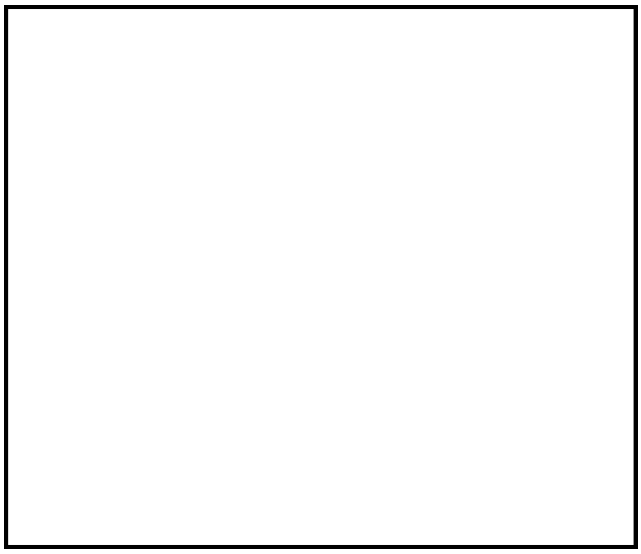
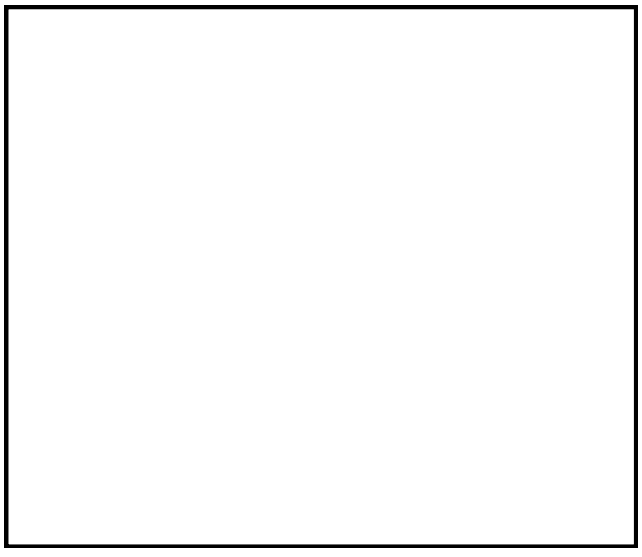
GUEST LECTURE : REVERSE ENGINEERING

On 31st January 2025, the Department of Mechanical Engineering organized a guest lecture on Reverse Engineering by Mrs. Nidhi Sanghvi, Manager – Business Development at Ask Me Engineers. Attended by 24 students and 3 faculty members, the session introduced reverse engineering as the process of analyzing existing products to understand, duplicate, or improve their design. Mrs. Sanghvi explained its applications across industries and outlined key steps—information extraction, modeling, and review—along with tools like decompilers, 3D scanners, and CAD software. She encouraged students to practice CAD and related tools to build careers in fields such as mechanical, aerospace, automotive, and computer engineering.





GUEST LECTURE : NAVIGATING THE TRANSITION: FROM CAMPUS LIFE TO CORPORATE SUCCESS

On 7th February 2025, the Department of Mechanical Engineering organized a guest lecture on Navigating the Transition: From Campus Life to Corporate Success by Mr. Ashwin Kharwa, Project Manager at Packt Publishing Pvt. Ltd. Attended by 18 students and 5 faculty members, the session focused on preparing students for professional life by emphasizing soft skills, adaptability, and continuous learning. Mr. Kharwa highlighted the importance of teamwork, leadership, networking, and personal branding, encouraging students to view success beyond securing a degree or job. The interactive session motivated participants to enter the corporate world with confidence and clarity.

INDUSTRIAL VISIT'S

LIST OF INDUSTRIAL VISIT'S

1. PRECIWORD MECHANICALS
2. PARESH ENGINEERING INDUSTRIES
3. STEAM-O-TECH ENGINEERS
4. ICE FACTORY

FACULTY INDUSTRIAL VISIT'S : PRECIWORD MECHANICALS

On 30th November 2024, the faculty of the Department of Mechanical Engineering visited Preciworld Mechanicals, Virar (E), as the concluding activity of the ISTE-approved STTP on welding. Guided by CEO Mr. Vinay Chansikar, the visit offered insights into precision manufacturing and advanced welding practices, particularly TIG and MIG techniques in complex assemblies. Faculty observed industrial-scale processes, interacted with engineers, and connected classroom learning with real-world applications. The visit enriched their knowledge and reinforced the integration of practical insights into academic teaching.

FACULTY INDUSTRIAL VISIT'S : PARESH ENGINEERING INDUSTRIES

On 30th November 2024, the faculty of the Department of Mechanical Engineering visited Paresh Engineering Industries, Virar (E), guided by Mr. Parag Nerurkar. The tour focused on pipeline welding, highlighting the challenges of circumferential welds, large components, and varied positions. Faculty observed specialized equipment, welding techniques, and the role of metallurgy and NDT in ensuring safety and reliability. The visit reinforced theoretical knowledge with practical exposure, broadening perspectives on diverse welding applications and career opportunities in specialized industries.

INDUSTRIAL VISIT : STEAM-O-TECH ENGINEERS

On 27th February 2025, the Department of Mechanical Engineering, VIVA Institute of Technology, organized an industrial visit to Steam-O-Tech Engineers, Naigaon (E), for Semester VI students as part of the Turbomachinery Lab. A group of 11 third-year students and one faculty member participated. Steam-O-Tech Engineers, a leading manufacturer of boilers and combustion equipment, showcased the complete boiler manufacturing process—from raw material procurement and sheet rolling to welding, assembly, and NDT-based quality checks. Students also observed surface finishing, anti-corrosion coatings, and heat-resistant paints, gaining practical insights that bridged classroom learning with industrial applications in energy systems.

