Two-Day Faculty Development Programme on "NBA Accreditation as per SAR-2024"



JSPM's
Rajarshi Shahu College of Engineering
An Empowered Autonomous Institute Affiliated to Savitribai Phule Pune University,
Approved by AICTE, Accredited by NBA, Accredited by NAAC With "A" Grade. MHRD-NIRF Rank:151-200

Two Days Faculty Development Programme
On

**NBA ACCREDITATION
AS PER SAR-2024**

Date : 19th - 20th June 2025
Venue: CoE Janatics

Resource Person:
Dr. Vijay Tambrallimath
Professor and Dy. Controller of Examinations, Global Academy of Technology,
Bangalore



Organised By
Department of Automation and Robotics

CHIEF PATRON
Hon'ble Prof. Dr. T. J. Sawant
Founder Secretary, JSPM & TSSM Group of Institutions

PATRON
Dr. Santosh Bhosle
Director, JSPM's RSCOE

CONVENER
Dr. A. M. Badadhe
Deputy Director, Dean Academics,
Professor and Head,
Department of Automation and Robotics

FDP COORDINATOR
Dr. Rayappa S. Mahale,
Assistant Professor,
Department of Automation and Robotics



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



JAYAWANT SHIKSHAN PRASARAK MANDAL'S
RAJARSHI SHAHU COLLEGE OF ENGINEERING

An Empowered Autonomous Institute. Affiliated to Savitribai Phule Pune University, Approved by AICTE,
Accredited by NBA, Accredited by NAAC With "A" Grade. MHRD-NIRF Rank:151-200



Schedule of Two Days Faculty Development Program on
"NBA Accreditation as per SAR-2024"

19th June to 20th June 2025

Organized by

Department of Automation and Robotics

Resource Person : Dr. Vijay Tambrallimath, Professor and
Dy. Controller of Examinations, Global Academy of Technology, Bangalore.

Day 1: Foundational Aspects of NBA Accreditation (19/06/2025)

Session	Time	Topic
Session-1	10:00 AM – 11:30 AM	Nuances of NBA GAPC 4.0 – Understanding Guidelines and Process Updates
11:30 AM – 11:45 AM Short Break		
Session-2	11:45 AM – 1:00 PM	Understanding Program Outcomes (POs) , Knowledge Attributes , Complex Engineering Problems , and their mapping to SDGs
1:00 PM – 2:00 PM Lunch Break		
Session-3	2:00 PM – 3:30 PM	NBA Framework and Pre-qualifier – Essentials for Eligibility and Compliance
3:30 PM – 3:45 PM Short Break		
Session-4	3:45 PM – 5:00 PM	Student-Faculty Ratio (SFR) Calculation and Compilation of Student Data & Records

Day 2: Criteria-Wise Technical Sessions (20/06/2025)

Session	Time	Topic
Session-1	10:00 AM – 11:30 AM	Criteria 1: Outcome-Based Curriculum Criteria 2: Outcome-Based Teaching Learning
11:30 AM – 11:45 AM Short Break		
Session-2	11:45 AM – 1:00 PM	Criteria 3: Outcome-Based Assessment Criteria 4: Students' Performance
1:00 PM – 2:00 PM Lunch Break		
Session-3	2:00 PM – 3:30 PM	Criteria 5: Faculty Information Criteria 6: Faculty Contributions
3:30 PM – 3:45 PM Short Break		
Session-4	3:45 PM – 5:00 PM	Criteria 7: Facilities and Technical Support Criteria 8: Continuous Improvement

Dr. Rayappa S. Mahale
Assistant Professor,
Dept of A&R

Dr. Avinash M. Badadhe
HoD, Dept of AR
& Deputy Director

Dr. Santosh P. Bhosle
Director



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33

(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



Introduction

The Department of Automation and Robotics organized a two-day Faculty Development Programme (FDP) on *"NBA Accreditation as per SAR – 2024"*, aimed at enhancing the understanding of NBA's latest guidelines, assessment process, and documentation practices. This FDP served as a crucial knowledge-sharing platform for faculty members preparing for upcoming NBA accreditation cycles.

Objectives:

- Familiarize the faculty with NBA GAPC 4.0 guidelines.
- Provide comprehensive knowledge on SAR criteria, documentation, and evaluation process.
- Enhance institutional preparedness for NBA accreditation through understanding Program Outcomes (POs), Student-Faculty Ratio (SFR), and continuous improvement processes.

Details of Resource Person:

Dr. Vijay Tambrallimath

Professor and Dy. Controller of Examinations
Global Academy of Technology, Bangalore

About Resource Person:

Dr. Vijay Tambrallimath is a seasoned academician and institutional leader currently serving as Professor in Mechanical Engineering and Deputy Controller of Examinations at Global Academy of Technology (Autonomous), Bangalore. He brings over 15 years of academic experience, having previously held key positions such as Head of the Department of Automobile Engineering at Dayananda Sagar College of Engineering and Senior Assistant Professor at Manipal Institute of Technology.

Dr. Vijay holds a B.E. in Automobile Engineering, an M. Tech in Energy Systems Engineering, and a Ph.D. in 3D Printing Technology. His research contributions span across additive manufacturing, electric vehicles, and energy systems, resulting in **30+ Scopus-indexed publications**, one edited book on additive manufacturing, and a research profile with **~600 citations and an h-index of 14**.

He is a recipient of the **Best Research Paper Award** at international conferences and has been honored with the Young Researcher Award by ISIE India. An active collaborator with industry, Dr. Vijay has played a pivotal role in establishing Centers of Excellence in Electric Vehicles at both Manipal and Dayananda Sagar institutions. His efforts have consistently aimed at aligning academic programs with emerging technological needs and industry expectations.

In the realm of academic quality and accreditation, he has extensive hands-on experience serving as NBA Coordinator and Department Chairman for four NBA accreditations (Tier 1 & Tier 2), two NAAC accreditations as a Criteria Champion, and contributing to IET (UK)



accreditation at MIT Manipal. He brings deep insight into outcome-based education, institutional rankings, and accreditation systems.

Dr. Vijay envisions impactful education that bridges cutting-edge research with industry relevance. He is committed to mentoring future engineers, fostering a culture of innovation, and driving academic reforms. Currently, he is leading the digital transformation of the examination system at Global Academy of Technology, streamlining processes to ensure transparency, efficiency, and academic integrity.

Outcomes of FDP

The two-day Faculty Development Programme on NBA Accreditation as per SAR-2024 was a comprehensive and impactful initiative aimed at building institutional readiness for accreditation. The outcomes of the FDP are summarized in the following key areas:

1. Enhanced Understanding of NBA GAPC 4.0 Framework

- Faculty members gained clarity on the **latest revisions in the NBA GAPC 4.0 guidelines**, including program-level and course-level expectations.
- Detailed insight into **process changes, compliance norms, and documentation practices** was shared, which is essential for preparing the Self-Assessment Report (SAR).

2. Clarity on Program Outcomes (POs), PEOs, and PSOs

The sessions effectively addressed the formulation, assessment, and mapping of:

- Program Outcomes (POs)
- Program Specific Outcomes (PSOs)
- Program Educational Objectives (PEOs)

Faculty understood the importance of **aligning these outcomes with the Sustainable Development Goals (SDGs)** and national education policies.

3. Streamlined Approach to SAR Documentation

- Participants learned to structure SAR documentation criterion-wise using correct **evidence formats, templates, and data presentation techniques**.
- Examples from accredited institutes and real SAR reports were shared, enhancing practical knowledge.

4. Technical Understanding of Student-Faculty Ratio (SFR) and Data Compilation

- Faculty were trained to accurately compute **Student-Faculty Ratio**, a crucial quantitative metric for accreditation.



- Best practices for **organizing faculty credentials, student records, performance data, and supporting evidence** were explained.

5. Mastery of Criteria-wise NBA Compliance

Each NBA criterion was thoroughly discussed with an emphasis on:

- **Criterion 1 & 2:** Designing Outcome-Based Curriculum and Teaching-Learning strategies.
- **Criterion 3 & 4:** Outcome-based assessments, question paper taxonomy, result analysis, and student performance tracking.
- **Criterion 5 & 6:** Documentation of faculty achievements, participation in FDPs/STTPs, publications, and their contributions to research and consultancy.
- **Criterion 7 & 8:** Infrastructure readiness, lab and facility planning, and continuous quality improvement (CQI) processes.

6. Faculty Empowerment for NBA Roles

- Faculty were encouraged to take on leadership roles as **SAR Coordinators, Criterion In-charges, and Department NBA Coordinators**.
- The FDP motivated faculty to take ownership of **internal academic audits, curriculum reviews, and assessment strategies**.

7. Encouragement for Continuous Quality Improvement (CQI)

- Emphasis was placed on **closing the loop through feedback mechanisms**, data-driven decisions, and academic benchmarking.
- Faculty committed to **developing and documenting best practices** for periodic improvement.

8. Peer Learning and Inter-departmental Collaboration

- The FDP provided a platform for **cross-departmental interaction**, helping faculty understand interdisciplinary approaches to SAR preparation.
- It led to **collaborative planning for departmental readiness** ahead of the next NBA cycle.

9. Positive Feedback and Action Plan

- The post-FDP feedback reflected a high level of satisfaction and learning.
- Departments have begun forming **NBA task forces and action committees** to initiate internal preparations.
- Participants expressed readiness to conduct **mock audits and internal review sessions**.

The FDP succeeded in bridging the gap between policy-level NBA documentation requirements and faculty-level execution strategies. It **boosted the confidence, technical**



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



skills, and documentation awareness of all participating faculty members, thereby enhancing the institutional capability for quality assurance and accreditation readiness.

Glimpses of Faculty Development Program

Day-1 (19.06.2025)





JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics

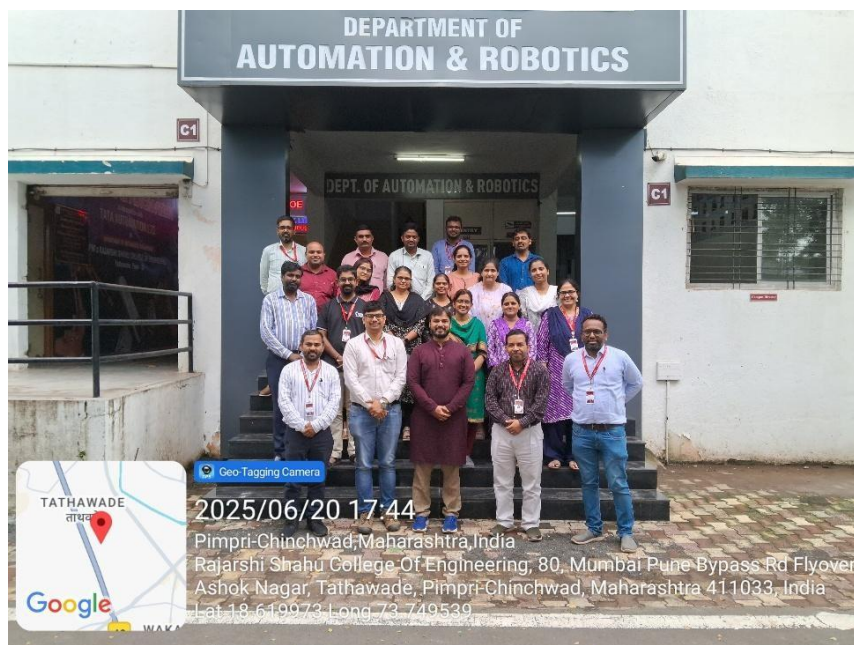


Day-2 (20.06.2025)





JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



Dr. Rayappa S. Mahale
FDP Coordinator

Dr. Avinash M. Badadhe
HOD, Dept. of A&R and Deputy Director, RSCOE

Department of Automation and Robotics, JSPMs Rajarshi Shahu College of Engineering, Pune



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



Five-Day Faculty Development Programme on "Power of Active Learning and AI in Engineering Education"

CHIEF PATRON
Hon'ble Prof. Dr. T. J. Sawant
Founder Secretary
JSPM & TSSM Group of Institutions

CONVENER
Dr. S. P. Bhosle
Director, JSPM's, RSCOE

CONVENER
Dr. A. M. Badadhe
Deputy Director, Dean Academics, HoD,
Department of Automation & Robotics

ADVISOR
Dr. S. L. Bhilare
Executive Director, Tathawade Campus

FDP CO-ORDINATORS
Dr. Swapnil S. Vyavahare
Dr. Rayappa S. Mahale

ORGANIZING COMMITTEE
Dr. Y. U. Chapke
Prof. M. N. Chandan
Prof. S. K. Vitnor
Prof. A. V. Shivashimpi
Prof. S. R. Desai
Prof. A. S. Umrikar
Prof. R. A. Dehspande
Prof. R. S. Mulla



JSPM's
Rajarshi Shahu College of Engineering
An Empowered Autonomous Institute
Affiliated to Savitribai Phule Pune University, Approved by AICTE,
Accredited by NBA, Accredited by NAAC With "A" Grade
MHRD-NIRF Rank:151-200

One Week Hands-On FDP
Power of Active Learning and AI in Engineering Education
30th June to 4th July 2025
Time - 9 AM - 5 PM

Organized by
Department of Automation & Robotics
In Association with
Educational Technology Researchers at CET, IIT Bombay

ABOUT THE FDP

- The FDP is designed to empower engineering educators with modern pedagogical strategies and advanced Artificial Intelligence (AI) tools.
- FDP begins with constructive alignment of learning outcomes, pedagogy, and assessments. It offers in-depth exploration of active learning techniques to boost classroom engagement. The FDP is placed on integrating AI and Learning Analytics to enhance student engagement, personalize instruction, and predict performance. It also includes hands-on sessions using AI tools with practical engineering education use cases.
- Overall, the FDP fosters a comprehensive and future-ready teaching approach.

SPEAKERS

Mr. Vishwas Badhe
Educational Technology Researchers at CET, IIT Bombay

Mr. Amit Paikrao
Educational Technology Researchers at CET, IIT Bombay

Mrs. Jyoti Shaha
Educational Technology Researchers at CET, IIT Bombay

Mr. Debarshi Nath
Educational Technology Researchers at CET, IIT Bombay

Mode of Course: Offline



JSPM's RAJARSHI SHAHU COLLEGE OF ENGINEERING TATHAWADE, PUNE-33

(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



APPLICATION FORM

Name : _____
Designation : _____
Department : _____
Institute : _____
Address for correspondence : _____
Phone : _____
E-mail Id : _____
Experience in Years : _____
Teaching : _____
Industry : _____
Place : _____ Date : _____
Signature of Applicant

Registration form link:

<https://forms.gle/w88yPNePB9ZdqRux8>

Registration fee:

Rs. 500/-

Scan to Register



Contact

Dr. Swapnil S. Vyavahare
ssvyavahare_ar@jspmrscoe.edu.in
+91-9890485568



JSPM's Rajarshi Shahu College of Engineering

Rajarshi Shahu College of Engineering is one among the hallmark institutes of Pune, established in 2001 with the aim of providing quality technical education and excellence in the ever expanding horizon of technical revolution of 21st century. The institute is becoming an icon in the field of engineering education in the state of Maharashtra. It is nurtured and managed by Jayawant Shikshan Prasarak Mandal Trust. The Institute is approved by the All India Council for Technical Education (AICTE), New Delhi and Govt. of Maharashtra affiliated to Savitribai Phule Pune University.

Department of Automation and Robotics

The department is recently established by the Institute from A.Y. 2021-22 with a UG program of intake capacity of 60. This program is approved by AICTE, New Delhi and Affiliated to the Savitribai Phule Pune University. The department is established to meet the growing demand for trained engineers in the field of Robotics and Industrial Automation. The Department has a Centre of Excellence in Robotics and Automation which is established in association with TATA Automation Ltd (TAL), Pune. It has the Centre of Excellence in Mechatronics established in association with Nayan Electronics, Pune. The department is also featured with Centre for Training in IoT, ML & AI in association with India First Robotics, Pune.

Topics to be covered

- Constructive alignment: LO, pedagogy, and assessment mapping
- Active learning strategies and their classroom applications
- Introduction to AI in teaching and learning
- Overview of Large Language Models (LLMs) and AI tools
- AI-enabled active learning methods in engineering education
- Case studies and hands-on with AI tools for teaching
- Implementing a learner-centric model in the classroom
- Introduction to Learning Analytics and its benefits
- Using no-code ML tools to analyze student data and predict at-risk students
- Faculty presentations on hands-on activities and expert feedback
- AI tools in research, literature reviews, and academic writing
- Ethical considerations in using AI in education"

INSTRUCTIONS FOR PARTICIPANTS

Dear Participants,

We request you to please carry the following materials (in soft copy) with you when you come for the Faculty Development Program (FDP):

- **Course Content:**
PDF of any one chapter from the course you will be teaching in the upcoming semester
Alternatively, you may bring the textbook covering that chapter
- **Supporting Materials:**
Relevant videos, infographics, or presentation slides related to the selected chapter
- **Assessment Questions:**
A minimum of 7-8 assessment questions based on the chapter (both MCQs and long answer)
- **Learning Design Documents:**
Clearly defined Learning Objectives (Los)
A lesson plan for the selected chapter (for 1 lecture)
These resources will be used for hands-on activities during the FDP. Your preparation will help ensure meaningful participation and engagement.

Thank you, and we look forward to your active involvement.

Schedule

Day	Session	Content
Day-1	Morning	Triangle of effective learning: • Why & What is required of constructive Mapping • How LO, pedagogy, and Assessment mapping can be done • Examples and hands-on of such mappings and their importance • Q&A
		Break
	Afternoon	Active learning strategies for teachers: • Conceptualization of Active learning methods. • Different active learning methods ◦ Examples of active learning methods • Q&A



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33

(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



Day 2	Morning	AI for Teaching Learning and Active learning strategies: ● Introduction to Artificial Intelligence (AI) and its potential in transforming teaching and learning. ○ Examples with different pedagogies ● Introduction to LLMs and Different AI tools (with example) ● Exploring the benefits of using AI in active learning for student engagement, critical thinking, and knowledge retention in engineering disciplines. ● Q&A
		Break
	Afternoon	Hands-on activities using AI tools: ● Presenting case studies of AI in teaching ● Different use cases in engineering education (For 2 detailed examples of active learning pedagogies along with suitable AI tool) ● Q&A
Day 3	Morning	Use of Learning analytics and Technology tools for teachers: ● What is learning analytics and How can help teachers ● Example of use of learning analytics ● Affordance of AI tools in teaching-learning and assessment ● Q&A
		Break
	Afternoon	Hands-on activities for using learning analytics tools: ● ML tool demo ● Analysing student performance data for getting deeper insights ● Predicting at-risk students using ML tools
Day 4		Assignment Day: ● Implementation of flipped classroom ● Q&A



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



Day 5	Morning	Group Presentations: • Faculty presentations and submission of assignments • Feedback by experts • Q&A
	Break	
	Afternoon	Continuing presentations & exploring use of AI in research: • Continue with faculty Presentations • Use of AI tools in enhancing research capabilities • Ethical considerations in the use of AI tools in education. • AI tools for literature review and paper writing

Introduction

The Department of Automation and Robotics organized a five-day Faculty Development Programme (FDP) on "***Power of Active Learning and AI in Engineering Education***", aimed at enhancing the understanding of active learning and use of AI in Engineering Education. This FDP served as a crucial knowledge-sharing platform for faculty members preparing for upcoming semester.

Details of Resource Person:

Educational Technology Researchers at CET, IIT Bombay

1. Mr. Vishwas Badhe
2. Mr. Amit Paikrao
3. Mrs. Jyoti Shaha
4. Mr. Debarshi Nath

Outcomes of FDP

The five-day Faculty Development Programme was a comprehensive and impactful initiative aimed at building teaching foundation for engineering teaches. The outcomes of the FDP are summarized in the following key areas:

Day 1 Highlights

Resource Person: Mr. Vishwas P Badhe

Researcher at Indian Institute of Technology, Bombay

Topic: Triangle of Effective Learning

Key Highlights from the Session:

- ◆ Explored the “Why & What” of Constructive Mapping in the context of meaningful learning.



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



- ◆ Insightful framework on mapping Learning Outcomes (LOs), Pedagogy, and Assessments the critical triangle for effective teaching.
- ◆ Hands-on activities and practical examples of mapping exercises for real classroom implementation.
- ◆ Interactive Q&A session with rich discussion on integrating these techniques into engineering curricula.

This session laid a strong foundation for embracing active learning strategies and AI tools in technical education. A heartfelt thanks to Mr. Vishwas Badhe for sharing his expertise and insights drawn from his extensive work at IIT Bombay.

Day 2 Highlights

We were honoured to have **Mrs. Jyoti Shaha**, Educational Technology Researcher, Indian Institute of Technology, Bombay, as the esteemed resource person for Day 2 of the FDP.

Session 1: AI for Teaching-Learning and Active Learning Strategies

Mrs. Jyoti Shaha delivered a comprehensive session covering:

- An engaging introduction to Artificial Intelligence (AI) and its transformative potential in education
- Use of different pedagogies alongside AI tools to enhance learning outcomes
- Overview of Large Language Models (LLMs) and demonstrations of practical AI tools for the classroom
- Insightful discussion on how AI boosts student engagement, critical thinking, and knowledge retention, especially in engineering domains
- An interactive Q&A session, addressing practical classroom challenges

Session 2: Hands-on Activities Using AI Tools

Participants actively explored:

- Real-world case studies showcasing AI integration in teaching
- Detailed examples of active learning pedagogies, paired with suitable AI tools for implementation in engineering subjects
- Use cases demonstrating how AI can simplify curriculum design, feedback mechanisms, and assessments.

A second Q&A round, enabling in-depth exploration of use cases and challenges

The sessions offered valuable insights and practical strategies for integrating AI to enrich teaching-learning experiences.

Day 3 Highlights

Resource Person: **Mr. Amit Paikrao**, PhD Scholar, Indian Institute of Technology, Bombay

The session focused on integrating Learning Analytics and AI Tools in engineering education to design more effective and learner-centric teaching models.

Topics Covered:

Introduction to Learner-Centric MOOCs Model



Understanding Learning Analytics: Its role and impact on teaching

Real-life examples of applying learning analytics

Affordances of AI tools in teaching, learning, and assessment

Hands-on demonstrations and interactive sessions

Hands-on Activities Included:

ML tool demo for analyzing student data

Predicting at-risk students using analytics

Tools explored:

Imarena.ai, mentimeter.com, padlet.com, tacherly.org, notebooklm.google.com, moodle.org, edpuzzle.com

The session empowered faculty to use data-driven approaches for enhancing student engagement and academic success.

Day 4 Highlights

Resource Person: Mr. Debarshi Nath, PhD Scholar, Indian Institute of Technology, Bombay

Day 4 of the FDP offered an intellectually stimulating and practice-oriented session focusing on the application of Machine Learning and Data Analytics in education.

Session Highlights:

Introduction to Machine Learning concepts relevant to education

Live demonstration of analysing student performance data to derive actionable insights

Hands-on experience using Power BI and Orange for visual data analytics

Discussions on how data-driven approaches can support personalized learning paths, early intervention, and academic decision-making

The session was highly interactive and enabled participants to practically engage with tools that are reshaping modern pedagogy through the integration of AI and analytics.

Day 5 Highlights

On Day 5, we had an intellectually enriching day led by two dynamic resource persons:



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



Mr. **Amit Paikrao** and **Vishwas P Badhe**, PhD Scholars from Indian Institute of Technology, Bombay.

Session Highlights:

Session 1: Leveraging AI in Engineering Research

Participants explored cutting-edge tools to streamline literature reviews and enhance research quality, including:

SciSpace, Connected Papers, Litmaps, Claude.ai, Scholarcy.com, and more.

Session 2: Data and Ethics in Education

A thought-provoking session on the responsible use of data in educational contexts, emphasizing the ethical dimensions of AI and data-driven decision-making.

Session 3: Participant Presentations & Action Planning

An engaging session where participants presented their teaching-learning strategies, including:

- ◆ Implementation of Predict, Observe, and Explain (POE) strategy
- ◆ Planning to incorporate at least one AI tool into their teaching practice
- ◆ Drafting a broad plan for using the Learner Centric Model (LCM)
- ◆ Strategies to leverage Power BI for data-driven teaching insights

The sessions inspired participants to reflect, plan, and transform their teaching with AI-integrated pedagogies, fostering learner-centric and evidence-based education.



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics

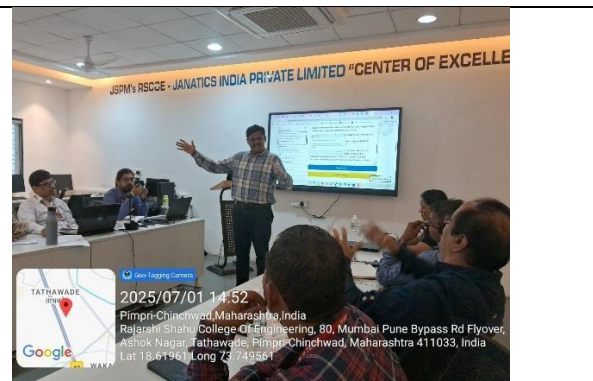


Glimpses of Faculty Development Program

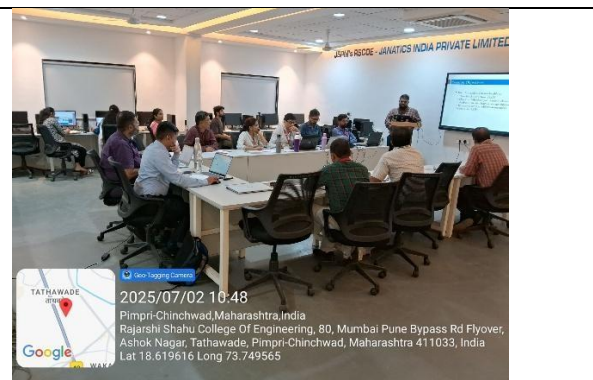
Day-1



Day-2



Day-3





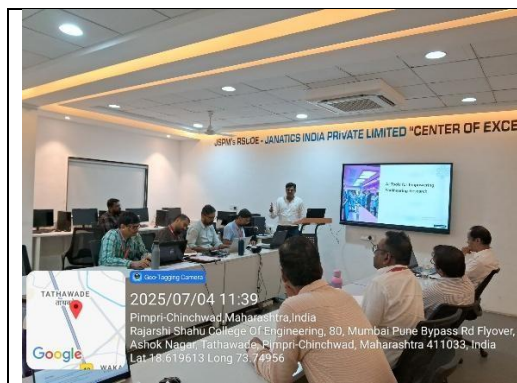
JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
 (An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



Day-4



Day-5



Details of Participants

Sr. No.	Name of Participants
1	Dr. Nithin S K
2	Prof. Pradip Gunaki
3	Prof. Wagh Smita Sitaram
4	Prof. Rupali Shrikant Dupade
5	Dr. Poonam D.Lambhate
6	Prof. Mahesh Chandrabhan Shinde
7	Prof. Prashant kakkamari
8	Prof. Ashish Umbarkar
9	Prof. Santosh Raghunath Algule
10	Prof. Santosh Raikar
11	Prof. Mallikarjun Bhagawati



JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



12	Prof. Chetan Kudale
13	Prof. Basavaraj Hugar
14	Prof. Suvarna Karki
15	Prof. Ashwin Kumar Dubey
16	Dr. Sharbani Kaushik
17	Prof. Parul Rajwade
18	Prof. Pravin S Phutane
19	Prof. Roshni Narkhede
20	Prof. Vivek Popat Patekar
21	Prof. Ashwin Kumar Dubey

Sample Certificates:





JSPM's
RAJARSHI SHAHU COLLEGE OF ENGINEERING
TATHAWADE, PUNE-33
(An Autonomous Institute Affiliated to Savitribai Phule Pune University, Pune)
Department of Automation and Robotics



Dr. Swapnil S. Vyavahare
FDP Coordinator

Dr. Rayappa S. Mahale
FDP Coordinator

Dr. Avinash M. Badadhe
HOD, Dept. of A&R and
Deputy Director, RSCOE



JSPM'S
RAJARSHI SHAHU COLLEGE OF ENGINEERING, TATHAWADE
(An Empowered Autonomous Institute Affiliated to SPPU)
DEPARTMENT OF AUTOMATION AND ROBOTICS



Faculty Development Programme (FDP)

Report on

Title: *Hands-on Industrial Automation and Collaborative Robots*

Duration: 23rd June 2025 – 28th June 2025

Venue: Centre of Excellence – Janatics, Department of Automation & Robotics, JSPM's Rajarshi Shahu College of Engineering, Pune

Organized by: Department of Automation & Robotics

In Association with: Janatics Global Solutions Private Limited

1. Inaugural Session Report

Date: 23rd June 2025 **Time:** 10:00 AM

Venue: CoE Janatics, Department of Automation & Robotics, JSPM RSCOE

The **Inaugural Ceremony** marked the commencement of the Six-Day FDP. The event began with a **welcome address** by FDP Coordinators, **Prof. Chandan M. N.** and **Prof. A. V. Shivashimpi**, highlighting the objectives and structure of the FDP.

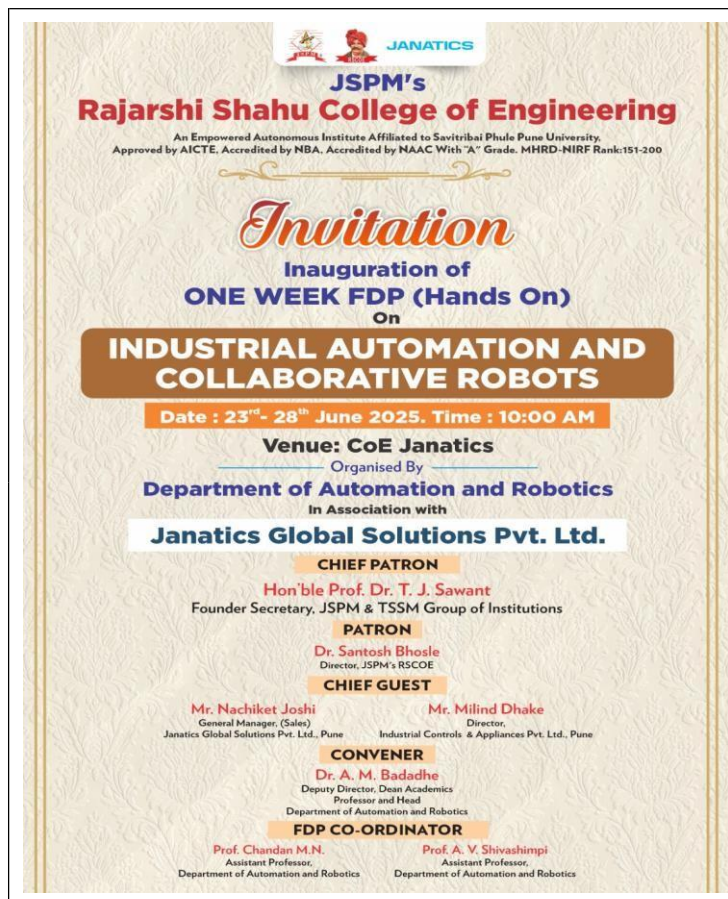
Distinguished Guests and Dignitaries:

- **Patron:** Dr. Santosh Bhosle, Director, JSPM's RSCOE
- **Chief Guests:**
 - Mr. Nachiket Joshi, General Manager (Sales), Janatics Global Solutions Pvt. Ltd., Pune
 - Mr. Milind Dhake, Director, Industrial Controls & Appliances Pvt. Ltd., Pune
- **Convener:** Dr. A. M. Badadhe, Deputy Director, Dean Academics, and Head – Department of Automation & Robotics

Key Highlights:

- Dr. A. M. Badadhe emphasized the importance of **Industry 4.0 technologies** and faculty exposure to **automation and collaborative robotics**.
- Mr. Nachiket Joshi and Mr. Milind Dhake shared insights on **Automation, Pneumatics, PLCs, and Collaborative Robotics**, highlighting **academic–industry collaboration**.
- Dr. Santosh Bhosle motivated participants to actively engage and integrate **automation technologies** into teaching and research.
- The session concluded with a **vote of thanks** by Prof. A. V. Shivashimpi.

Glimpses of Inauguration:



2. Programme Overview

The **Six-Day FDP** (23rd–28th June 2025) aimed to upgrade faculty knowledge and skills in hydraulics, pneumatics, PLC, SCADA, Industry 4.0, IoT, and collaborative robotics, bridging academic learning with industrial applications.

3. Objectives of the FDP

- In-depth theoretical and practical exposure in **industrial automation systems**
- Hands-on training in **Hydraulic, Pneumatic, and Electro-Pneumatic Systems**
- Introduction to **PLC, SCADA, OPC, and IoT-based automation platforms**
- Demonstration of **Collaborative Robotics and Machine Vision applications**
- Promote **academic–industry interaction** through expert sessions and industrial visits

4. Expected Learning Outcomes

Participants gained the ability to:

1. Understand **hydraulic and pneumatic systems** principles
2. Design and simulate **automation circuits** using Automation Studio and PLCs
3. Integrate **industrial communication protocols (OPC, SCADA, Kepware)**
4. Operate **collaborative robots (Cobots)** with vision systems
5. Apply **IoT, Digital Twin, and AR-based troubleshooting** in smart manufacturing
6. Relate industrial practices through **real-world industry exposure**

5. Summary of Sessions

Day	Date	Major Topics / Activities	Resource Person(s)	Organization / Venue
Day 1	23.06.2025	Fundamentals and Design of Hydraulic Systems; Omron PLC, HMI, and SCADA Applications; Hydraulic Circuits in Injection Molding	Mr. Krishna Kulkarni, Mr. Milind Dhake, Mr. Sanjay Unde	CoE Janatics
Day 2	24.06.2025	Pneumatics Fundamentals; Pneumatic and Electropneumatic Circuits; Safety and Advanced Pneumatic Concepts	CoE Janatics Team	CoE Janatics
Day 3	25.06.2025	Pneumatic Simulations using Automation Studio; PLC-Controlled Pneumatic Systems; OPC Communication and Kepware Integration	CoE Janatics Experts	CoE Janatics
Day 4	26.06.2025	Industry 4.0 and Mechatronic Systems; Digital Twin and IoT Demonstrations; AR-Based Troubleshooting	CoE Janatics Team	CoE Janatics
Day 5	27.06.2025	Introduction to Collaborative Robots; Vision System Integration; AI/ML Applications in Cobots	CoE Janatics Experts & Industry Resource Persons	CoE Janatics
Day 6	28.06.2025	Industrial Visit: V. R. Coatings Pvt. Ltd. and Oxford Assembly Automation; Valedictory Ceremony and Certificate Distribution	Industry Experts & FDP Coordinators	Onsite (Industrial Visit)

6. Participation Details

- **Total Participants:** 38 (Faculty Members & Research Scholars)
- **Institutions Represented:** JSPM RSCOE and sister institutions
- **Mode:** Offline (Hands-on and Industrial Visits)

7. Key Outcomes

- Enhanced understanding of **automation hardware and control logic**
- Developed **hands-on proficiency** in pneumatic, PLC, and simulation tools
- Improved awareness of **Industry 4.0 technologies and collaborative robotics**
- Strengthened **academic–industry linkage** through industrial visits
- Enabled integration of advanced automation topics into **curriculum and research**

8. Industrial Visits and Valedictory Session

Day 6 (28th June 2025): Participants visited **V. R. Coatings Pvt. Ltd.** and **Oxford Assembly Automation**, Pune.

Key Observations:

- Industrial coating systems, automation in manufacturing, and control system integration
- Robotic assembly operations, vision-based inspection, and modular automation setups

Valedictory Ceremony:

- Feedback session and certificate distribution by FDP Coordinators and Head of Department

9. Feedback Summary

Participants described the FDP as **technically enriching, well-structured, and highly interactive**, requesting **future advanced automation sessions**.

10. Coordinators Remarks

The FDP successfully met its objectives of imparting *practical skills, industrial awareness, and technological competency* in automation and robotics. It **enhanced the teaching–learning ecosystem** by connecting academic concepts with modern industrial practices, preparing faculty to guide students in **industry-aligned projects and research**.