INDUSTRIAL VISIT : ICE FACTORY

On 11th March 2025, the Department of Mechanical Engineering, VIVA Institute of Technology, organized an industrial visit to the Ice Factory at Pachu Bandar, Vasai (W) for the HVAC&R Lab of Semester VI. Attended by 18 students from S.E., T.E., and B.E., along with all department faculty members, the visit showcased the ammonia-based vapor compression refrigeration cycle used in block ice production. Students observed key components such as compressors, condensers, expansion valves, and evaporators, along with insulated ice tanks and monitoring instruments. The visit provided practical exposure to large-scale refrigeration systems, reinforcing classroom learning with industrial applications.

STUDENT WORKSHOP

LIST OF STUDENT WORKSHOP

1. ACADEMIC RESEARCH MANAGEMENT

STUDENT WORKSHOP : ACADEMIC RESEARCH MANAGEMENT

On 5th and 9th August 2024, the Department of Mechanical Engineering organized a guest lecture on Academic Research Management by Dr. Devshree Ugvekar, Librarian & Information Head at VIVA Institute of Technology, Virar. Attended by 30 students and 2 faculty members, the two-day session covered the research process, from framing questions to data analysis, with emphasis on ethics, plagiarism avoidance, and institutional compliance. Dr. Ugvekar highlighted literature review techniques, academic writing, and publication opportunities, along with hands-on training on research management tools. The session concluded with an interactive Q&A, making it highly informative and impactful.

FACULTY STTP

FUNDAMENTALS OF WELDING : MASTERING THE BASICS

- DATE : 25TH - 30TH NOV 2024
- VENUE : VIVA INSTITUTE OF TECHNOLOGY + INDUSTRY VISITS
- ORGANIZED BY : MECHANICAL ENGG. DEPT., ISTE APPROVED
- SPEAKERS : MR. VINAY CHANSIKAR, DR. VISHVESH BADHEKA, DR. AMIT KUMAR SINGH, MR. SHASHIKANT GUPTA
- HIGHLIGHTS : EXPERT TALKS, HANDS-ON TRAINING, INDUSTRIAL VISITS

ISTE APPROVED ONE WEEK STTP ON "FUNDAMENTALS OF WELDING: MASTERING THE BASICS"

The Department of Mechanical Engineering, VIVA Institute of Technology, organized an ISTE-approved STTP on Fundamentals of Welding: Mastering the Basics from 25th to 30th November 2024. The program combined expert lectures, hands-on training, and industrial visits, giving participants a comprehensive understanding of welding technologies. Sessions covered SMAW, GTAW, GMAW, resistance welding, and advanced methods in additive manufacturing and Industry 4.0. Practical training on TIG and MIG machines was followed by visits to Preciworld Mechanicals and Paresh Engineering Industries. The STTP enriched participants with both theoretical knowledge and practical skills, highlighting welding's importance in modern manufacturing.

TEAM MESA

The Mechanical Engineering Students' Association (MESA) is a student-driven body that focuses on enhancing technical knowledge, leadership, and teamwork among its members. It organizes seminars, workshops, guest lectures, technical competitions, industrial visits, and cultural programs, giving students opportunities to learn beyond the classroom and apply theoretical concepts to real-world scenarios.

MESA fosters unity, creativity, and innovation within the department by bringing students together to collaborate, share ideas, and develop skills essential for their careers. Over the years, it has become the backbone of student activities, bridging the gap between academics and practical exposure.

Through its diverse initiatives, MESA empowers students to showcase their talents, build confidence, and take on challenges. It not only prepares them for professional careers but also nurtures leadership, communication, and problem-solving skills, shaping them into well-rounded engineers.

HEADS OF MESA

PRESIDENT

DURGASINGH CHUNDAWANT

SECRETARY

AYUSH KHOPKAR

JOINT SECRETARY

SUJAL PAWAR

TREASURER

NARESH KATRE

EVENT HEAD

PATIL SAHIL

EVENT HEAD

PITRODA DEV

PUBLICITY HEAD

SAIRAJ SHINDE

PUBLICITY HEAD

SHREYASH JAMSANDEKAR

MESA EVENTS

LIST OF MESA EVENTS

1. TECHCHASE 2024
2. TEACHERS DAY CELEBRATION
3. DUSSEHRA CELEBRATION
4. PROJECT COMPETITION
5. FAREWELL CELEBRATION 2024–25 BATCH

TECHCHASE 2024

The Mechanical Engineering Students' Association (MESA) organized Techchase 2024, a two-day fest held on 30th and 31st August 2024, combining fun, innovation, and technical challenge. The event was designed to give students a break from academics while testing their creativity, teamwork, and quick thinking. With three exciting activities — Operation Engine Heist, Boat Race, and Bike Pit Stop — the event attracted over 120 participants and created a vibrant atmosphere within the department.

Each competition carried its own uniqueness. Operation Engine Heist was a thrilling detective-themed challenge where students solved puzzles against the clock. Boat Race promoted sustainability by encouraging participants to design boats from recycled plastic bottles, showcasing both engineering skills and environmental awareness. The most popular event, Bike Pit Stop, simulated a high-pressure racing environment where participants demonstrated speed, precision, and coordination. Across all three games, the competitive spirit was balanced with enjoyment, making Techchase one of the most memorable events of the semester.

TEACHER'S DAY CELEBRATION

The Mechanical Engineering Students' Association (MESA) celebrated Teacher's Day 2024 with great enthusiasm to honor the dedication and guidance of faculty members. Organized in the department premises, the event began with a heartfelt welcome, where students expressed gratitude towards their professors for shaping their academic journey. To make the day lively, the MESA team arranged interactive games such as Balloon Shouldn't Fall, Tug of Cup, and Dumb Charades, which encouraged active participation and created a cheerful atmosphere.