Glimpses of Session, Industry Visit and Valedictory Session:







Prof. A. V. Shivashimpi
 FDP Coordinator, A & R

Prof. Chandan M N
 FDP Coordinator, A & R

Dr. A.M. Badadhe
 HOD, A & R



Prof. Dr. T. J. Sawant
 B.E.(Elec.) PGDM.Ph.D
 Founder Secretary

S. No. 80, Pune-Mumbai By Pass Highway, Tathawade, Pune - 411033.
 Ph.: 020-67127777 / 67127778 / 67127779 / 67127780 / 67127780
 Email : principal@jspmrscoe.edu.in Website : www.jspmrscoe.edu.in

Dr. Santosh P. Bhosle
 M.Tech.(Prod.) Gold Medallist,
 Ph.D. (Mech.), M.B.A. (H.R.)
 Director

Event Report

**Event Name: One Week (6 Days) National level Online Faculty Development Program On
 “Research Challenges & Opportunities in Electrical Engineering”**

Event Date: 26th May- 31st May, 2025

Event Type: Virtual Mode;

Zoom meeting link-

<https://us02web.zoom.us/j/81255862071?pwd=AyK9VDcdUBsunVBsibMEwqkjc1jqI.1>

**Event Organizing Institute name: JSPM's Rajarshi Shahu College of Engineering,
 Tathawade, Pune**

Event Time: Session 1: 11am to 12.30 pm, Session 2: 2 to 3.30 pm

Event details:

A one-week (6-days) National level online Faculty Development Program on “Research Challenges & Opportunities in Electrical Engineering” was organized by the Department of Electrical Engineering, JSPM's Rajarshi Shahu College of Engineering, Tathawade, Pune, in association with the IEEE PES-IAS Chapter, Pune Section, during 26th May to 31st May 2025. The program witnessed active participation from 160 attendees across various states like Maharashtra, Karnataka, Andhra Pradesh, Uttar Pradesh, Madhya Pradesh, Tamil Nadu, Rajasthan, Gujarat, Chhattisgarh and institutions, comprising 152 academicians, 2 industry professionals, and 6 research scholars. A total of 12 expert sessions were conducted -two sessions per day, delivered by distinguished speakers from both industry and academia.

LinkedIn post link - <https://www.linkedin.com/feed/update/urn:li:activity:7325862382855933952/>

Participants from various states:

State	Participants
Maharashtra	127
Rajasthan	1
Tamil Nadu	10
Uttar Pradesh	2
Gujarat	11
Karnataka	6
Madhya Pradesh	8
Andhra Pradesh	1
Chhattisgarh	1
West Bengal	1
Total	168

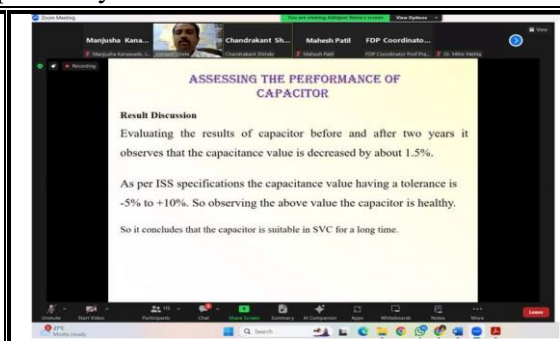
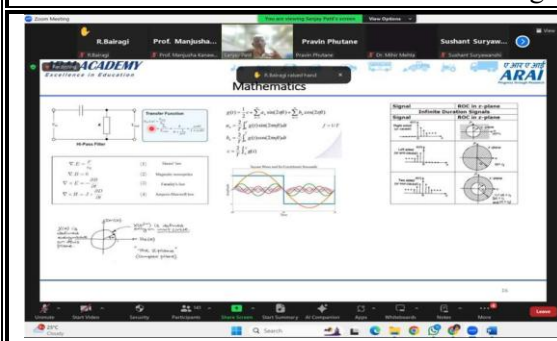


Prof. Dr. T.J. Sawant
 B.E.(Elec.) PGDM, Ph.D
 Founder Secretary

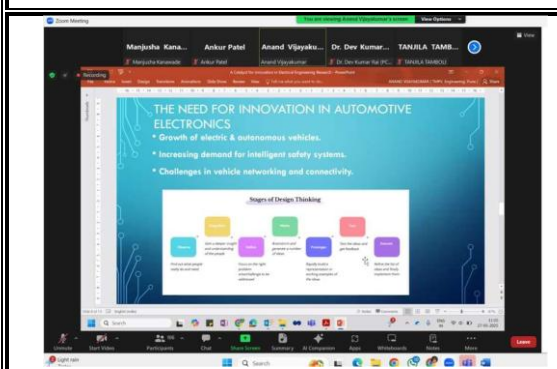
S. No. 80, Pune-Mumbai By Pass Highway, Tathawade, Pune - 411033.
 Ph.: 020-67127777 / 67127778 / 67127779 / 67127780 / 67127780
 Email : principal@spmrscOE.edu.in Website : www.jspmrscOE.edu.in

Dr. Santosh P. Bhosle
 M.Tech.(Prod.) Gold Medallist,
 Ph.D. (Mech.), M.B.A. (H.R.)
 Director

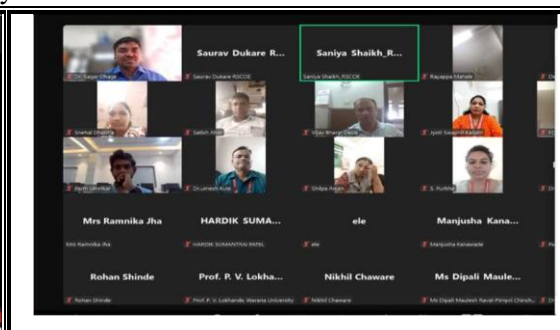
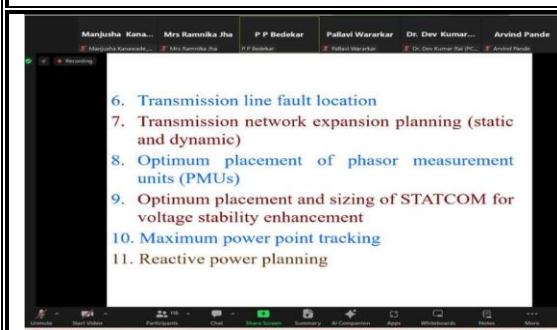
Some glimpses: Day 1



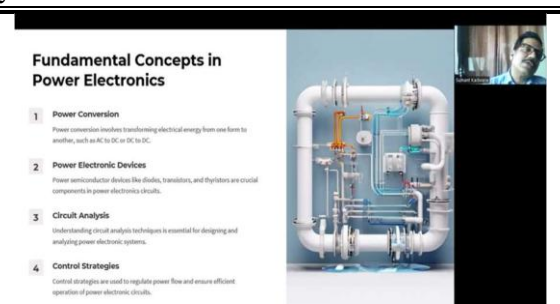
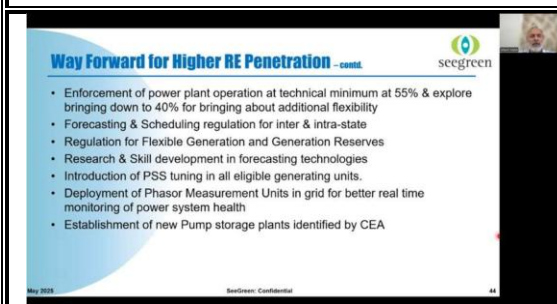
Day 2



Day 3



Day 4



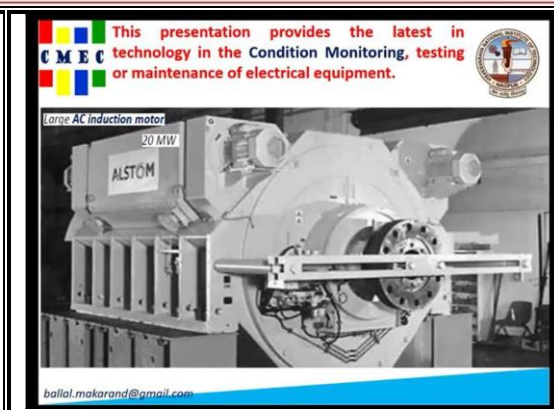
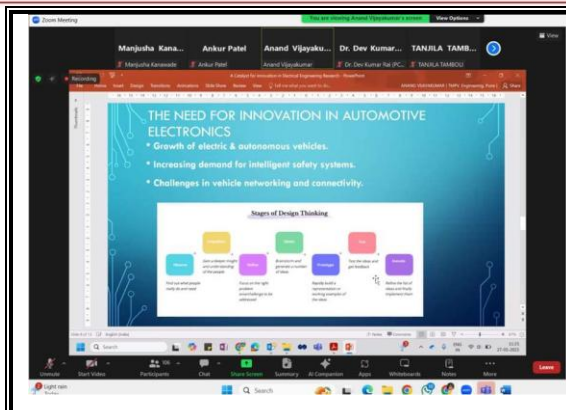
Day 5



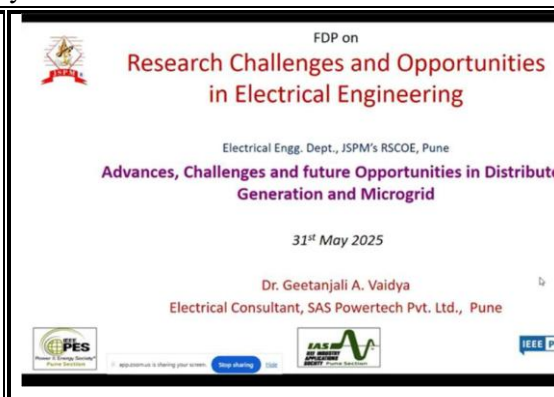
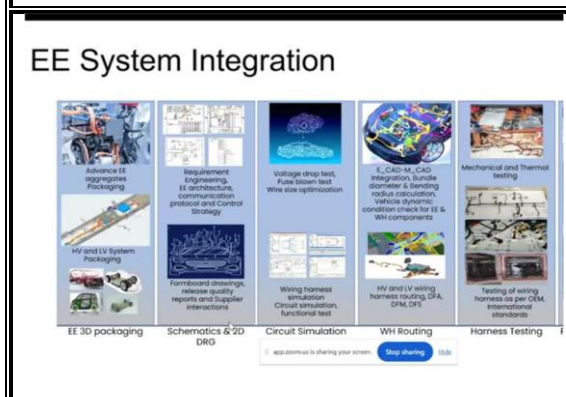
Prof. Dr. T.J. Sawant
 B.E.(Elec.) PGDM.Ph.D
 Founder Secretary

S. No. 80, Pune-Mumbai By Pass Highway, Tathawade, Pune - 411033.
 Ph.: 020-67127777 / 67127778 / 67127779 / 67127780 / 67127780
 Email : principal@spmrscoe.edu.in Website : www.jspmrscoe.edu.in

Dr. Santosh P. Bhosle
 M.Tech.(Prod.) Gold Medallist,
 Ph.D. (Mech.), M.B.A. (H.R.)
 Director



Day 6



Prof Pravin S Phutane
 FDP Coordinator

Mrs. Manjusha A. Kanawade
 FDP Coordinator Secretary, IEEE
 PES chapter, Pune section

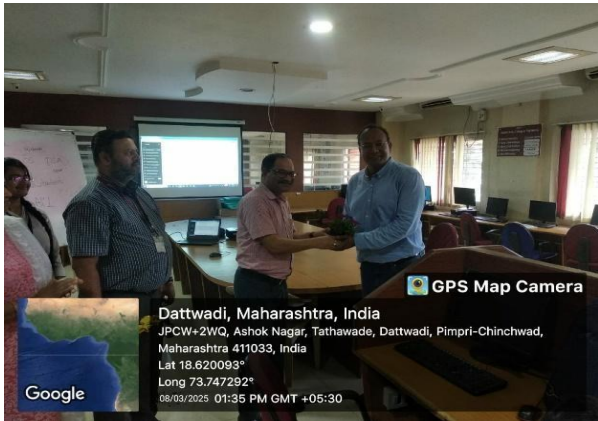
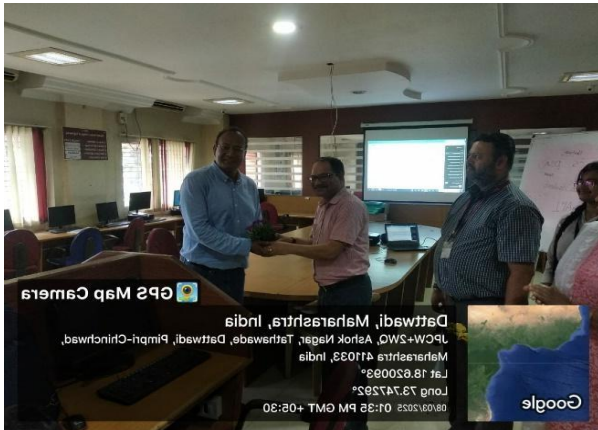
Dr. S. L. Chavan
 HOD, Electrical Engineering



DEPARTMENT OF MCA
Faculty Development Program
on DevOps

Date: 17/03/2025

On 08/03/2025, **Mr. Chaitanya Choradiya** working at Functionize Software Pvt. Ltd as a Technical Lead of DevOps visited the college and guided the faculties. Session started with introduction to cloud and how to utilize the cloud services. The session was designed to provide with a comprehensive understanding of modern DevOps practices, tools, and cloud technologies. The training was held from 9:00 AM to 5:00 PM each day, ensuring a deep dive into each topic with hands-on exercises and practical examples.

Sr. No.	Name of Alumina	Name of Company
1	Mr. Chaitanya Choradiya	Functionize Software Pvt. Ltd
2.	Mr. Gajanan Patil	Wipro Technologies
 Dattwadi, Maharashtra, India JPCW+2WQ, Ashok Nagar, Tathawade, Dattwadi, Pimpri-Chinchwad, Maharashtra 411033, India Lat 18.620093° Long 73.747292° 16/03/2025 01:34 PM GMT +05:30		 Dattwadi, Maharashtra, India JPCW+2WQ, Ashok Nagar, Tathawade, Dattwadi, Pimpri-Chinchwad, Maharashtra 411033, India Lat 18.620093° Long 73.747292° 09/03/2023 01:35 PM GMT +05:30
 Dattwadi, Maharashtra, India JPCW+2WQ, Ashok Nagar, Tathawade, Dattwadi, Pimpri-Chinchwad, Maharashtra 411033, India Lat 18.620093° Long 73.747292° 08/03/2025 01:35 PM GMT +05:30		 Dattwadi, Maharashtra, India JPCW+2WQ, Ashok Nagar, Tathawade, Dattwadi, Pimpri-Chinchwad, Maharashtra 411033, India Lat 18.620093° Long 73.747292° 08/03/2025 01:35 PM GMT +05:30

Day 1: Introduction to Cloud Computing and Cloud Platforms

Time: 9:00 AM - 5:00 PM

Topics Covered:

What is Cloud Computing?

1. Definition and benefits of cloud computing.
2. Overview of cloud service models: IaaS, PaaS, SaaS.
3. Discussion on public, private, and hybrid cloud models.

Microsoft Azure and AWS

1. Introduction to two leading cloud platforms: Microsoft Azure and Amazon Web Services (AWS).
2. Comparison of Azure and AWS in terms of services, pricing, and use cases.
3. Demonstration of creating and managing resources on both platforms.

S3 Buckets

1. Explanation of Amazon S3 (Simple Storage Service) and its use cases.
2. Hands-on session on creating and managing S3 buckets.
3. Discussion on storage classes, lifecycle policies, and access control.

IAM (Identity and Access Management)

1. Importance of IAM in cloud security.
2. Demonstration of creating users, roles, and policies in AWS IAM.
3. Best practices for managing permissions and access.

Virtual Machines (VMs)

1. Introduction to virtual machines and their role in cloud computing.
2. Hands-on session on launching and managing VMs on Azure and AWS.
3. Discussion on VM sizing, pricing, and optimization.

Day 2: Scaling, Linux Basics, and Security

Time: 9:00 AM - 5:00 PM

Topics Covered:

Scaling of Virtual Machines

1. Explanation of vertical and horizontal scaling.
2. Demonstration of auto-scaling groups in AWS and scaling sets in Azure.
3. Discussion on load balancing and its role in scaling.

Linux Basics

1. Introduction to Linux operating system and its importance in DevOps.
2. Basic Linux commands, file system navigation, and shell scripting.
3. Hands-on session on setting up and configuring Linux environments.

Security and SSH

1. Importance of security in cloud and DevOps environments.
2. Introduction to SSH (Secure Shell) and its role in secure communication.
3. Hands-on session on setting up SSH keys and connecting to remote servers.
4. Discussion on security best practices for cloud environments.

Day 3: Configuration Management, Version Control, and Containerization

Time: 9:00 AM - 5:00 PM

Topics Covered:

Ansible

1. Introduction to Ansible as a configuration management tool.
2. Explanation of Ansible playbooks, roles, and modules.
3. Hands-on session on automating infrastructure provisioning using Ansible.

GitLab

1. Overview of GitLab as a version control and CI/CD platform.
2. Demonstration of creating repositories, branching, and merging.
3. Discussion on GitLab's integrated DevOps lifecycle.

Terraform

1. Introduction to Terraform as an Infrastructure as Code (IaC) tool.
2. Explanation of Terraform configurations, providers, and state management.
3. Hands-on session on provisioning cloud resources using Terraform.

Docker

1. Introduction to containerization and Docker.
2. Explanation of Docker images, containers, and Dockerfile.
3. Hands-on session on creating and managing Docker containers.

Day 4: CI/CD Pipelines and Kubernetes

Time: 9:00 AM - 5:00 PM

Topics Covered:

CI/CD Pipeline with GitLab

1. Introduction to Continuous Integration and Continuous Deployment (CI/CD).
2. Explanation of GitLab CI/CD pipelines and their components.
3. Hands-on session on setting up a CI/CD pipeline for a sample application.

Kubernetes

1. Introduction to Kubernetes as a container orchestration platform.
2. Explanation of Kubernetes architecture, pods, services, and deployments.
3. Hands-on session on deploying and managing applications on Kubernetes.
4. Discussion on Kubernetes scaling, monitoring, and best practices.

Key Takeaways:

- Students gained a solid understanding of cloud computing, DevOps tools, and best practices.
- Hands-on sessions provided practical experience with tools like AWS, Azure, Ansible, Terraform, Docker, GitLab, and Kubernetes.
- The training emphasized the importance of automation, security, and scalability in modern software development and deployment processes.

Conclusion:

The 4-day DevOps session 8/3/2025 to 11/3/2025 conducted by Chaitanya Chordiya was highly informative and engaging. The faculty gained valuable insights into the world of DevOps and cloud computing, equipping them with the skills needed to excel in the rapidly evolving tech industry. The hands-on approach and real-world examples made the learning experience both practical and impactful.



Prof. Sonali Ingole
Co-ordinator



Dr. Rinku Dulloo
HOD-MCA

Report on Five Days Faculty Development Program (FDP) on “Deep Learning on Modern Intel Architecture”

Participants engaged in practical exercises, which strengthened their understanding of both supervised and unsupervised machine learning concepts.

Day 3: Phase II – Introduction to Deep Learning

Agenda:

The third day marked the beginning of Phase II, focusing on deep learning (DL) fundamentals and the mathematical principles that drive neural networks.

1. Fundamental Techniques & Terminology

- Introduction to DL terminology, including neurons, layers, activations, and loss functions.
- Mathematics of deep learning: Linear transformations, activation functions, and backpropagation.

2. Neural Network Architectures

- Overview of **Feedforward Networks** and their applications.
- Backpropagation: A step-by-step explanation of gradient calculation for neural networks.

3. Hands-on Session

- Participants built their first neural network using **Keras** to recognize handwritten digits from the **MNIST dataset**.
- The session covered data loading, model creation, training, and evaluation with accuracy metrics.

The day concluded with a successful hands-on project, enabling participants to practically apply fundamental neural network concepts to image classification.

Day 4: Phase II – Convolutional Neural Networks (CNNs) and Transfer Learning

Agenda:

This day was dedicated to convolutional neural networks (CNNs), an essential architecture for image classification tasks, and introduced the concept of transfer learning for efficient model training.

1. Convolutional Neural Networks (CNNs)

- Introduction to CNNs, including convolutional layers, pooling layers, and activation functions.
- Participants built a CNN model to classify images from the **CIFAR-10 dataset**, focusing on essential architecture components.

2. Data Augmentation Techniques

- Overview of data augmentation to improve model generalization.
- Implemented augmentation techniques such as rotations, flips, and zooms to enhance CIFAR-10 image classification.

Report on Five Days Faculty Development Program (FDP) on “Deep Learning on Modern Intel Architecture”

1. Introduction to Machine Learning

- Overview of machine learning types: Supervised, Unsupervised, and Reinforcement Learning.
- Key concepts: Overfitting, underfitting, regularization, and cross-validation.

2. Supervised Learning Algorithms

- Explanation of supervised learning algorithms and how to select appropriate methods based on problem type.
- Parameter tuning, model validation, and the importance of a robust evaluation strategy.

3. Techniques in Model Training

- **Train-Test Splits** and the purpose of splitting data to prevent model overfitting.
- Algorithms discussed included **K-Nearest Neighbors (KNN)** for classification and **Linear Regression** for prediction tasks.

4. Regularization Methods

- Overview of regularization techniques: **Ridge**, **Lasso**, and **Elastic Net** regressions.
- Introduction to **Gradient Descent** methods, their role in optimizing model weights, and the differences between batch, stochastic, and mini-batch gradient descent.

5. Logistic Regression & Classification Error Metrics

- Introduction to **Logistic Regression** for binary classification.
- Error metrics for model evaluation, including accuracy, precision, recall, and F1-score.

The day concluded with interactive Q&A sessions, providing participants with a clear understanding of fundamental supervised learning algorithms and regularization methods.

Day 2: Phase I – Continued

Agenda:

Unsupervised learning and clustering methods were introduced, expanding participants' understanding of machine learning beyond supervised techniques.

1. Unsupervised Learning

- Concepts of unsupervised learning, including clustering and dimensionality reduction.
- Use cases for unsupervised learning in anomaly detection and customer segmentation.

2. Clustering Techniques

- Techniques such as **K-Means Clustering** and **Hierarchical Clustering**.
- Hands-on session with clustering on sample datasets, allowing participants to explore data groupings without predefined labels.

Report on Five Days Faculty Development Program (FDP) on "Deep Learning on Modern Intel Architecture"

3. Transfer Learning

- Concepts and advantages of transfer learning, including the use of pre-trained models.
- Participants applied transfer learning with popular pre-trained models like **VGG16** and **ResNet** on a custom image dataset.

Hands-on sessions with CNNs and transfer learning provided participants with valuable skills in image classification and model optimization.

Day 5: Phase II – End-to-End (E2E) Workflow and Final Project

Agenda:

The final day covered the end-to-end workflow of deep learning, from data preparation to model evaluation and deployment.

1. End-to-End Image Classification Workflow

- Overview of a typical E2E DL workflow, including data preprocessing, model selection, training, evaluation, and optimization.
- Participants implemented the workflow using an image classification problem, consolidating the knowledge and skills acquired throughout the program.

2. Final Project Presentation and Evaluation

- Participants presented their final projects, showcasing their understanding of deep learning methodologies and their application to real-world data.
- Each group's project was evaluated based on the model's performance and optimization techniques implemented.

3. Feedback & Certificate Distribution

- The FDP concluded with a feedback session to gather participants' experiences and suggestions.
- Certificates were distributed, acknowledging the successful completion of the FDP.

The FDP on "Deep Learning on Modern Intel Architecture" provided participants with foundational and advanced knowledge in machine learning and deep learning. The blend of theoretical and hands-on sessions was well-received, and participants expressed their satisfaction with the opportunity to apply learning concepts directly. This FDP strengthened participants' capabilities in machine learning and deep learning, enhancing their ability to teach these subjects and apply them to their research.

Outcomes:

- Enhanced understanding of ML and DL concepts, techniques, and practical applications.
- Practical experience with DL tools and frameworks optimized for Intel architecture.

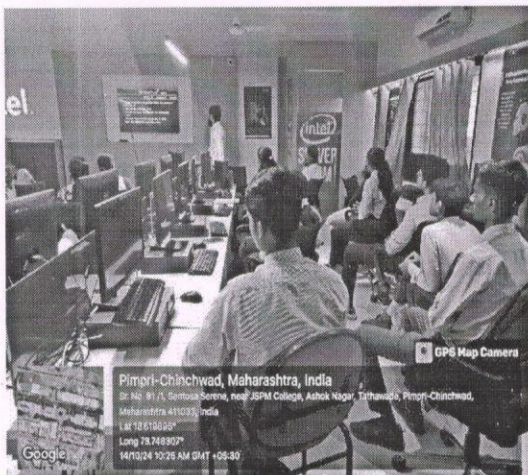
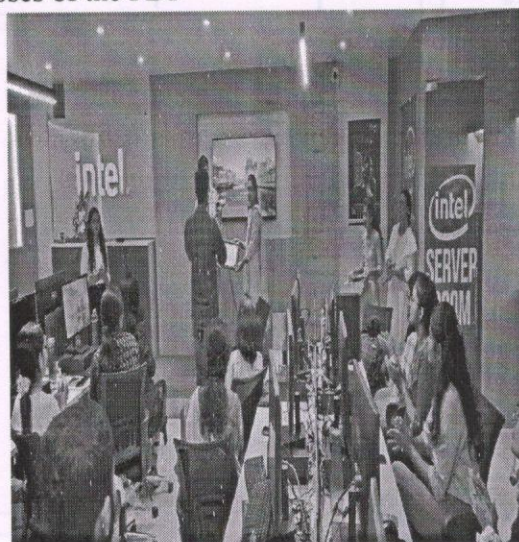
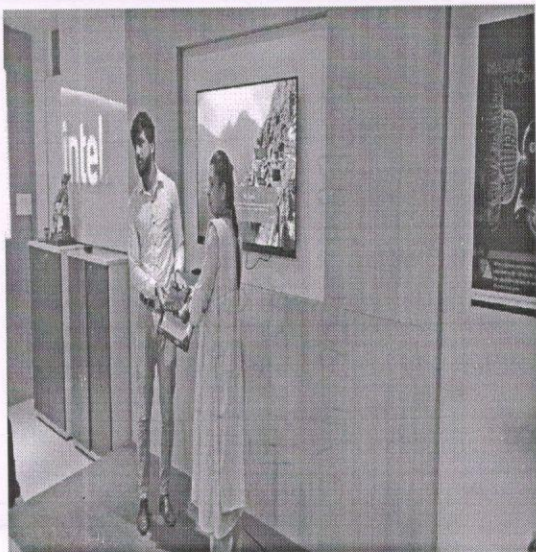
JSPM's Rajarshi Shahu College of Engineering, Pune
Department of Computer Science And Business Systems
Academic Year: 2024-2025 Semester-I

Report on Five Days Faculty Development Program (FDP) on “Deep Learning on Modern Intel Architecture”

- Encouraged future research and teaching advancements in the field of artificial intelligence.

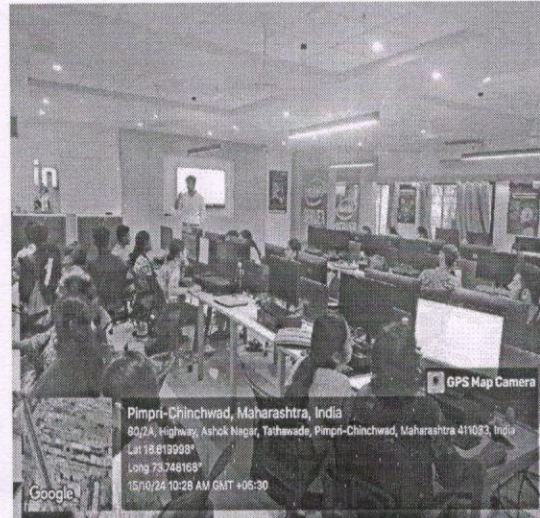
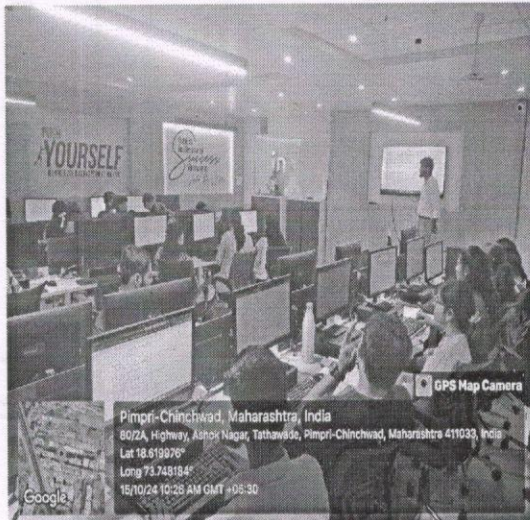
The success of this FDP lays the groundwork for future programs, fostering an academic environment that stays current with rapid technological advancements in machine learning and deep learning.

Some of the Glimpses of the FDP



JSPM's Rajarshi Shahu College of Engineering, Pune
Department of Computer Science And Business Systems
Academic Year: 2024-2025 Semester-I

Report on Five Days Faculty Development Program (FDP) on
“Deep Learning on Modern Intel Architecture”




Dr. Renuka S. Gound
Coordinator

Dr. Kavita P. Moholkar
HoD



HEAD OF DEPARTMENT
Computer Science & Business Systems
JSPM's Rajarshi Shahu College of Engineering
(An Autonomous Institute)
Tathawade, Pune - 411 033, M.S. (India)

JSPM's Rajarshi Shahu College of Engineering, Pune
Department of Computer Science And Business Systems
Academic Year: 2024-2025 Semester-I

Five Days Faculty Development Program (FDP) on "Deep Learning on Modern Intel Architecture"

Day Wise Schedule

Day 1

Date: 14/10/2024

Time: 9:00 AM to 5:00 PM

1	9:00 AM – 9:30 AM	Registration and Inauguration Ceremony
2	9:30 AM – 10:30 AM	Introduction to Machine Learning and Supervised Learning algorithms
3	10:30 AM – 10:45AM	Break
4	10:45 AM – 12:30 PM	key concepts like under- and overfitting, regularization, and cross-validation
5	12:30 PM – 1:30 PM	Lunch Break
6	1:30 PM – 3:30 PM	Identify the type of problem to be solved, choose the right algorithm, tune parameters, and validate a model.
7	3:30 PM – 3:45 PM	Tea Break
8	3:45 PM – 5:00 PM	Train Test Splits, K Nearest Neighbors, Linear Regression

Day 2

Date: 15/10/2024

Time: 9:00 AM to 5:00 PM

1	9:00 AM – 9:30 AM	Regularization Methods
2	9:30 AM – 10:30 AM	Ridge, Lasso and Elastic Net regression. Gradient Descent Methods.
3	10:30 AM – 10:45AM	Break
4	10:45 AM – 12:30 PM	Logistic Regression and Classification Error Metrics.
5	12:30 PM – 1:30 PM	Lunch Break
6	1:30 PM – 3:30 PM	Unsupervised learning
7	3:30 PM – 3:45 PM	Tea Break
8	3:45 PM – 5:00 PM	Clustering Methods

JSPM's Rajarshi Shahu College of Engineering, Pune
Department of Computer Science And Business Systems
Academic Year: 2024-2025 Semester-I

Five Days Faculty Development Program (FDP) on “Deep Learning on Modern Intel Architecture”

Day 3

Date: 16/10/2024

Time: 9:00 AM to 5:00 PM

1	9:00 AM – 9:30 AM	Techniques and terminology of Deep Learning
2	9:30 AM – 10:30 AM	Mathematics of Deep Learning
3	10:30 AM – 10:45AM	Break
4	10:45 AM – 12:30 PM	Fundamental neural network architectures
5	12:30 PM – 1:30 PM	Lunch Break
6	1:30 PM – 2:30 PM	Fundamental Feedforward networks
7	2:30 PM – 2:45 PM	Tea Break
8	2:45 PM- 5:00 PM	Fundamental Backpropagation.

Day 4

Date: 17/10/2024

Time: 9:00 AM to 5:00 PM

1	9:00 AM – 10:30 AM	Handwritten Image Detection with Keras using MNIST Data.
2	10:30 AM – 10:45AM	Break
3	10:45 AM – 12:30 PM	Convolutional networks and building a CNN to classify images in the CIFAR-10 dataset
4	12:30 PM – 1:30 PM	Lunch Break
5	1:30 PM – 3:30 PM	Convolutional networks and building a CNN to classify images in the CIFAR-10 dataset
6	3:30 PM – 3:45 PM	Tea Break
7	3:45 PM – 5:00 PM	Transfer Learning and pre-trained models.

JSPM's Rajarshi Shahu College of Engineering, Pune
Department of Computer Science And Business Systems
Academic Year: 2024-2025 Semester-I

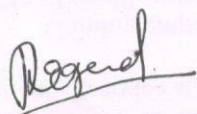
**Five Days Faculty Development Program (FDP) on "Deep
Learning on Modern Intel Architecture"**

Day 5

Date: 18/10/2024

Time: 9:00 AM to 5:00 PM

1	9:00 AM – 10:30 AM	Classifying CIFAR - 10 with Data Augmentation
3	10:30 AM – 10:45AM	Break
4	10:45 AM – 12:30 PM	Classifying CIFAR - 10 with Data Augmentation
5	12:30 PM – 1:30 PM	Lunch Break
6	1:30 PM – 3:30 PM	Hands on E2E workflow using an image classification problem.
7	3:30 PM – 3:45 PM	Tea Break
8	3:45 PM – 5:00 PM	Exam and Valedictory



Dr. Renuka S. Gound
Coordinator

Dr. Kavita P. Moholkar
HoD

2 3033-3034



Event / Activity Report

Department of Computer Engineering

Name of Event/Activity: Effective data mining and analytics with Apache spark and Azure

Name and affiliation of Expert Speaker: Mr. Virendra Dakhode
Data Scientist ,Wipro ltd

Duration in Hrs: 9:30am to 5:00pm

Starting Date: End Date: 08/05/2024

Total Number of Faculty Participated: 47

Mode of Session Delivery: Offline

PO Mapped : 1,2,3,4,5,6,12

PSO Mapped: 1,2,3

Objective:

1. Learn Effective data mining technique and analytics with Apache spark and Azure

JSPM'S
RAJARSHI SHAHU COLLEGE OF ENGINEERING TATHAWADE, PUNE-33
(AN AUTONOMOUS INSTITUTE AFFILIATED TO SAVITRIBAI PHULE PUNE UNIVERSITY)