The celebration not only brought smiles and laughter but also strengthened the bond between teachers and students by allowing them to interact informally outside the classroom. The joy and energy shared during the program made the occasion memorable, leaving both faculty and students with lasting memories of appreciation and togetherness.

DUSSEHRA CELEBRATION

The Mechanical Engineering Students' Association (MESA) celebrated Dussehra 2024 with devotion and enthusiasm. The department was beautifully decorated with flowers and traditional designs, creating a festive atmosphere. A special puja was performed under the guidance of Hon. HOD Dr. Niyati Raut, with prayers to Lord Ganesha for blessings of knowledge and success. Faculty and students came together to participate in the aarti, filling the environment with spiritual energy.

In addition to the department ceremony, a puja was also conducted in the mechanical workshop, symbolizing the integration of tradition with technical learning. Faculty members and students actively took part, strengthening the spirit of togetherness. The celebration concluded with the distribution of sweets and a group photograph, capturing the joy and unity of the occasion.

MECHXPLORE - PROJECT COMPETITION

The Department of Mechanical Engineering at VIVA Institute of Technology organized the MechXplore Project Competition on April 5, 2025, to provide students with a platform to showcase their innovative projects before industry experts. The event, inaugurated by Dr. Niyati Raut (HOD) and judged by Mr. Pramod Shetty from Sams TechnoMech Pvt. Ltd., saw participation from 17 major and 12 mini project teams. In the Major Project category, the first prize went to Optimization of Crash Box by Changing its Design & Material, followed by Sanitary Pad Disposal Machine in second place, while third place was shared by Customized 3D Printed Knee Joint and IoT-Based Automatic Kaju Katli Making Machine. In the Mini Project category, Portable EDM Machine won first prize, while Automatic Pet Feeder and Emergency Braking System secured second and third prizes respectively.

FAREWELL CELEBRATION 2024–25 BATCH

On 30th April 2025, the Mechanical Engineering Students' Association (MESA) organized a warm and memorable Farewell Celebration for the outgoing final-year batch of 2024–25. The event, hosted by Sujal Pawar, featured fun games, a cake-cutting ceremony, and a touching farewell video capturing memories from classrooms, activities, and events. Seniors expressed gratitude towards faculty and juniors while sharing experiences and advice, making the occasion both joyful and emotional. The program concluded with the presentation of framed group photographs to each senior, marking a heartfelt goodbye and the beginning of a new chapter in their lives.

ALUMNI MEET

- DATE : 17TH APRIL 2024
- VENUE : SEMINAR HALL, 4TH FLOOR
- THEME: “SOWING ASPIRATION, REAPING SUCCESS”
- PARTICIPANTS: ALUMNI, FACULTY & STUDENTS

ALUMNI MEET 2025

The Department of Mechanical Engineering hosted Alumni Meet on 17th April 2025, bringing together past graduates, faculty, and current students. The event created a platform for alumni to share their professional journeys and offer valuable guidance to juniors.

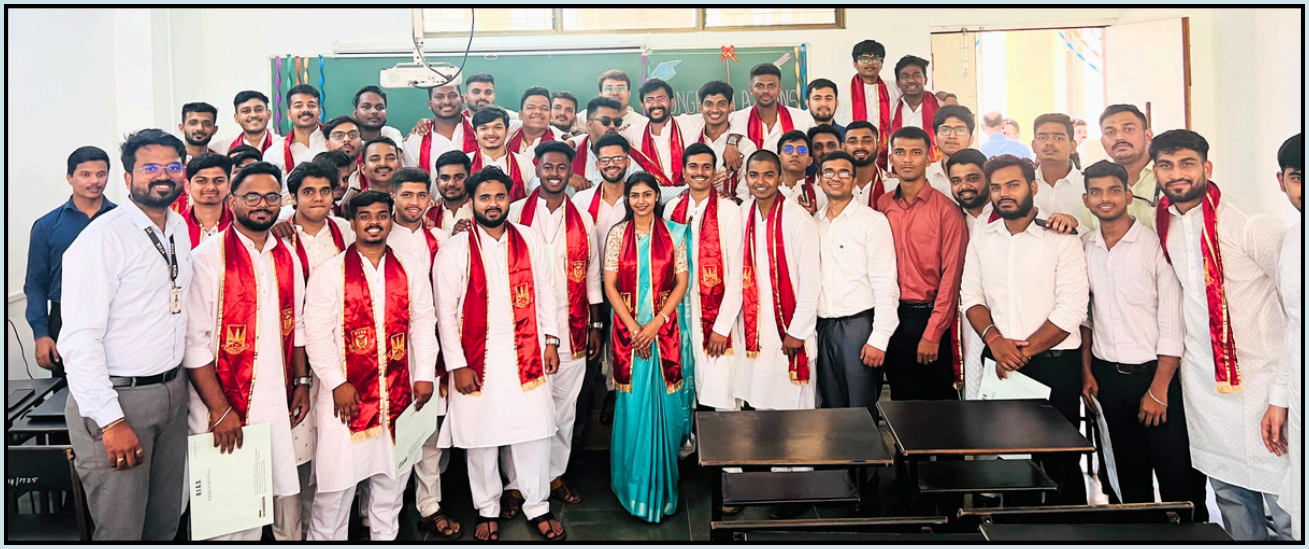
In the presence of the Principal, HOD, and faculty members, alumni reflected on how their time at the institute shaped their careers. The theme "Sowing Aspiration, Reaping Success" captured the essence of the gathering, celebrating growth, achievements, and the strong bond between the department and its graduates.

CONVOCATION CEREMONY

- DATE : 17TH APRIL 2024
- VENUE: SEMINAR HALL & DEPARTMENT
- PARTICIPANTS: GRADUATING BATCH & FACULTY
- HIGHLIGHTS: TOPPER FELICITATION, GROUP PHOTOS, FAREWELL ADDRESS

CONVOCATION CEREMONY 2024

The Department of Mechanical Engineering held its Convocation Ceremony 2024 in the seminar hall to honor the graduating batch in the presence of the Principal, HOD, faculty, and students. The event featured addresses by dignitaries and the felicitation of university rank holders, whose achievements inspired juniors to strive for excellence. The ceremony concluded with group photographs, capturing memories of pride, joy, and togetherness, marking both a farewell and a new beginning for the graduates.