COMPUTER ENGINEERING DEPARTMENT
EFFECTIVE DATA MINING AND ANALYTICS WITH
APACHE SPARK AND AZURE
BY
MR. VIRENDRA DAKHODE

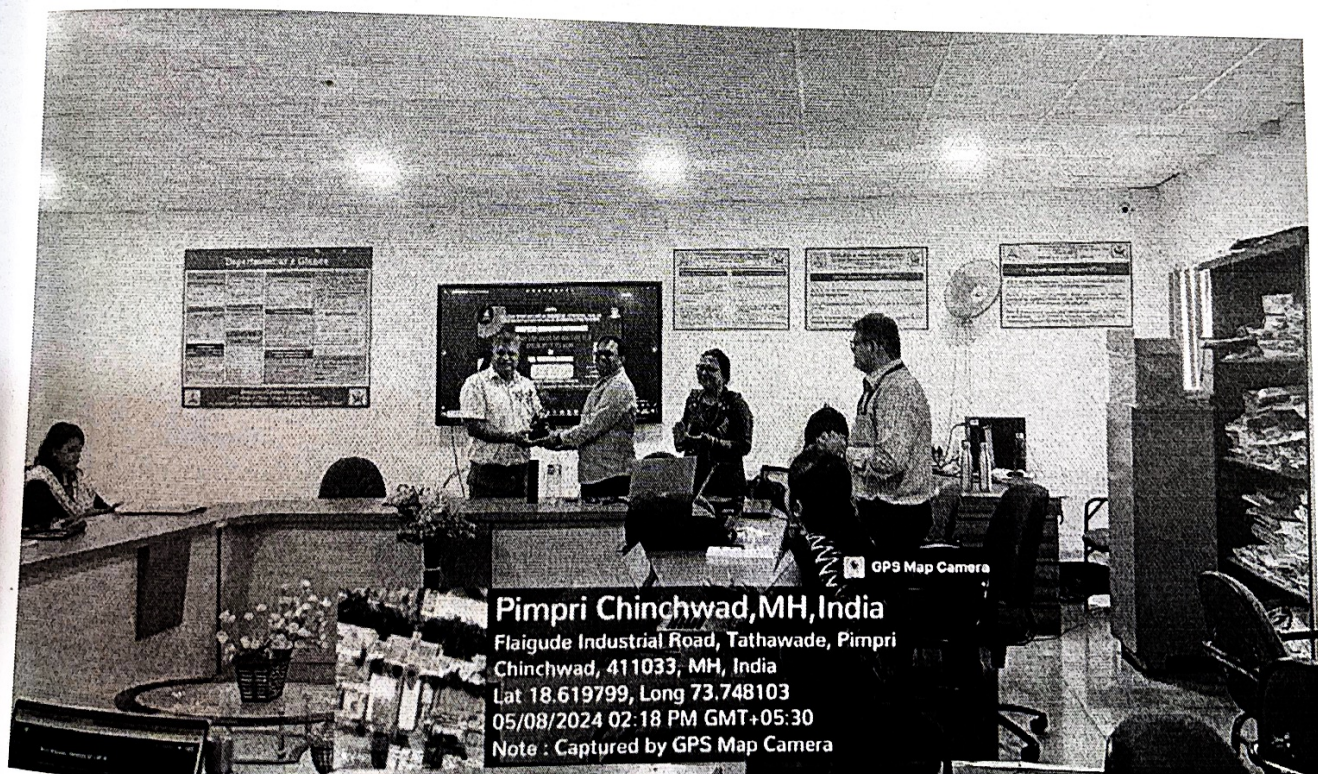
Specialist : Data Engineer
Corporate Trainer

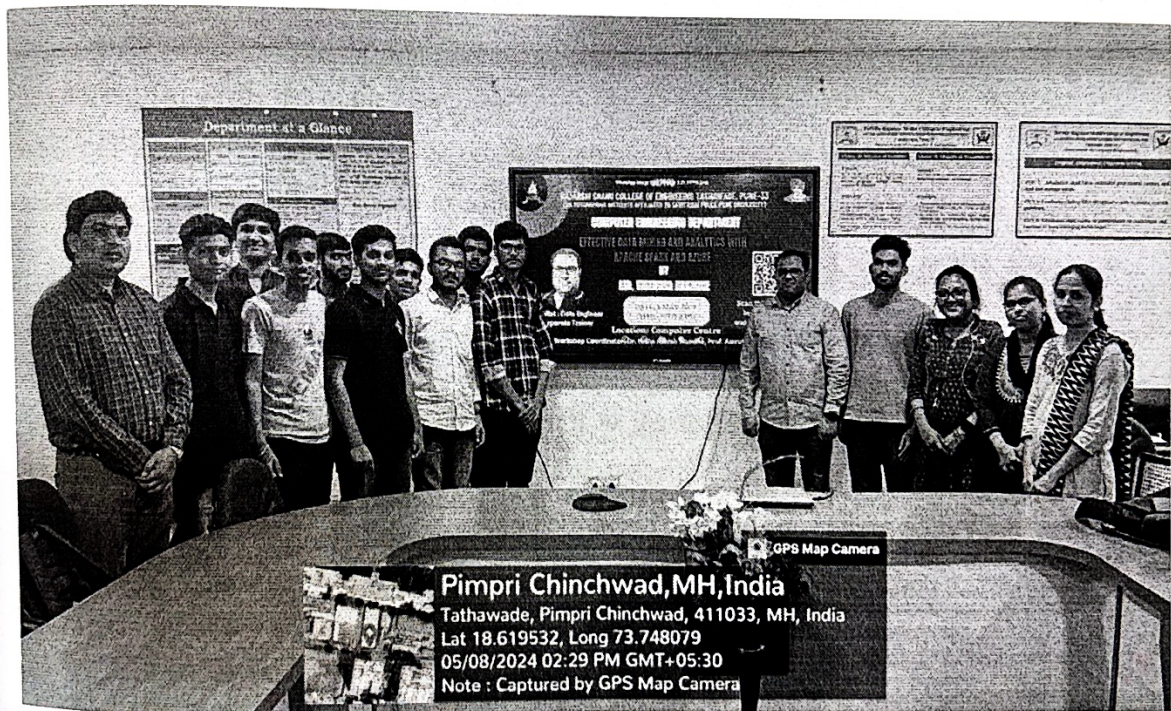
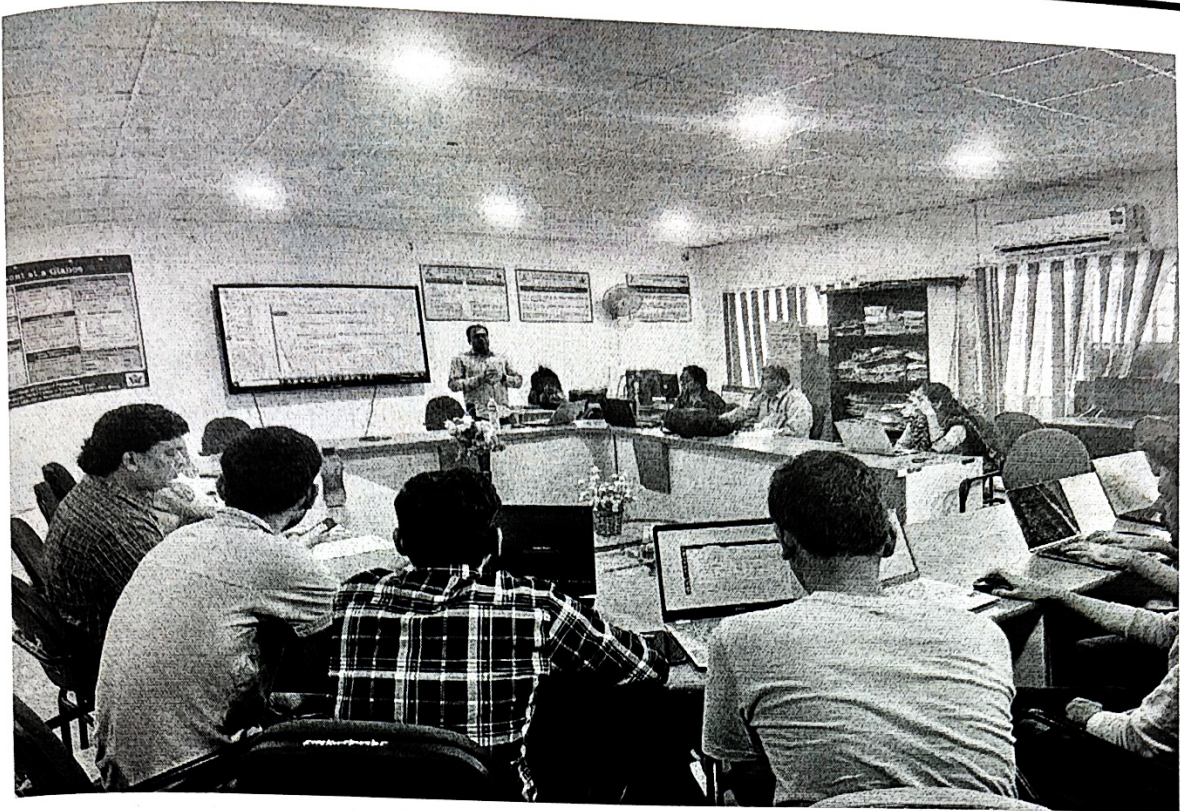
DATE: 8 MAY 2024
TIME: 9 TO 4 PM

Location: Computer Centre
Workshop Coordinator: Dr. Nisha Ashish Wandile, Prof. Amruta Hingmire

Scan this QR Code for
Installation Guide
and Details of Program

Photos of the Event





Session Started at 9:30 am with the formal introduction and felicitation of speaker.

Attendance sheet of participant in the event:

JSPM's
Rajprabha Shiksha College of Engineering, Talasari, Pune-41
Computer Engineering
Date: 30 May 2024

Date: 08/05/2024

FDP on Effective data mining and analytics with Apache spark and Azure

Sr. No.	Name of the Participant	Designation	Email ID	Signature
1	Amol Pandey	Student	amol.pandey22@gmail.com	
2	Aditya Pandey	Student	aditya.pandey22@gmail.com	
3	Aditya Pandey	Student	aditya.pandey22@gmail.com	
4	Aditya Pandey	Student	aditya.pandey22@gmail.com	
5	Aditya Pandey	Student	aditya.pandey22@gmail.com	
6	Aditya Pandey	Student	aditya.pandey22@gmail.com	
7	Aditya Pandey	Student	aditya.pandey22@gmail.com	
8	Aditya Pandey	Student	aditya.pandey22@gmail.com	
9	Aditya Pandey	Student	aditya.pandey22@gmail.com	
10	Aditya Pandey	Student	aditya.pandey22@gmail.com	
11	Aditya Pandey	Student	aditya.pandey22@gmail.com	
12	Aditya Pandey	Student	aditya.pandey22@gmail.com	
13	Aditya Pandey	Student	aditya.pandey22@gmail.com	
14	Aditya Pandey	Student	aditya.pandey22@gmail.com	
15	Aditya Pandey	Student	aditya.pandey22@gmail.com	
16	Aditya Pandey	Student	aditya.pandey22@gmail.com	
17	Aditya Pandey	Student	aditya.pandey22@gmail.com	
18	Aditya Pandey	Student	aditya.pandey22@gmail.com	
19	Aditya Pandey	Student	aditya.pandey22@gmail.com	
20	Aditya Pandey	Student	aditya.pandey22@gmail.com	
21	Aditya Pandey	Student	aditya.pandey22@gmail.com	
22	Aditya Pandey	Student	aditya.pandey22@gmail.com	
23	Aditya Pandey	Student	aditya.pandey22@gmail.com	
24	Aditya Pandey	Student	aditya.pandey22@gmail.com	
25	Aditya Pandey	Student	aditya.pandey22@gmail.com	
26	Aditya Pandey	Student	aditya.pandey22@gmail.com	
27	Aditya Pandey	Student	aditya.pandey22@gmail.com	
28	Aditya Pandey	Student	aditya.pandey22@gmail.com	
29	Aditya Pandey	Student	aditya.pandey22@gmail.com	
30	Aditya Pandey	Student	aditya.pandey22@gmail.com	

JSPM's
Rajprabha Shiksha College of Engineering, Talasari, Pune-41
Computer Engineering
Date: 30 May 2024

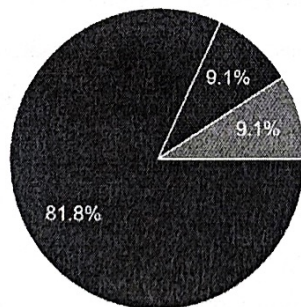
Date: 08/05/2024

FDP on Effective data mining and analytics with Apache spark and Azure

Sr. No.	Name of the Participant	Designation	Email ID	Signature
1	Amol Pandey	Student	amol.pandey22@gmail.com	
2	Aditya Pandey	Student	aditya.pandey22@gmail.com	
3	Aditya Pandey	Student	aditya.pandey22@gmail.com	
4	Aditya Pandey	Student	aditya.pandey22@gmail.com	
5	Aditya Pandey	Student	aditya.pandey22@gmail.com	
6	Aditya Pandey	Student	aditya.pandey22@gmail.com	
7	Aditya Pandey	Student	aditya.pandey22@gmail.com	
8	Aditya Pandey	Student	aditya.pandey22@gmail.com	
9	Aditya Pandey	Student	aditya.pandey22@gmail.com	
10	Aditya Pandey	Student	aditya.pandey22@gmail.com	
11	Aditya Pandey	Student	aditya.pandey22@gmail.com	
12	Aditya Pandey	Student	aditya.pandey22@gmail.com	
13	Aditya Pandey	Student	aditya.pandey22@gmail.com	
14	Aditya Pandey	Student	aditya.pandey22@gmail.com	
15	Aditya Pandey	Student	aditya.pandey22@gmail.com	
16	Aditya Pandey	Student	aditya.pandey22@gmail.com	
17	Aditya Pandey	Student	aditya.pandey22@gmail.com	
18	Aditya Pandey	Student	aditya.pandey22@gmail.com	
19	Aditya Pandey	Student	aditya.pandey22@gmail.com	
20	Aditya Pandey	Student	aditya.pandey22@gmail.com	
21	Aditya Pandey	Student	aditya.pandey22@gmail.com	
22	Aditya Pandey	Student	aditya.pandey22@gmail.com	
23	Aditya Pandey	Student	aditya.pandey22@gmail.com	
24	Aditya Pandey	Student	aditya.pandey22@gmail.com	
25	Aditya Pandey	Student	aditya.pandey22@gmail.com	
26	Aditya Pandey	Student	aditya.pandey22@gmail.com	
27	Aditya Pandey	Student	aditya.pandey22@gmail.com	
28	Aditya Pandey	Student	aditya.pandey22@gmail.com	
29	Aditya Pandey	Student	aditya.pandey22@gmail.com	
30	Aditya Pandey	Student	aditya.pandey22@gmail.com	

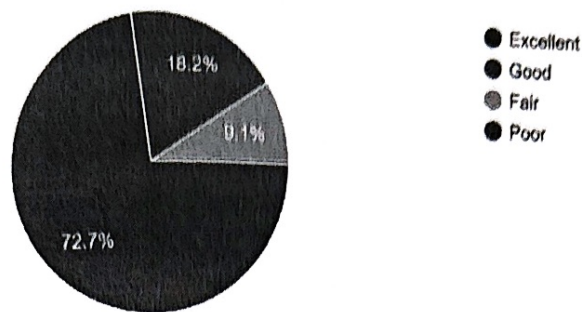
Feedback from Faculty:

Content: How would you rate the relevance and usefulness of the content covered in the FDP?
11 responses

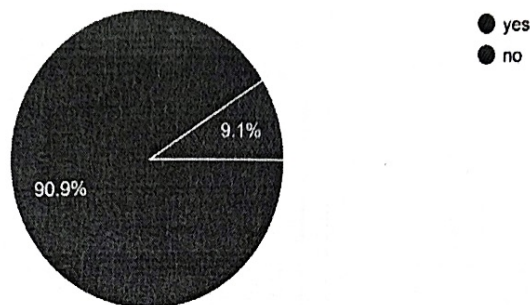


- Excellent
- Good
- Fair
- Poor

Delivery: Please rate the effectiveness of the delivery of the content by the facilitators;
11 responses



Whether FDP covering industrial requirements?
11 responses



Strengths: What did you find most valuable or effective about the FDP?

Effective session

- I really liked sir's way of delivering and he provided us with all insights of data mining looking forward to more such sessions.
- Hands on Education is effective.
- Great FDP organised
- Got the knowledge about Hadoop Architecture, Azure cloud and Big data
- This was amazing session on data mining and analytics. We know about data mining tools like Hadoop ,spark and pyspark and do hands on practice. Also explore the Microsoft azure cloud .
- Introduction to industrial requirements
- I had knowledge of AWS, and Azure cloud was my requirement. I got enough inputs from this FDP.

How engaged attendees were during the event?	Excellent %	Satisfactory %	Less than satisfactory %
	97.5	2.5	0

Dr. Nisha Ashish Wandile
Prof. Amruta Hingmire
Co-ordinator



Dr. P.B.Kumbharkar
HOD , Computer



Report of Three Days Faculty Development Programme for Mentee Institutes on "NBA ORIENTATION" (Under AICTE-NBA Margadarshan Scheme)

FDP Duration: 22/01/2025 to 24/1/2025

FDP of Coordinator: Dr. Seema Kedar, Dr. Nisha Wandile.

Participants: Faculties from Mentee Institutions and JSPM Faculties

Speaker Details:

Sr. No.	Speaker Name	Topic Name
1	Prof. Hemant Joshi	NBA Awareness
2	Dr. Rushali Deshmukh	Criteria 1: Vision, Mission, and Program Educational Objectives
3	Dr. G. S. Mate	Criteria 2: Teaching Learning Processes: 2.2.1 Quality of Teaching 2.2.2 Quality of Internal Assessment 2.2.3 Quality of Projects
4	Dr. Avinash Badadhe	Criteria 2: Teaching Learning Processes: 2.2.4 Industry Interaction 2.2.5 Internship/ Training
5	Dr. Kavita Moholkar	Criteria 3: Course Outcomes and Program Outcomes
6	Dr. Nihar Ranjan	Criteria 4: Student Admission, Result, and Placement Performance
7	Dr. R. Dubal	Criteria 4: Student Activities
8	Dr. Seema Kedar	Criteria 5 Faculty Information and Contributions
9	Dr. Rachayya R. Arakerimath	Criteria 7: Continuous Improvement
10	Dr. S. L. Chavan	Criteria 6 Facilities and Technical support Criteria 9: 9.2 to 9.7
11	Dr. Nisha Wandile	Criteria 9 Student Support Systems: 9.1
12	Dr. Sunita Yadav	Criteria 8: First Year Academics
13	Dr. Sagar Dhage	Criteria 10: Governance
14	Dr. Amey Choudhari	Institutional support, and financial resources
15	Dr. Seema Kedar	NBA Execution Plan





Detailed Report

The overall objective of the Three Days Faculty Development Programme is to motivate mentee institutes to achieve NBA accreditation by fostering awareness about its benefits and aligning efforts with AICTE initiatives. It aims to provide guidance on NBA processes, facilitate access to host institute resources, and promote best practices in Outcome-Based Education (OBE). Additionally, the programme supports mentee institutes in improving academic quality, institutional performance, and NIRF rankings.

Inaugural Ceremony

The day began with a grand inaugural ceremony that set the stage for the NBA Orientation Programme. The ceremony commenced with a traditional **Saraswati Pujan**, symbolizing a deep reverence for learning and wisdom.