TEAM ISHRAE

The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE) is a professional society dedicated to advancing knowledge and innovation in the field of HVAC&R (Heating, Ventilation, Air Conditioning, and Refrigeration). At VIVA Institute of Technology, the ISHRAE Student Chapter serves as an active platform where students can connect with industry experts, enhance their technical knowledge, and prepare themselves for future careers. It acts as a bridge between classroom learning and real-world applications, encouraging students to go beyond textbooks and gain practical exposure.

The chapter organizes a wide range of activities including technical seminars, expert guest lectures, K-12 awareness programs, hands-on workshops, and industrial visits. These initiatives not only strengthen academic learning but also inspire creativity, innovation, and teamwork among students. Competitions at college, state, and national levels provide opportunities to showcase design skills and problem-solving abilities, while also fostering a healthy spirit of participation and collaboration.

In addition to technical growth, ISHRAE offers career-oriented benefits such as internships, project funding, scholarships, and participation in industry-driven research activities. It also hosts job fairs, placement drives, and networking events, helping students build valuable connections with professionals and companies in the HVAC&R sector. Such exposure gives students a competitive edge and prepares them for roles in industries ranging from refrigeration and energy systems to sustainable building technologies.

Being a part of ISHRAE instills a sense of social responsibility as well, with initiatives that raise awareness about energy conservation, clean air, and environmental sustainability. For students, the chapter becomes a platform to learn, innovate, network, and grow into professionals who can contribute effectively to industry and society. Through ISHRAE, students not only strengthen their technical foundation but also develop leadership, communication, and teamwork skills, shaping them into well-rounded engineers ready to face the challenges of the future.

HEADS OF ISHRAE

PRESIDENT

SAIRAJ SHINDE

VICE PRESIDENT

AYUSHI PANDEY

SECRETARY

AYUSH KHOPKAR

TREASURER

ROHIT SOLANKI

PROJECT HEAD

SHEETAL GUPTA

IV HEAD

YASHRAJ SHARMA

HEADS OF ISHRAE

K-12 HEAD

KALPESH BHOIR

PUBLICITY HEAD

SHREYASH JAMSANDEKAR

EXPERT LECTURE HEAD

TEJAS JAGDALE

DOCUMENTATION HEAD

AKSHAR PATIL

CREATIVE HEAD

SUJAL PAWAR

ISHRAE EVENTS

LIST OF ISHRAE EVENTS

1. K-12 ACTIVITY

K-12 ACTIVITY

On 7th January 2025, the ISHRAE VIVA Mumbai Chapter organized a K-12 Activity at Zilla Parishad School, Khanivade, Virar, to spread awareness on energy conservation and sustainable practices. School children actively participated in interactive games and activities that blended learning with fun, creating a lively atmosphere. The session concluded with snack distribution, reflecting ISHRAE's commitment to nurturing young minds and inspiring energy-efficient habits.

ACHIVEMENTS

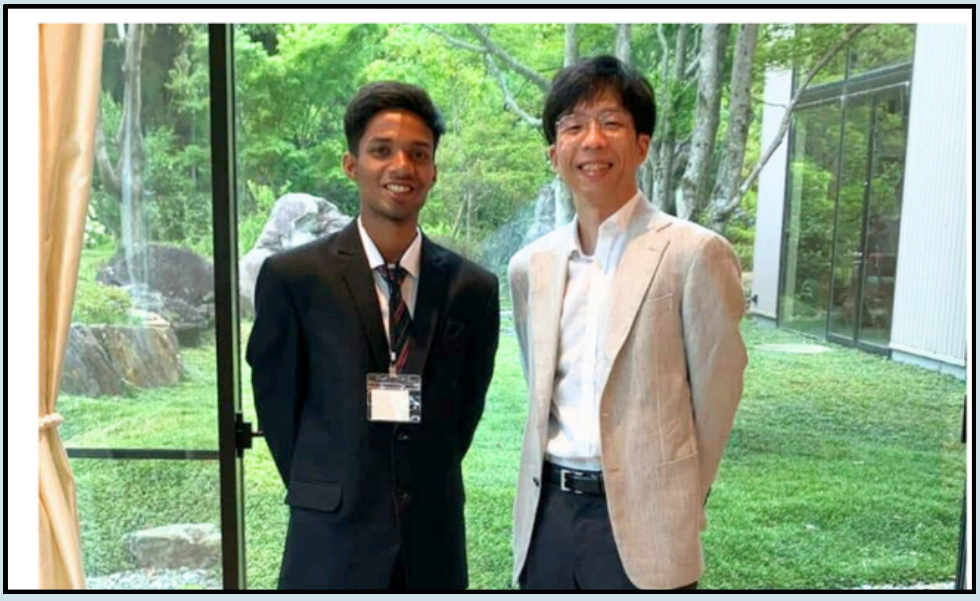
STUDENT ACHIVEMENTS

2024-25

FROM VIVA TO JAPAN: SAIRAJ SHINDE WINS INTERNATIONAL WELLBEING COMPETITION

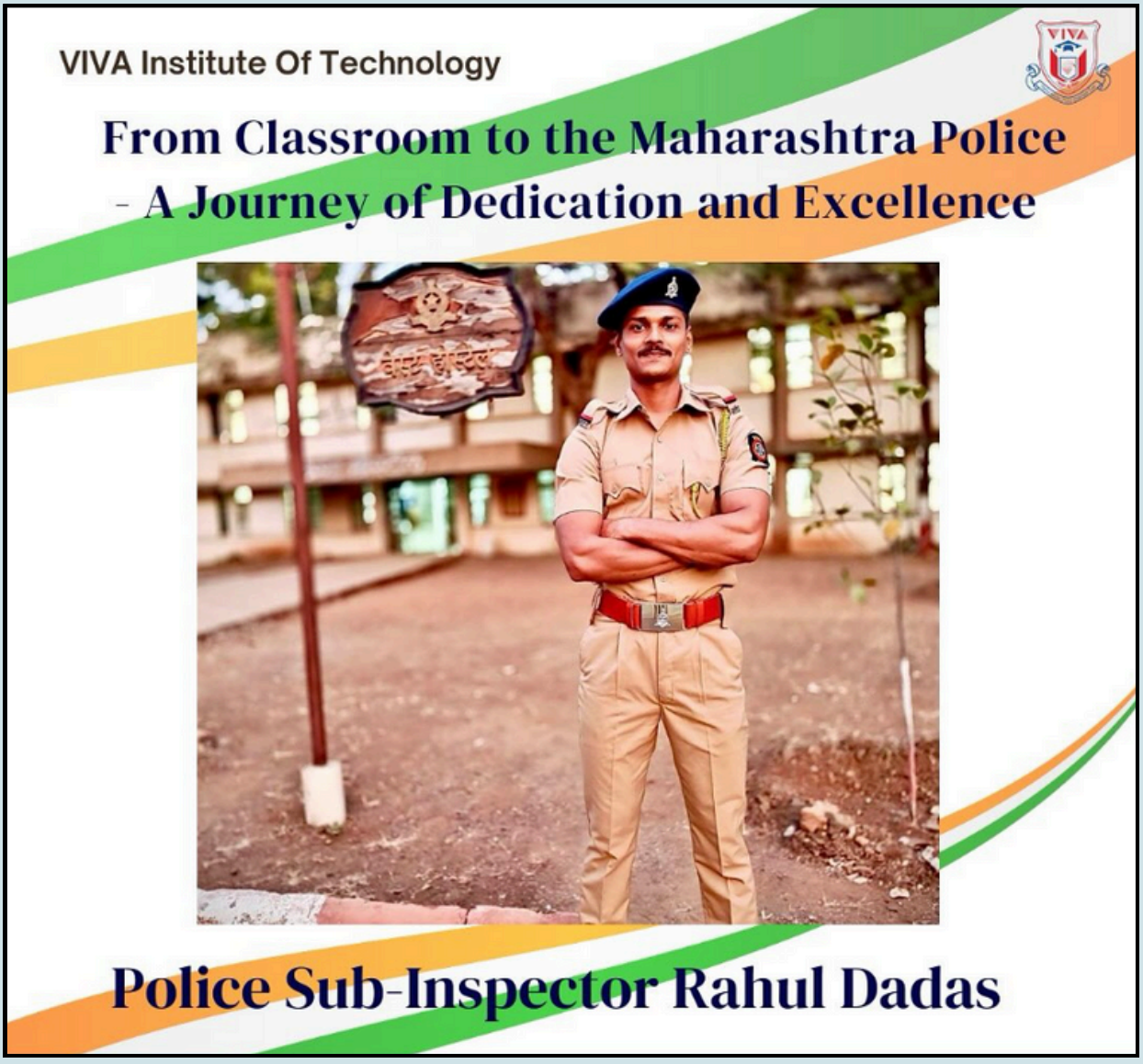
Mr. Sairaj Shinde, won first place in the Awaji Kizuna Challenge, an international global wellbeing competition. As the winner, he was invited to Awaji Island, Japan, from July 2–15, 2024, where he worked on a tourism iOS app and explored ongoing projects at Pasona Inc.

Worked on a Tourism IOS Application Project



ALUMNI ACHIEVEMENT: RAHUL DADAS APPOINTED AS POLICE SUB-INSPECTOR

Congrats to our proud alumnus, PSI Rahul Sheela Ramchandra Dadas (Mechanical Engineering, Batch 2019), on achieving his dream of becoming a Police Sub-Inspector! After clearing the 2021 Combined Group B & C Exam, he has set a remarkable example of dedication and perseverance.



PROUD ACHIEVEMENT: 1ST PLACE IN SPACE STATION MAKING COMPETITION

“Agastya-Bharatiy Sapce Station” secured 1st Rank at the “Space Satation Making Competition during Cosmic Fest 2025 ” 25th April 2025 at Nehru Science Center , Worli.

CELEBRATING INNOVATION: 2ND PRIZE FOR UV WATER STERILIZER, VVMC 2025

UV Water Sterilizer” won 2nd Prize in the Swachhata Technology Challenge Competition held on 28th January 2025 at Vasai Virar Municipal Corporation

STUDENT PROJECT WINS ₹50,000 ISHRAE GRANT

The ISHRAE VIVA Mumbai Chapter achieved a milestone in the SRPG UG 2025 competition, winning a grant of ₹50,000/- for the project "IoT and Blockchain Based Decentralized AC Management System for Predictive Maintenance" (Code: W SRPG UG 030). The team — Mr. Sairaj Shinde, Mr. Rohit Solanki, Ms. Sheetal Gupta, and Ms. Ayushi Pandey — developed an innovative solution integrating IoT and blockchain for efficient, reliable, and sustainable AC management. This recognition showcases both the students' technical excellence and ISHRAE's support for research-driven HVAC solutions.

INNOVATIVE DESIGN WINS ₹20,000 AT ISHRAE NSDC

The ISHRAE VIVA Mumbai Chapter achieved a proud milestone at the National Student Design Competition (NSDC 2025), securing the Second Prize and a cash award of ₹20,000/-. The team of Mr. Mukesh Prajapati, Mr. Naresh Katre, Mr. Durgasingh Chundavath, and Mr. Akshar Patil showcased their technical knowledge and creativity through an innovative HVAC design project that addressed real-world challenges.