This was followed by the felicitation of distinguished dignitaries, including **Dr. Anil Bhosale**, **Dr. Avinash Devasthali** (Deputy Director of JSPM's RSCOE), and **Dr. Avinash Badadhe** (Deputy Director and Dean Academics), acknowledging their significant contributions to education and institutional development. **Dr. Seema Kedar**, Head of the Department of Computer Engineering, delivered the inaugural speech, highlighting the importance of NBA accreditation in enhancing both employment opportunities for students and the institution's reputation. She underscored that accreditation is not merely a one-time achievement but a continuous process aimed at ensuring quality education.

Dr. Seema Kedar also recognized JSPM's RSCOE for securing accreditation four times across five departments and its role in mentoring other institutions under the **Margadarshan Scheme**. These mentee institutions included Indira College, Siddhant College of Engineering, Keystone College of Engineering, D.Y. Patil Lohagaon, and Chhatrapati Shahu College of Engineering, Sambhajinagar. Following this, **Dr. Avinash Badadhe** shared insights from RSCOE's accreditation journey, which began in 2012. He spoke about strategies for implementing NBA activities effectively, adhering to accreditation standards, and achieving the desired educational outcomes. **Dr. Avinash Devasthali** concluded the ceremony by emphasizing the collaborative nature of the offline orientation programme, urging participants to submit their pre-qualifiers by December 2025 and apply for NIRF rankings to further elevate their visibility and credibility on a national level. The formal vote of thanks at 11:10 a.m. marked the official commencement of the programme.

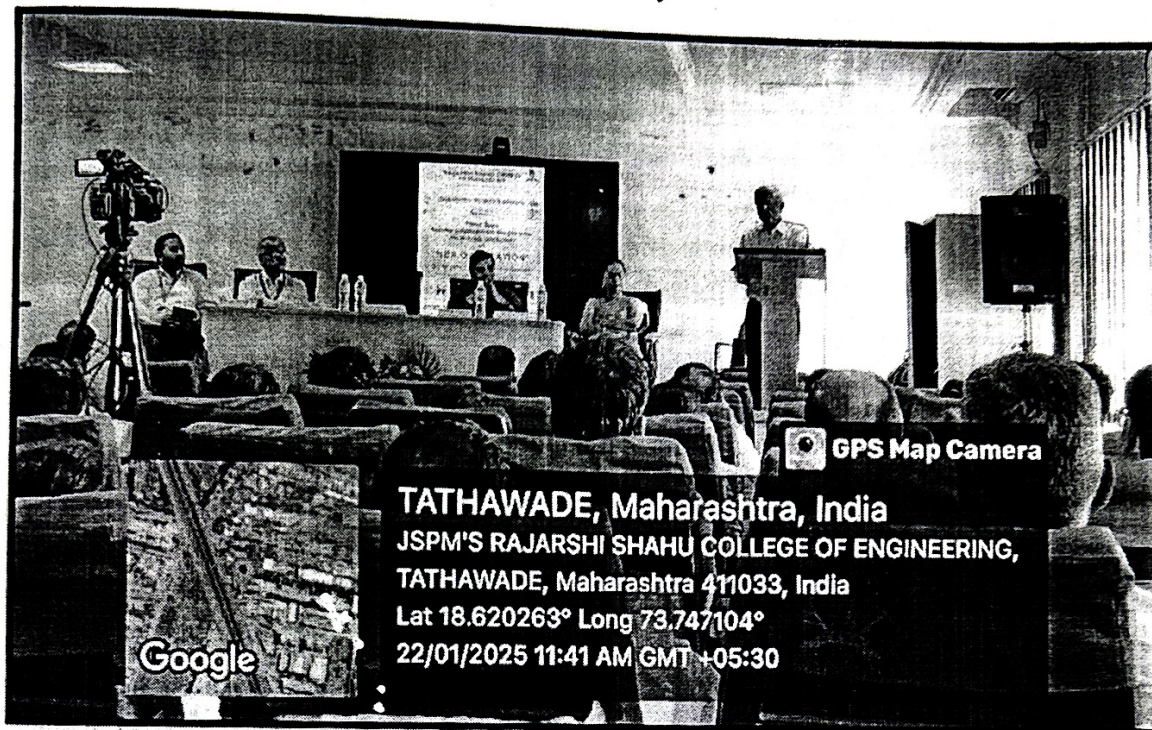


Dattwadi, Maharashtra, India
Jpcw+3w4, Ashok Nagar, Tathawade, Dattwadi,
Pimpri-chinchwad, Maharashtra 411033, India
Lat 18.62007° Long 73.747314°
22/01/25 10:58 AM GMT +05:30

Session 1: Introduction: Quality and Importance of Education

Time: 11:10 am – 12:00pm

Speaker: Dr. Anil Bhosale, Director JSPM University



The first session of the day was delivered by Dr. Anil Bhosale, focusing on the **Quality and Importance of Education**. Dr. Bhosale discussed the intrinsic nature of quality in education, emphasizing that it is not an abstract concept but a tangible outcome of well-defined and meticulously monitored processes. He highlighted the importance of preparing course files for the upcoming semester, ensuring that they align with quality parameters. Dr. Bhosale posed thought-provoking questions to the audience, such as whether their course files were ready and if they had been assessed against the necessary quality standards. He stressed that the documentation process—encompassing detailed notes, labeled diagrams, and structured teaching materials—forms the backbone of quality education. However, he acknowledged the challenges faced by academic institutions in consistently maintaining such high standards. Through his session, Dr. Bhosale encouraged participants to adopt detailed and systematic approaches to their teaching methodologies and assessments, ensuring sustained quality in the education they deliver.

This was followed by the felicitation of distinguished dignitaries, including **Dr. Anil Bhosale**, **Dr. Avinash Devasthali** (Deputy Director of JSPM's RSCOE), and **Dr. Avinash Badadhe** (Deputy Director and Dean Academics), acknowledging their significant contributions to education and institutional development. **Dr. Seema Kedar**, Head of the Department of Computer Engineering, delivered the inaugural speech, highlighting the importance of NBA accreditation in enhancing both employment opportunities for students and the institution's reputation. She underscored that accreditation is not merely a one-time achievement but a continuous process aimed at ensuring quality education.

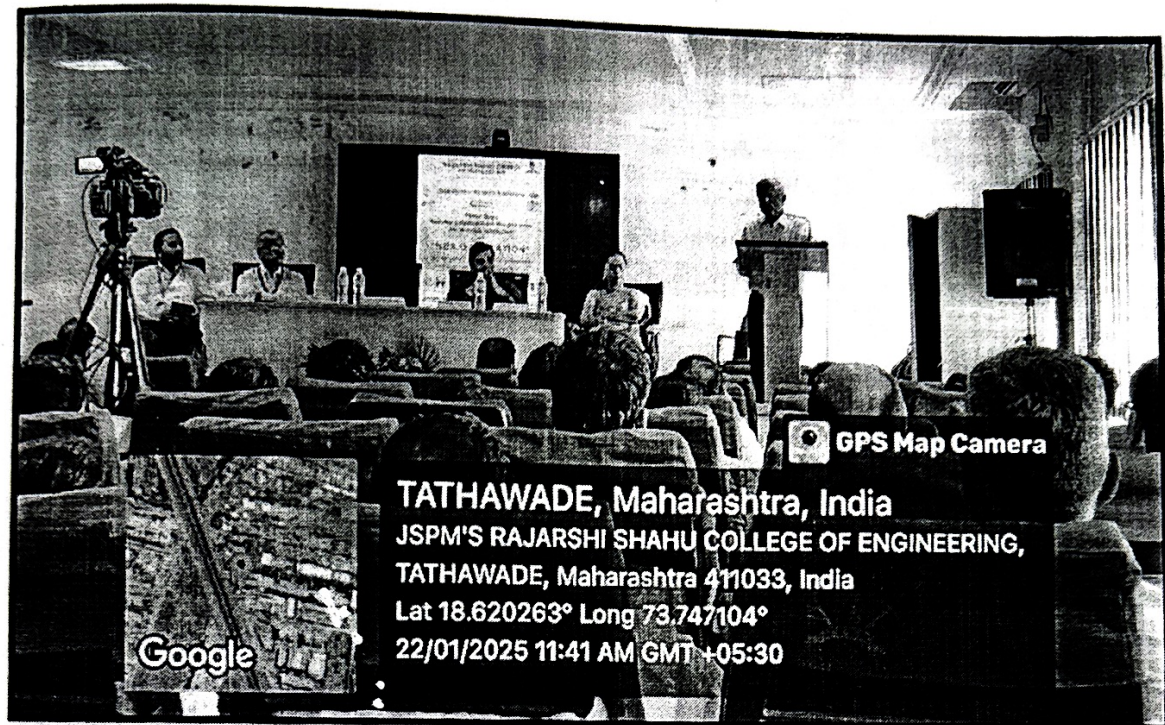
Dr. Seema Kedar also recognized JSPM's RSCOE for securing accreditation four times across five departments and its role in mentoring other institutions under the **Margadarshan Scheme**. These mentee institutions included Indira College, Siddhant College of Engineering, Keystone College of Engineering, D.Y. Patil Lohagaon, and Chhatrapati Shahu College of Engineering, Sambhajnagar. Following this, **Dr. Avinash Badadhe** shared insights from RSCOE's accreditation journey, which began in 2012. He spoke about strategies for implementing NBA activities effectively, adhering to accreditation standards, and achieving the desired educational outcomes. **Dr. Avinash Devasthali** concluded the ceremony by emphasizing the collaborative nature of the offline orientation programme, urging participants to submit their pre-qualifiers by December 2025 and apply for NIRF rankings to further elevate their visibility and credibility on a national level. The formal vote of thanks at 11:10 a.m. marked the official commencement of the programme.



Session 1: Introduction: Quality and Importance of Education

Time: 11:10 am – 12:00pm

Speaker: Dr. Anil Bhosale, Director JSPM University



The first session of the day was delivered by Dr. Anil Bhosale, focusing on the **Quality and Importance of Education**. Dr. Bhosale discussed the intrinsic nature of quality in education, emphasizing that it is not an abstract concept but a tangible outcome of well-defined and meticulously monitored processes. He highlighted the importance of preparing course files for the upcoming semester, ensuring that they align with quality parameters. Dr. Bhosale posed thought-provoking questions to the audience, such as whether their course files were ready and if they had been assessed against the necessary quality standards. He stressed that the documentation process—encompassing detailed notes, labeled diagrams, and structured teaching materials—forms the backbone of quality education. However, he acknowledged the challenges faced by academic institutions in consistently maintaining such high standards. Through his session, Dr. Bhosale encouraged participants to adopt detailed and systematic approaches to their teaching methodologies and assessments, ensuring sustained quality in the education they deliver.

Session 2: NBA Awareness & Outcome-Based Education

Time: 12:00 pm -- 1:30 pm

Speaker: Dr. Hemant Joshi, Assistant Director JSPM University



The second session of the day, led by Dr. Hemant Joshi, the Director of JSPM, focused on raising NBA Awareness and the importance of Outcome-Based Education (OBE) in the context of accreditation. Dr. Joshi started by addressing a significant challenge in the Indian engineering education landscape—the oversupply of engineers. He pointed out that India produces approximately **15 lakh engineers annually**, while the actual demand is only about **3 lakh**, leading to high unemployment rates. To tackle this, he stressed the critical role of ensuring credibility and quality in education, making it essential for institutions to obtain recognition from reputable bodies like NBA. Dr. Joshi also highlighted the importance of **networking**, infrastructure development for faculty research, and securing funding from external agencies, all of which contribute to strengthening the academic fabric of institutions. He emphasized the need to cater to the varied needs of students, whether they are slow learners or advanced learners, and the value of publishing impactful research papers. Furthermore, Dr. Joshi advocated for the use of effective assessment tools such as **Bloom's Taxonomy** and group discussions to gauge student learning and achievement accurately.

Lunch Break (1:30 pm - 2:15 pm)

Session 3: Criterion 1: Vision, Mission, and Program Educational Objectives (PEOs)

Time: 2:30 pm - 3:20 pm

Speaker: Dr. Rushali Deshmukh, Associate Dean Academics

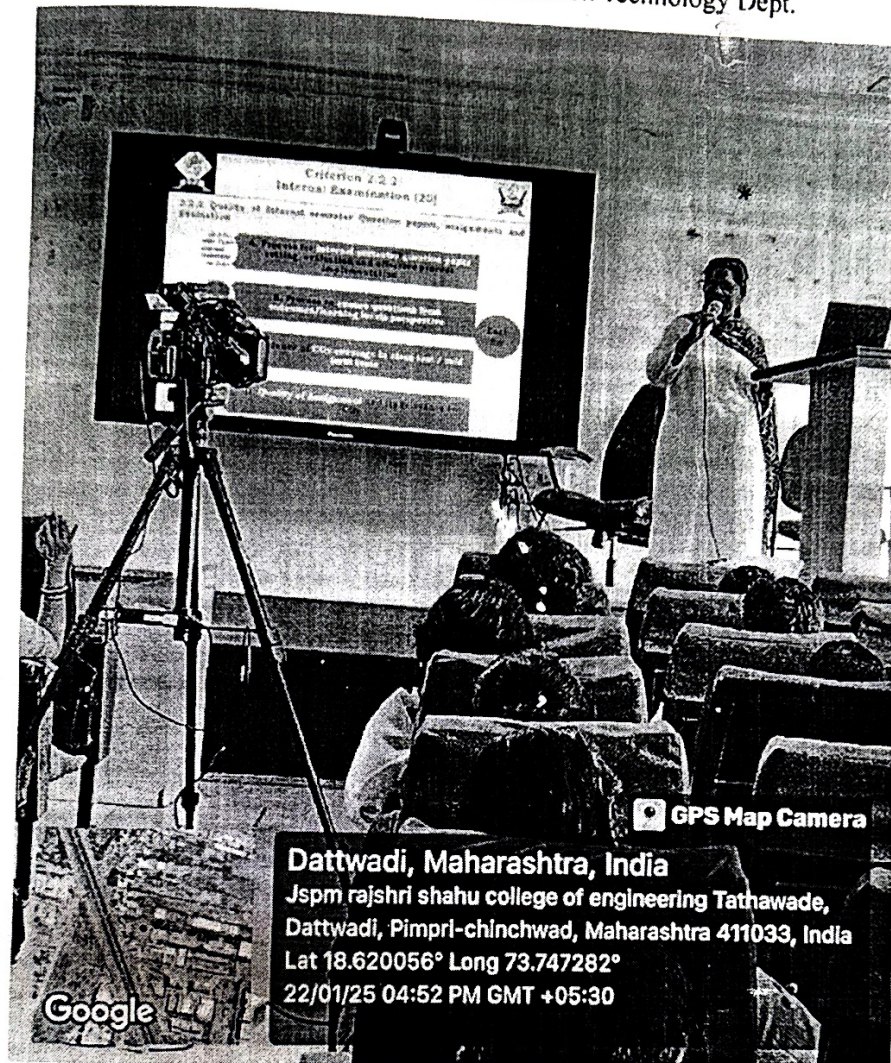


The third session was led by **Dr. Rushali Deshmukh**, Associate Dean Academics, who discussed **Criterion 1: Vision, Mission, and Program Educational Objectives (PEOs)**. Dr. Deshmukh explained that a department's **Vision** and **Mission** statements are pivotal to its overall direction and goals. These statements form the foundation upon which all other academic activities are built. She elaborated on the processes involved in formulating and aligning these statements with the broader institutional goals, ensuring that there is consistency and clarity in their articulation. She also emphasized the importance of publishing and disseminating these statements widely among stakeholders to ensure transparency and accountability. Dr. Deshmukh introduced the concept of mapping **Program Educational Objectives (PEOs)** to mission elements, which serves as a critical tool for evaluating the alignment of a department's activities with its overarching objectives. Her session provided actionable insights for institutions to refine their foundational goals and communicate them effectively to all involved parties, helping them strengthen their accreditation journey.

Session 4: Criterion 2: Teaching-Learning Processes

Time: 3:30 pm - 4:12 pm

Speaker: Dr. G S Mate, Associate Professor, Information Technology Dept.



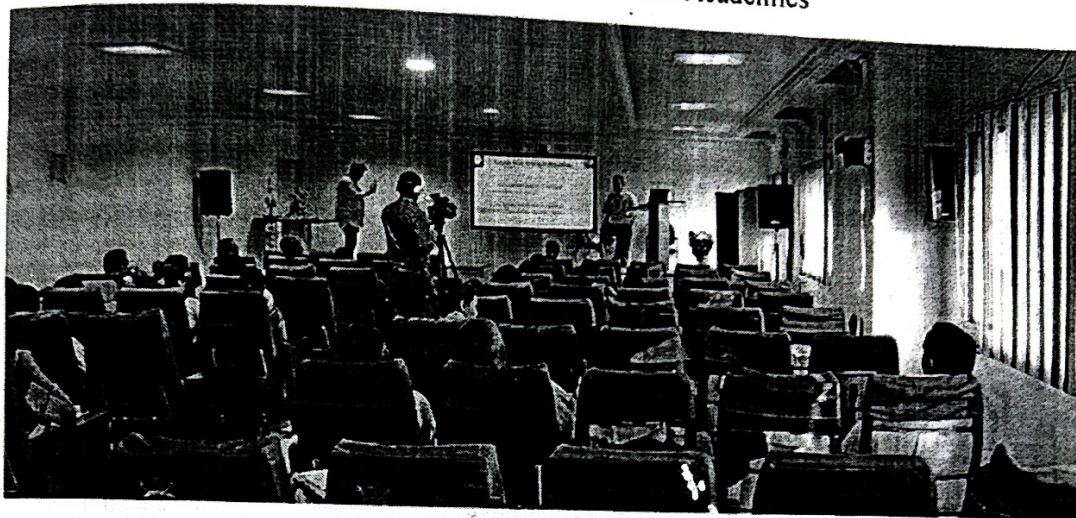
The fourth session, delivered by Dr. G. S. Mate, Associate Professor in the Department of Information Technology, was dedicated to **Criterion 2: Teaching-Learning Processes**. Dr. Mate highlighted the importance of adhering to academic calendars, ensuring that courses are conducted as planned and that teaching methods remain diverse and engaging. She discussed how various instructional approaches, both inside and outside the classroom, can contribute to the quality of teaching and learning. Dr. Mate also focused on maintaining high standards in laboratory and classroom teaching and emphasized the significance of **internal assessments**. She further elaborated on the process of setting question papers and evaluating assignments, ensuring that these assessments align with **Course Outcomes (COs)** and

with accreditation standards and meets the expectations of students and regulatory bodies alike.