This accomplishment highlights the team's hard work and ingenuity while also reflecting the guidance and support of the ISHRAE VIVA Chapter. The achievement strengthens the institute's presence at the national level and serves as an inspiration for future students to pursue excellence in design and research

STUDENT ACHIVEMENTS 2024-25

Sr. No	Name Of Student/Faculty	Class	Date	Inter Institute Event	Prize
1.	• Pawar Sujal Jayendra • Bind Yogesh Birendra • Chaudhary mohd Sameer manavarali	SE	2/14/2025	ISHRAE Innovate -X for Solar Powered Electric Bicycle with Dynamo	Consolation with Rs. 1000
2.	• Pawar Sujal Jayendra • Bind Yogesh Birendra • Chaudhary mohd Sameer manavarali	SE	2/14/2025	ISHRAE Innovate -X for Fabrication of Automatic Nimbu Shikanji Machine	Consolation with Rs. 1000
3.	• Solanki Rohit Dilip • Shinde Sairaj Mangesh	BE	3/8/2025	Pravinya 2025- State level Inter Collegiate Tech fest	2nd Prize with Rs. 1500
4.	• Pagdhare Paras • Chundawath Durgasingh • Patil Akshar Ram	BE	07/03/2025-08/03/2025	Best Paper Category in National Conference on Role of Engineers for Nation Building 2025, VIVA Institute of Technology	3rd Prize

STUDENT ACHIVEMENTS
2024-25

Sr. No	Name Of Student/Faculty	Class	Date	Inter Institute Event	Prize
5.	• Gupta Sheetal Ayodhya Prasad • Pandey Ayushi • Solanki Rohit Dilip • Shinde Sairaj Mangesh	BE	2/14/2025	ISHRAE Innovate -X for IOT and Blockchain Based Decentralized AC management system for Predictive Maintainance	Consolation Prize with Rs. 1000
6.	• Gupta Sheetal Ayodhya Prasad • Pandey Ayushi • Solanki Rohit Dilip • Shinde Sairaj Mangesh	BE	2/14/2025	ISHRAE Innovate -X IOT Based Earthquake Detection System	Consolation Prize with Rs. 1000
7.	• Gupta Sheetal Ayodhya Prasad • Pandey Ayushi • Solanki Rohit Dilip • Shinde Sairaj Mangesh	BE	2/14/2025	ISHRAE Innovate -X Portable UV water Sterilizer	Consolation Prize with Rs. 1000
8.	• Gupta Sheetal Ayodhya Prasad	BE	2/14/2025	ISHRAE Innovate-X Optimization of Crash Box by changing its Design and Material	Consolation Prize with Rs. 1000

STUDENT ACHIVEMENTS 2024-25

Sr. No	Name Of Student/Faculty	Class	Date	Inter Institute Event	Prize
9.	• Gupta Sheetal Ayodhya Prasad • Chaudhari Prabhas	BE	07/03/2025-08/03/2025	Best Paper Category in Nation Conference on Role of Engineers for Nation Building 2025, VIVA Institute of Technology	1st Prize
10.	• Gupta Sheetal Ayodhya Prasad • Chaudhari Prabhas	BE	4/5/2025	MECHXPLORE-2025 Project Competition at VIVA Institute of Technology	1st Prize
11.	• Shinde Sairaj Mangesh	BE	26/04/2025-30/04/2025	National Level Workshop on Finite Element Analysis of Engineering Systems	Participated
12.	• Shinde Sairaj Mangesh • Solanki Rohit Dilip • Patil Akshar Ram	BE	2/14/2025	ISHRAE Innovate - X for Vane Flow Air Bike	Consolation Prize with Rs. 1000
13.	• Sharma Yashraj Vijay • Waikar Omkar • Kalekar Suyog	BE	4/5/2025	MECHXPLORE-2025 Project Competition at VIVA Institute of Technology	3rd Prize

STUDENT ACHIVEMENTS 2024-25

Sr. No	Name Of Student/Faculty	Class	Date	Inter Institute Event	Prize
14.	• Sharma Yashraj Vijay • Waikar Omkar • Kalekar Suyog • Pitroda Dev	BE	Apr-25	Projecthon 2025 at Indian Institution of Industrial Engineering	Super Champion
15.	• Sharma Yashraj Vijay • Waikar Omkar • Kalekar Suyog	BE	07/03/2025-08/03/2025	Best Paper Category in Nation Conference on Role of Engineers for Nation Building 2025, VIVA Institute of Technology	2nd Prize

TOPPERS OF 2024-25

TOPPERS OF A.Y. 2024-25

- SECOND YEAR MECHANICAL ENGG.
- THIRD YEAR MECHANICAL ENGG.
- FOURTH YEAR MECHANICAL ENGG.

Class:	S.E.	Semester:	IV	Examination:	May 2025

Rank	Name of the Student	CGPI
1	JHA RAJKUMAR ANIL REKHA	7.89
2	PAWAR KSHITIJ RAJESH DIPIKA	7.4
3	TRIPATHI ADITYA KAMLESH MAMTA	7.23

Class:	T.E.	Semester:	VI	Examination:	May 2025

Rank	Name of the Student	CGPI
1	YADAV RAMASHISH BHUWAL DHANRAGI	8.62
2	PRASAD SACHIN SHIVSHANKAR REETA	7.32
3	MALKAN RAHUL SHAILENDRA GAYATRI	7.14

Class:	B.E.	Semester:	VIII	Examination:	May 2025

Rank	Name of the Student	CGPI
1	Gupta Sheetal Ayodhyaprasad	8.9
2	Sairaj Mangesh Shinde	8.81
3	Pandey Ayushi Dinesh Kumar	8.55
3	Sharma Yashraj Vijay	8.55

CAMPUS PLACEMENT

PLACEMENTS BATCH 2024-25

PLACEMENTS BATCH 2024-25

MECHANICAL 2025 PASSOUT				
SR NO.	STUDENT NAME	NAME OF COMPANY IN WHICH STUDENT IS PLACED	DESIGNATION	PACKAGE
1	PREM RAJESH CHAUDHARI	JERAI FITNESS LTD	Trainee Engineer	4.3LPA
2	SAIRAJ MANGESH SHINDE	JERAI FITNESS LTD	Trainee Engineer	4.3LPA
3	SHEETAL AYODHYA PRASAD GUPTA	JERAI FITNESS LTD	Trainee Engineer	4.3LPA
4	TEJAS SUBHASH JAGDALE	JERAI FITNESS LTD	Trainee Engineer	4.3LPA
5	SHREYASH SHAILESH JAMSANDEKAR	JERAI FITNESS LTD	Trainee Engineer	4.3LPA
6	AYUSHI DINESH PANDEY	JERAI FITNESS LTD	Trainee Engineer	4.3LPA
7	MUKESH VINOD PRAJAPATI	JERAI FITNESS LTD	Trainee Engineer	4.3LPA
8	YASHRAJ VIJAY SHARMA	JERAI FITNESS LTD	Trainee Engineer	4.3LPA
9	MAYUR RAJAN KANADE	Gemsons Precision Engineering (P) Ltd.	Quality Assurance Engineer	4.30 LPA
10	NARESH NARSIMA KATRE	Abhishek Millenium Contract Ltd	Junior Project Engineer	2.76LPA
11	OMKAR VINOD WAIKAR	Tata AIG General Insurance Company Limited	Associate	3 LPA
12	DURGASINGH CHUNDAWANT	CaratLane Trading Private Limited	Executive	3.14 LPA
13	AGASKAR SOHAM SANTOSH	Terminal Technologies Pvt. Ltd.	Quality Engineer	3.2 LPA
14	SAIRAJ MOHAN SHETYE	Gemsons Precision Engineering (P) Ltd.	Quality Assurance Engineer	4.30 LPA
15	DEV MANOJ PITRODA	Superfyne techno engineers pvt.ltd	Trainee Quality Engineer	2.52 LPA
16	KALPESH DAYANAND BHOIR	Superfyne techno engineers pvt.ltd	Trainee Quality Engineer	2.52 LPA

PLACEMENTS BATCH
2024-25

JERAI FITNESS LTD
Post:-Trainee Engineer
4.3LPA

JERAI FITNESS LTD
Post:-Trainee Engineer
4.3LPA

JERAI FITNESS LTD
Post:-Trainee Engineer
4.3LPA

JERAI FITNESS LTD
Post:-Trainee Engineer
4.3LPA

PLACEMENTS BATCH 2024-25

JERAI FITNESS LTD
Post:-Trainee Engineer
4.3LPA

JERAI FITNESS LTD
Post:-Trainee Engineer
4.3LPA

JERAI FITNESS LTD
Post:-Trainee Engineer
4.3LPA

JERAI FITNESS LTD
Post:-Trainee Engineer
4.3LPA

PLACEMENTS BATCH 2024-25

Gemsons Precision Engineering (P) Ltd.
Post : Quality Assurance Engineer
4.30 LPA

Gemsons Precision Engineering (P) Ltd.
Post : Quality Assurance Engineer
4.30 LPA