Session 5: Teaching-Learning Processes - Industry Interaction & Projects

Time: 4:16 pm - 5:03 pm

Speaker: Dr. Avinash Badadhe, Deputy Director & Dean Academics



The final session of Day 1 was led by **Dr. Avinash Badadhe**, who continued the discussion on **Teaching-Learning Processes** but with a specific focus on **student projects, industry interaction, and internships**. Dr. Badadhe emphasized the importance of aligning student projects with **Program Outcomes (POs)** and **Program-Specific Outcomes (PSOs)**, ensuring that projects are not only academically rigorous but also practically relevant. He discussed the methodology for project identification, implementation, and monitoring, emphasizing the need for these projects to reflect real-world challenges and provide students with hands-on experience. Dr. Badadhe also highlighted the role of **industry-supported labs** and collaboration with industry experts in course design and project implementation. He further stressed the significance of internships, industry exposure, and collaborative efforts with the corporate sector to provide students with a comprehensive learning experience. Additionally, he discussed evaluating the quality of completed projects, publishing research papers, and gathering industry feedback, all of which contribute to the continuous improvement of the teaching-learning process.

Conclusion:

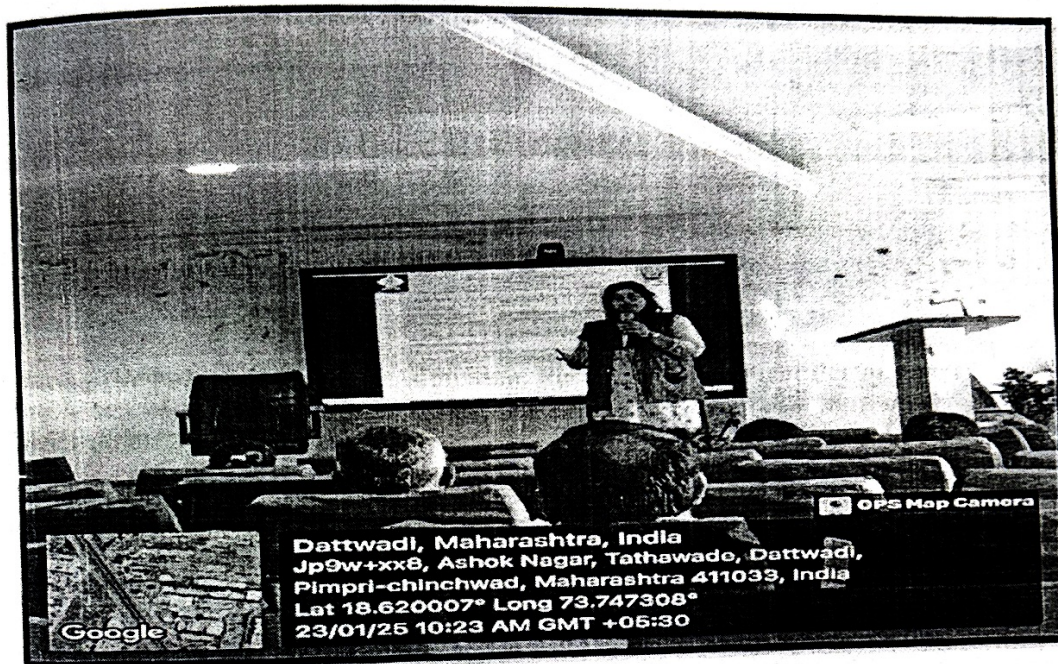
The inaugural day of the **NBA Margadarshan Scheme Faculty Development Programme** successfully set the tone for the subsequent days, providing a comprehensive understanding of the **NBA accreditation process, quality enhancement strategies, and the importance of robust teaching-learning methodologies**. The sessions were filled with valuable insights,

Day 2: Thursday, 23rd January 2025

Session 1: Criteria 4 – Student Admission, Result, and Placement Performance

Time: 10:00 AM to 11:20 AM

Speaker: Dr. R. A. Dubal, Dean Student Relation & Activity



The first session of the day began with a detailed discussion on **student admissions and diversity**. Dr. R. A. Dubal highlighted the importance of fostering an inclusive and merit-based admission system. The focus was on ensuring equitable access to education for students from diverse socio-economic backgrounds. Initiatives such as **Unnat Bharat Abhiyan**, a flagship program to connect educational institutions with rural areas, were emphasized for their role in bridging the accessibility gap and driving social responsibility. **Academic excellence and results** were discussed as vital parameters for evaluating institutional performance. Transparent marking schemes and structured feedback mechanisms were identified as tools for maintaining academic rigor. Dr. Dubal underlined the integration of extracurricular activities with co-curricular programs, emphasizing their role in shaping students' overall development. Evaluation guidelines for these metrics were presented: **Enrolment Ratio (20 Marks)**: Institutions achieving an enrolment ratio of 90% or more are awarded full marks. **Success Rate (40 Marks)**: This parameter measures the percentage of

student activities and professional development were explored. Over 30 active student chapters, including **ISTE**, **IEEE**, and clubs like the **Green Club** and **E-Cell**, were showcased as avenues for student engagement. A well-planned activity calendar ensures systematic execution of events and programs throughout the academic year. Professional activities such as participation in societies, research publications, and technical events contribute significantly, with **20 marks allotted** for this area. **Placement and industry readiness** were key discussion points. Dr. Dubal emphasized the role of a dedicated **Competitive Exam Cell** in preparing students for exams like **GATE** and **GRE** while enhancing their industry-aligned skill sets. Collaborations with alumni networks and industries were highlighted as critical to bridging the gap between academia and industry demands. Lastly, the session touched on **social responsibility and sustainability**. Engagement in initiatives like **Unnat Bharat Abhiyan** and activities aligned with **Sustainable Development Goals (SDGs)** were underscored as crucial for inculcating ethical values and environmental awareness among students.

Session 2: Criteria 3 – Course Outcomes and Program Outcomes

Time: 11:20 AM to 12:30 PM

Speaker: Dr. Kavita Moholkar, Head of CSBS Dept.



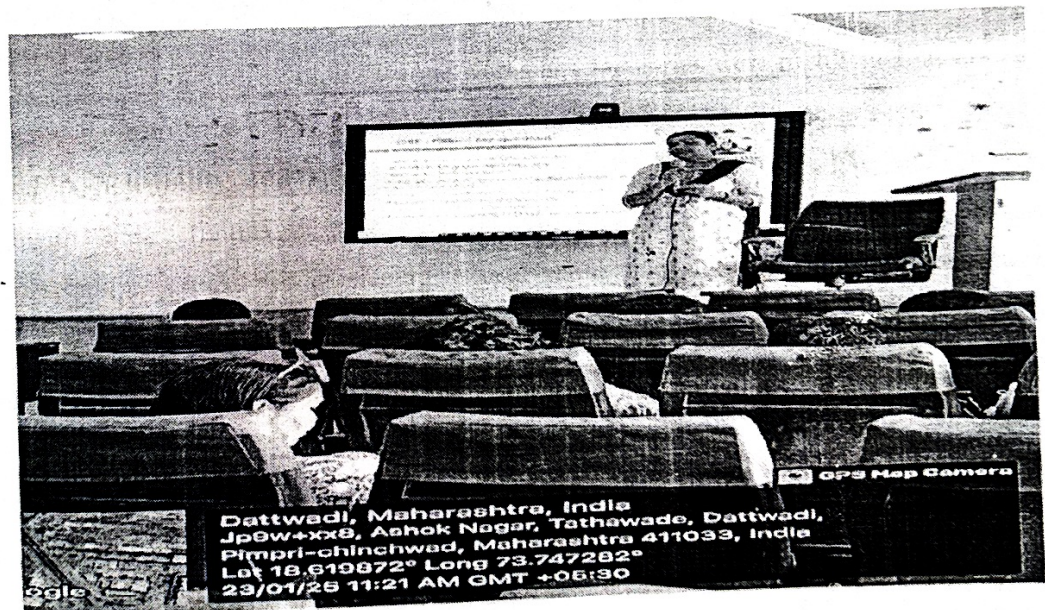
Dr. Kavita Moholkar presented an in-depth discussion on **Course Outcomes (COs)** and **Program Outcomes (POs)**. The session began with the importance of defining well-structured COs for individual courses. These COs are mapped to relevant POs and **Program Specific Outcomes (PSOs)** through a matrix, ensuring alignment with the program's educational objectives. The attainment of COs, POs, and PSOs, a significant part

student activities and professional development were explored. Over 30 active student chapters, including ISTE, IEEE, and clubs like the Green Club and E-Cell, were showcased as avenues for student engagement. A well-planned activity calendar ensures systematic execution of events and programs throughout the academic year. Professional activities such as participation in societies, research publications, and technical events contribute significantly, with 20 marks allotted for this area. Placement and industry readiness were key discussion points. Dr. Dubal emphasized the role of a dedicated Competitive Exam Cell in preparing students for exams like GATE and GRE while enhancing their industry-aligned skill sets. Collaborations with alumni networks and industries were highlighted as critical to bridging the gap between academia and industry demands. Lastly, the session touched on social responsibility and sustainability. Engagement in initiatives like Unnat Bharat Abhiyan and activities aligned with Sustainable Development Goals (SDGs) were underscored as crucial for inculcating ethical values and environmental awareness among students.

Session 2: Criteria 3 – Course Outcomes and Program Outcomes

Time: 11:20 AM to 12:30 PM

Speaker: Dr. Kavita Moholkar, Head of CSBS Dept.



Dr. Kavita Moholkar presented an in-depth discussion on Course Outcomes (COs) and Program Outcomes (POs). The session began with the importance of defining well-structured COs for individual courses. These COs are mapped to relevant POs and Program Specific Outcomes (PSOs) through a matrix, ensuring alignment with the program's educational objectives. The attainment of COs, POs, and PSOs, a significant part

collection and periodic reviews. Institutions are required to maintain evidence of attainment levels, ensuring that teaching methodologies and evaluation processes are both transparent and effective.

Session 3: Criteria 4 – Student Admission, Result, and placement performance

Time: 12:30 PM to 1:30 PM

Speaker: Dr. Nihar Ranjan, Head, Department of Information Technology.

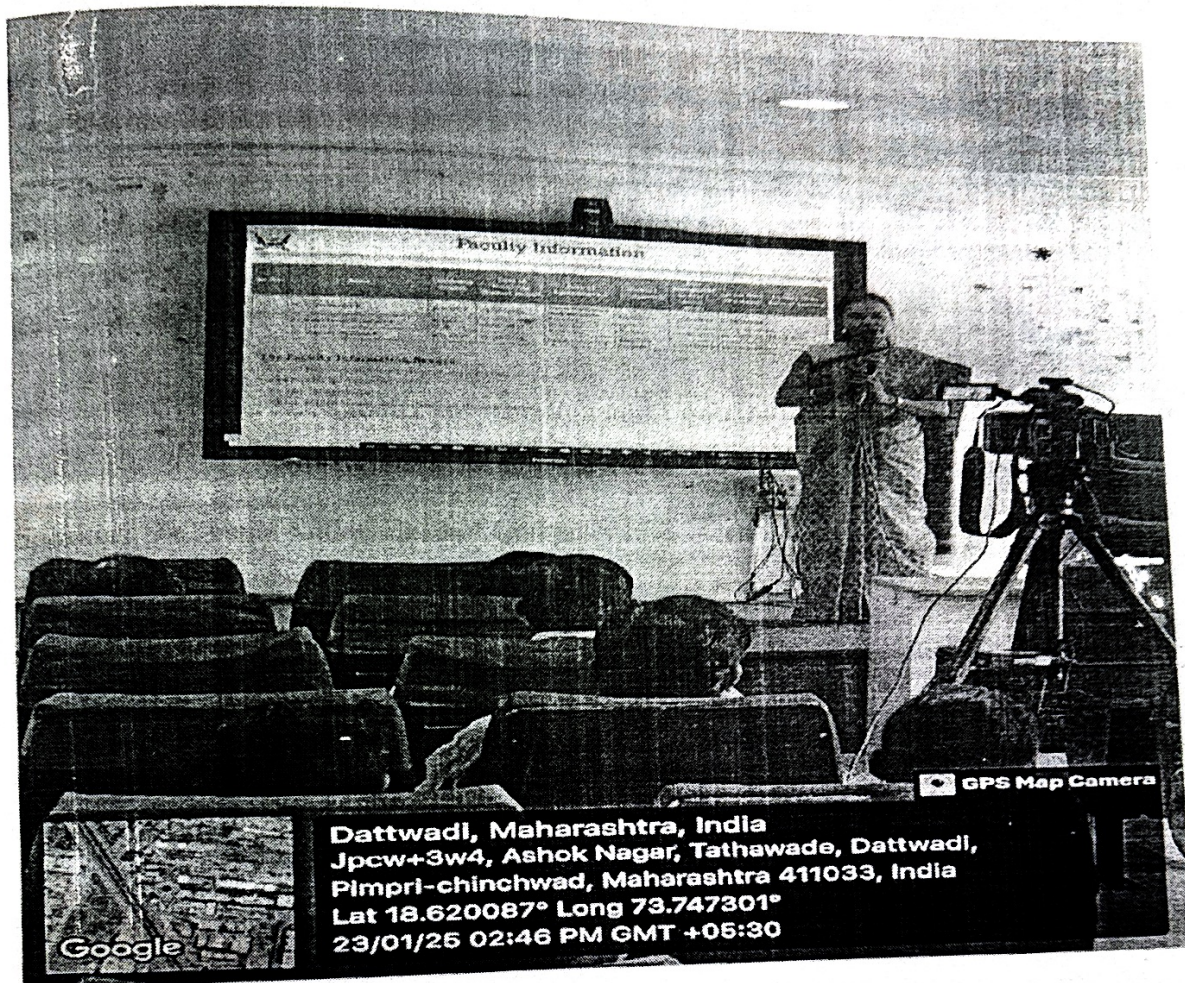


Dr. Nihar Ranjan presented a brief description on Calculation of total number of students, Enrollment ratio, Calculation of success index. He has given idea about how well institutions manage their admission process, student academic results, and the subsequent placement of graduates in the job market. The objective is to ensure that educational programs attract quality students, facilitate their academic success, and prepare them for meaningful employment upon graduation. Next, the institution must demonstrate strong academic outcomes. This includes high pass rates, good subject-wise performance, and overall academic achievement. Data on student performance in terms of pass percentages, top scorers, and overall academic progression should be provided. A strong academic result indicates that the institution is meeting its educational objectives and providing quality education.

Session 4: Criteria 5 – Faculty Information and Contributions

Time: 2:30 PM to 3:30 PM

Speaker: Dr. Seema Kedar, Head of Computer Engg. Dept.



Dr. Seema Kedar provided an extensive overview of the parameters used to evaluate faculty contributions. The session began with the **Student-Faculty Ratio (SFR)**, calculated using the formula $SFR = S/FSFR = S/F$, where SS represents the number of students and FF denotes the number of faculty members. Institutions achieving optimal ratios receive the maximum 20 marks for this criterion. Next, Dr. Kedar discussed the **faculty cadre proportion**, which evaluates the balance between various faculty roles, such as professors, associate professors, and assistant professors. Institutions with a well-distributed cadre proportion are awarded 25 marks. **Faculty qualifications** were another crucial parameter, with 25 marks allocated for the assessment of PhD and M.Tech-qualified faculty members. The retention of faculty was emphasized as a key indicator of institutional stability and continuity, with institutions receiving additional marks for maintaining high retention rates. The session concluded with a discussion on **faculty contributions to teaching and research**. Key activities such as

Session 5: Criteria 7 – Continuous Improvement

Time: 3:30 PM to 4:10 PM

Speaker: Dr. R.R. Arakerimath, Professor and Dean Academics



Dr. R.R. Arakerimath focused on the processes involved in achieving **continuous improvement** in academic and institutional performance. Institutions are required to conduct a gap analysis and implement action plans based on the attainment levels of these outcomes. The importance of regular **academic audits** was discussed, with **10 marks** allocated for this parameter. Effective audits ensure that institutions identify areas for improvement and implement corrective measures systematically. Dr. Arakerimath also highlighted the significance of improving **placement rates**, facilitating **higher studies**, and fostering **entrepreneurial ventures**. These factors, collectively carrying **10 marks**, reflect an institution's ability to prepare students for successful careers. Finally, the quality of student admissions was evaluated based on entrance ranks and academic performance, with institutions earning **10 marks** for attracting high-quality students.

Session 6: Criteria 6 & 9 – Facilities, Technical Support, and Student Support Systems

Time: 4:10 PM to 5:00 PM

Speaker: Dr. S.L. Chavan, Head of Electrical Dept.



Dr. S.L. Chavan provided a comprehensive overview of the facilities, technical support, and student support systems offered by institutions. **Facilities and technical support**, carrying 80 marks, were discussed in detail. This includes the availability of well-equipped laboratories, adequate technical staff, safety measures, and additional facilities aligned with POs and PSOs. Proper maintenance of these facilities is critical to ensuring their effectiveness. **Student support systems**, evaluated for 50 marks, were broken down into various components like **Mentoring (5marks)**: Personalized guidance provided to students. **Feedback Mechanisms (15 marks)**: Systems for collecting, analyzing, and acting on student feedback, **Self-Learning(5marks)**: Opportunities for students to access MOOCs, webinars, and other resources, **Career Guidance (10 marks)**: Pre-placement training and counseling to enhance employability, **Entrepreneurship Initiatives (5 marks)**: Efforts to promote startups and measure their outcomes, **Extracurricular Activities (10 marks)**: Participation in sports, NCC, cultural events, and other activities that foster holistic development.

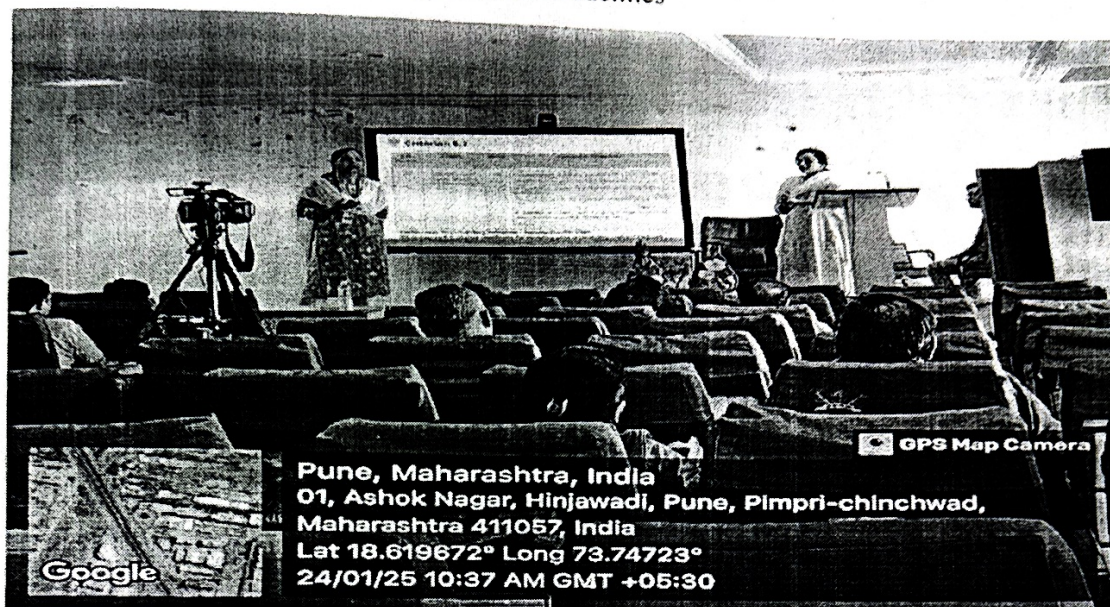
Day 3: Friday, 24th January 2025

Session 1: Criterion 8 – First-Year Academics

Time: 10:20 AM to 11:20 AM

Speakers:

- Dr. Sunita Yadav, Head of Department of Engineering Sciences and Humanities
- Dr. Preeti Tomar, Associate Dean of Academics



The session opened with an in-depth discussion of Criterion 8, focusing on the academic structure and performance of first-year programs. Dr. Sunita Yadav emphasized the critical role of the **First-Year Student-Faculty Ratio (FYSFR)** in delivering quality education. Institutions are encouraged to maintain an $FYSFR \leq 20$ for optimal assessment, which is evaluated based on regular faculty availability, valid appointment letters, and accurate student records from the current and past two years. Dr. Preeti Tomar then elaborated on the significance of **faculty qualifications** for first-year courses. **Academic performance** was discussed next, with **10 marks** allocated to the evaluation of the mean Grade Point Average (GPA) or percentage of first-year students and the proportion of students eligible to proceed to the second year. Institutions must provide validated data for at least one assessment year to ensure transparency and accuracy in evaluations.

The session also focused on the **attainment of Course Outcomes (COs)**, which carries **10 marks**. Assessment methods include a combination of direct and indirect tools to measure CO attainment, ensuring alignment with benchmarks. Documentation of attainment records for at least three courses is mandatory. Finally, the attainment of **Program Outcomes (POs)** and **Program-Specific Outcomes (PSOs)** was discussed, which accounts for **20 marks**. Dr. Yadav stressed the importance of computing POs and PSOs based on related first-year COs

Session 2: Criterion 9 – Mentoring System and Student Support

Time: 11:00 AM to 12:00 PM

Speaker: Dr. Nisha Wandile, Associate Professor and Counsellor, Dept. of Computer Engineering



The second session of the day delved into Criterion 9, focusing on mentoring systems and student support mechanisms. Dr. Nisha began by highlighting the importance of a **structured mentoring system** to provide individual-level support. Guardian Faculty Members (GFM), counselors, and mentors work collaboratively to address students' psychological, financial, and academic needs. Regular GFM meetings are conducted to identify and document student concerns, ensuring personalized attention. This criterion is allocated **5 marks**. A notable example shared involved a student who was compelled to study engineering despite aspirations to pursue acting. Through effective mentoring, the student managed to balance academics with their personal goals, successfully completing their degree and subsequently pursuing a career in acting. **Feedback analysis and corrective actions**, evaluated for **10 marks**, were discussed as a key component of student-centric improvement. Institutions are encouraged to design effective feedback collection processes, analyze responses, and implement corrective measures to enhance the overall learning environment. The session also covered the **feedback on institutional facilities**, worth **5 marks**, which involves collecting and analyzing student input on infrastructure and other resources. **Self-learning opportunities** were emphasized as an essential tool for student development, carrying **5 marks**. Resources such as MOOCs, podcasts, webinars, and other self-paced learning materials were highlighted as ways to enhance learning beyond the classroom. Dr. Nisha then discussed **career guidance and placement**, evaluated for **10 marks**. Pre-placement training.

critical for preparing students for their careers. The role of an **Entrepreneurship Cell** was also elaborated upon, with **5 marks** allocated to initiatives fostering entrepreneurial skills and tracking students who benefit from such efforts. The session concluded with a focus on **co-curricular and extracurricular activities**, carrying **10 marks**. Participation in sports, cultural events, National Service Scheme (NSS), National Cadet Corps (NCC), and annual student activities was emphasized as integral to holistic student development.

Session 3: Criterion 10 – Governance, Institutional Support, and Financial Resources

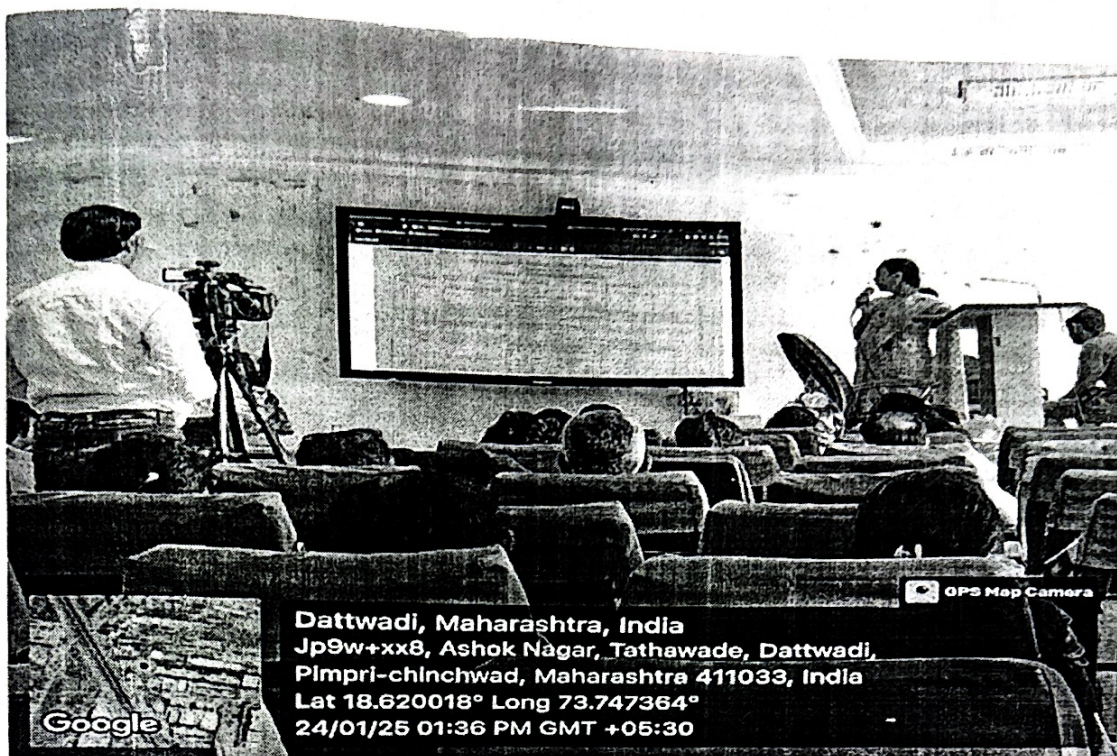
Time: 12:10 PM to 1:00 PM

Speaker: Dr. Amey Choudhari, HOD MBA.



The final session of the day addressed **Criterion 10**, which focuses on governance, institutional support, and financial resources. Ms. Nisha began by discussing the **organization, governance, and transparency framework**, which carries **40 marks**. Institutions are expected to have clear, future-oriented vision and mission statements aligned with their core values. A decentralized working structure and effective grievance redressal mechanisms were identified as essential components for fostering institutional trust and efficiency. Transparency in governance is further ensured through publicly available policies, annual reports, and financial statements. The discussion then shifted to **budget allocation and utilization**, worth **30 marks**. Institutions must demonstrate adequate budgetary support for institutional and program-specific requirements. Effective utilization of funds is critical for maintaining academic and infrastructural quality. The session concluded with a focus on **library and internet facilities**, which are evaluated for **20 marks**. High-quality learning resources, including digital libraries and e-resources, are crucial for academic success. Adequate internet bandwidth, campus-wide Wi-Fi, and secure access to online resources

Concluding Session: Dr. Seema Kedar, Head of Dept. Computer Engg.
Time: 1:35 pm to 3:00 pm



The Mentee institutes will be guided and analyzed before the Pre- Qualifier submission before 30th June and the mentoring process will be carried out for a span of 12 months.

Valedictory Function

The valedictory function of the three-day Faculty Development Programme on “NBA Orientation” under the AICTE-NBA Margadarshan Scheme was graced by esteemed dignitaries. Dr. Santosh Bhosale, Director, delivered an insightful speech emphasizing the importance of such workshops in enhancing the understanding of NBA processes. Dr. Avinash Devasthali, Deputy Director, highlighted the role of mentorship in achieving accreditation goals, while Dr. Avinash Badadhe, Deputy Director, encouraged participants to implement the learnings effectively.

- Feedback from participants was overwhelmingly positive, with many appreciating the structured and interactive sessions. Dr. Phadkule, Dr. Ankita Ghodke from the participants, remarked that the programme provided the best inputs throughout all sessions, offering practical insights into NBA accreditation. Faculty members also praised the expertise of the resource persons and the relevance of the topics covered. The event concluded on a high note,



END Coordinator

Seemach
HOD



114



Academic Year 2024-25

Department of Information Technology

Online FDP on “Advancements in AI with IOT for Sustainability”

Duration: 16/12/2024 to 20/12/2024

Timings: 2:00 pm to 5:00 pm

Title: Faculty Development Program on **Advancements in AI with IOT for Sustainability**

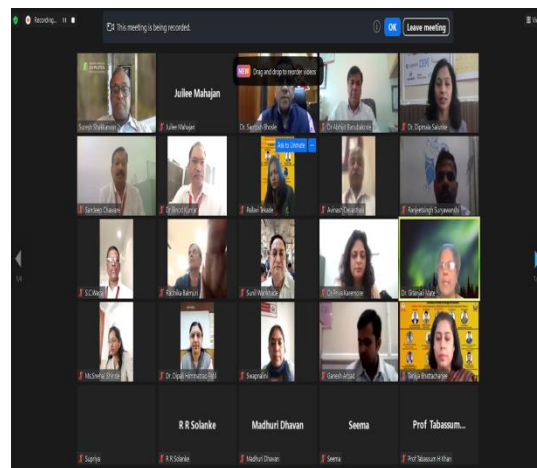
Venue: Online JSPM RSCOE Zoom Platform

Organized By: Department of Information Technology

Total Participants 45

Approved By: ISTE

The Faculty Development Program (FDP) was organized to enhance the teaching capabilities, research skills, and overall professional growth of the faculty members. The primary goal was to provide opportunities for faculty to engage with contemporary developments in education, research, technology, and pedagogy on emerging technologies such as AI and IOT. This program was specifically designed to assist faculty in refining their practical knowledge.

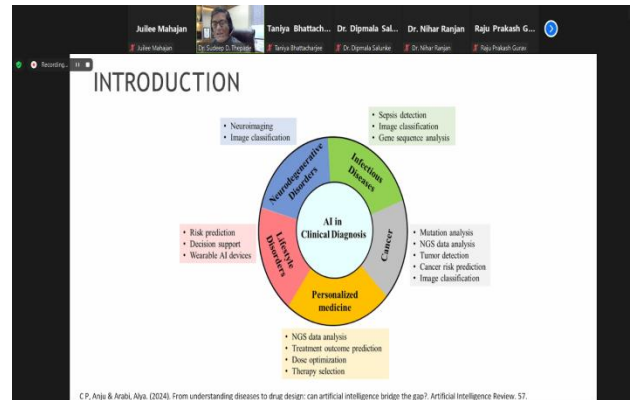


The Faculty Development Program spanned one week, and included a variety of sessions such as, presentations, and hands on sessions on recent technologies of AI.

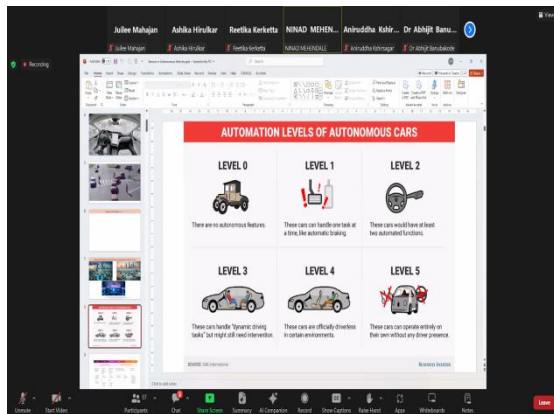
The different topics covered are as follows

- Case studies of AI based disease identification in medical diagnostics
- Startup using AI and IoT
- Sensors and Deep Learning approaches for autonomous vehicles
- Applications of AI and Computer Vision in Automotive industry
- Smart sustainable development perspective using AIoT
- AI for Healthcare
- AI for Healthcare

- AI & IoT in Precision Agriculture
- Hands on session

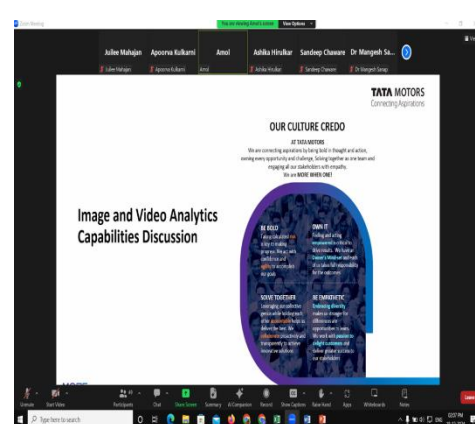


Day 1



Day 2

The program featured a mix of expert speakers, including experienced academics, researchers, and eminent personalities from Industry. The program employed a combination of theoretical lectures, interactive workshops, case studies, and group discussions to create an engaging learning environment. Faculty members were encouraged to actively participate and share their experiences. Several hands-on sessions were organized, where participants were allowed to use tools and techniques discussed in real-time scenarios.

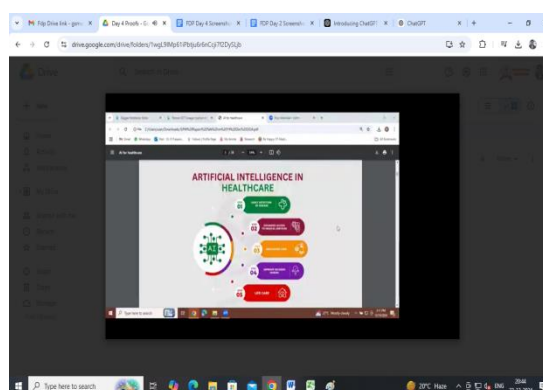


Day 3

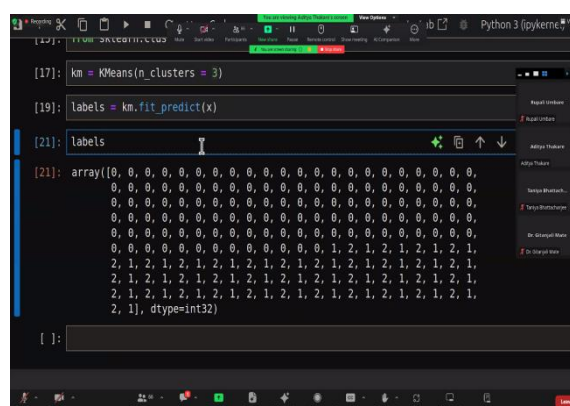
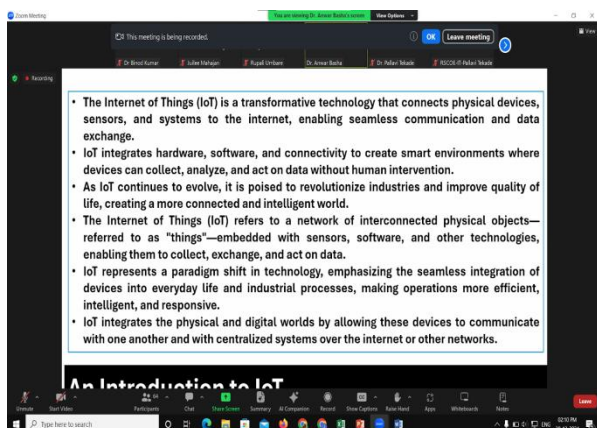
Feedback from the participants was collected through surveys at the end of the program. Key findings from the feedback include:

- **Content Quality:** 95% of the participants rated the content of the sessions as highly relevant and valuable.
- **Speaker Effectiveness:** 90% of the participants found the speakers knowledgeable and effective in delivering the sessions.
- **Engagement Level:** 85% of participants stated that the interactive nature of the program enhanced their learning experience.
- **Suggestions for Improvement:** Some participants suggested including more practical sessions and real-world case studies for a deeper understanding of the topics.

The Faculty Development Program was highly successful in achieving its objectives. It provided valuable insights into modern teaching practices, research strategies, and personal development for faculty. The program not only equipped faculty with the necessary tools and knowledge to improve their teaching effectiveness but also fostered an environment of collaborative learning and professional growth.



Day 4



Day 5

The feedback indicates a high level of satisfaction, and participants have expressed a strong desire for similar programs in the future. This initiative has contributed to fostering a more dynamic, engaging, and productive academic environment at information technology department.

FDP Coordinator

HOD IT