Superfyne techno engineers pvt.ltd
Post :-Trainee Quality Engineer
2.52 LPA

Superfyne techno engineers pvt.ltd
Post :-Trainee Quality Engineer
2.52 LPA

PLACEMENTS BATCH 2024-25

Terminal Technologies Pvt. Ltd.
Post :- Quality Engineer
3.2 LPA

Abhishek Millenium Contract Ltd
Post :- Junior Project Engineer
2.76LPA

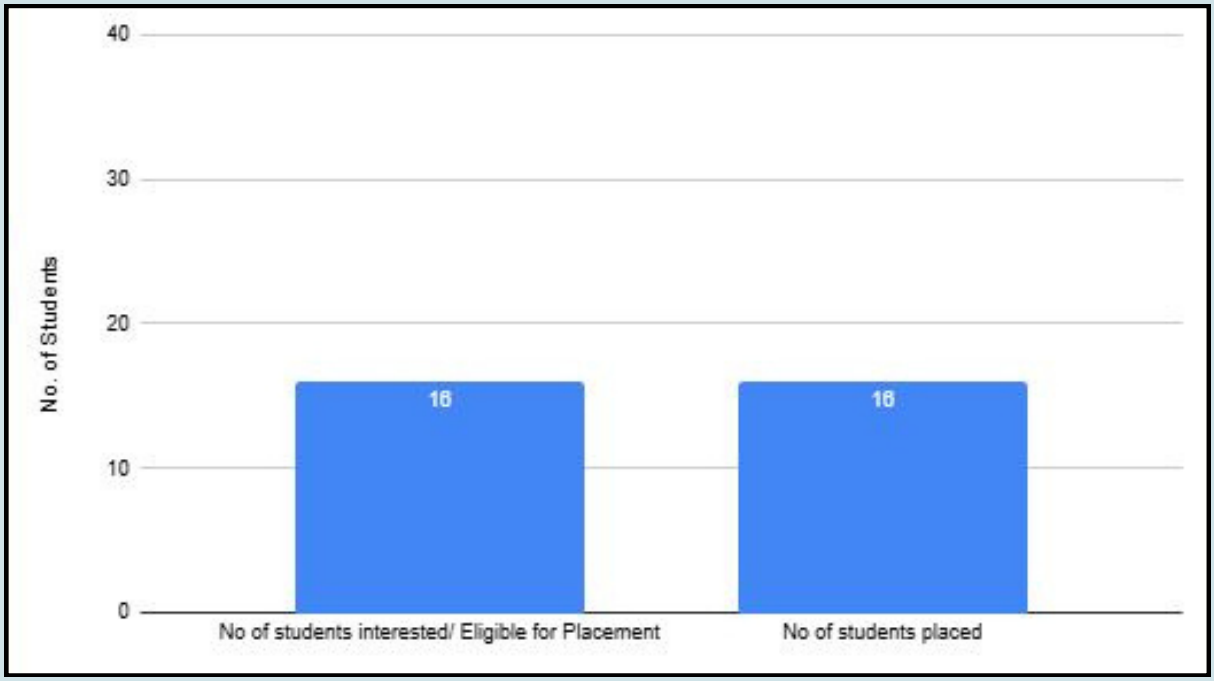
Highest salary Package :- 4.36 LPA

Lowest salary Package :- 2.52 LPA

Average salary Package :- 3.66 LPA

PLACEMENTS BATCH 2024-25

100 % Placement - 2024-25



No of students interested/ Eligible for Placement	16
No of students placed	16
Percentage of students	100
No of students interested for Higher study	1
No of students interested for Entrepreneurship	2

ARTICLES

LIST OF ARTICLES

1. THE SENTINEL: HOW MECHANICAL ENGINEERING SAFEGUARDS INDIA FROM NATURAL AND MAN-MADE DISASTERS
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THE SENTINEL: HOW MECHANICAL ENGINEERING SAFEGUARDS INDIA FROM NATURAL AND MAN-MADE DISASTERS

In a country as vast and dynamic as India, the specter of natural and man-made disasters looms large, from seismic tremors and flooding to industrial accidents and structural failures. While response and relief efforts are often highlighted, a more silent, proactive guardian works tirelessly to prevent these catastrophes from occurring in the first place: Mechanical Engineering. This discipline serves as the nation's first line of defense, embedding resilience and foresight into the very infrastructure and systems upon which modern India depends.

The role of Mechanical Engineering begins long before a disaster strikes, rooted in the principles of robust design and advanced materials science. When constructing bridges, dams, skyscrapers, or power plants, mechanical engineers calculate and mitigate risks by applying sophisticated simulation and modeling tools. They ensure structures can withstand earthquakes through seismic damping systems, design flood-resilient infrastructure with adaptive drainage and pumping technologies, and create fire-resistant industrial layouts. By anticipating failure modes and environmental stresses, they build durability into the bones of our cities and industries.

In the industrial sector, the prevention of man-made disasters—such as chemical leaks,
explosions, or structural collapses—falls heavily on mechanical systems and their oversight. Engineers design and implement fail-safes, pressure release valves, automated shutdown systems, and real-time monitoring networks that detect anomalies long before they escalate into emergencies.

Through predictive maintenance powered by vibration analysis, thermal imaging, and AI-driven diagnostics, potential points of failure in machinery or pipelines are identified and rectified proactively, avoiding incidents that could lead to environmental damage or loss of life.Water management represents another critical front where mechanical engineering provides essential solutions. In a monsoon-prone country like India, flooding and water system failures pose recurring threats. Engineers design and optimize pumping stations, dam gate controls, and urban drainage systems that can handle extreme weather events. During droughts, mechanical systems such as automated irrigation and water recycling units help conserve and manage scarce resources, reducing the societal strain that often accompanies natural scarcity.

Energy infrastructure, too, benefits from mechanical engineering's preventive ethos. Power plants—whether thermal, nuclear, or renewable—are equipped with control systems, cooling mechanisms, and redundancy protocols designed to avoid meltdowns, blackouts, or transformer explosions. As India expands its energy grid, mechanical engineers are integral in ensuring that new installations adhere to the highest safety standards, leveraging technologies like digital twins and IoT-enabled monitoring to create smarter and safer networks.

Even in transportation, mechanical engineering enhances safety and prevents accidents. From crash-testing vehicles to designing railway collision avoidance systems and aviation safety protocols, engineers reduce the risk of human and technical error. Anti-derailment mechanisms on trains, fatigue-resistant alloys in aircraft, and smart braking systems in automobiles all contribute to a culture of prevention rather than reaction.

Yet, the work of mechanical engineers does not stop at prevention. In the aftermath of a disaster, their expertise is crucial in rapid response and recovery.

They design and deploy emergency equipment—from hydraulic rescue tools and portable water purification units to temporary shelters and mobile power systems—aiding resilience and reducing suffering. The future of disaster avoidance in India will rely even more heavily on mechanical engineering innovation. The integration of AI, remote sensing, robotics, and advanced materials will enable smarter systems and more autonomous response mechanisms. As climate change intensifies natural threats and industrialization grows more complex, the mechanical engineer's role as society's sentinel becomes only more vital.

In the end, Mechanical Engineering is not merely about building things; it is about building things that last, protect, and preserve. Through meticulous design, relentless innovation, and a profound sense of responsibility, mechanical engineers help weave a safer, more resilient fabric for India—standing guard against the unpredictable, and ensuring that progress does not come at the cost of human safety or environmental harmony.

-Written by Asst. Prof. Suneet Mehta

THE DIGITAL PULSE: HOW MEASUREMENT AND CONTROL ARE REDEFINING MECHANICAL ENGINEERING IN INDIA

The landscape of Mechanical Engineering in India is undergoing a profound transformation. While the core principles of design and manufacturing remain, a new intelligent layer is being woven into the very fabric of the industry. At the heart of this change is the rapidly evolving field of Mechanical Measurement and Control (MMC), shifting from a supportive role to the central nervous system of modern industrial operations. This evolution is critical to achieving India's ambitious vision of becoming a global manufacturing and innovation leader.

Gone are the days of relying solely on manual gauges and isolated data points. The future is one of interconnected intelligence, driven by the powerful convergence of MMC with Industry 4.0 technologies like the Internet of Things (IoT) and Artificial Intelligence (AI). We are moving towards a reality where networks of smart, wireless sensors provide a comprehensive, real-time health map of every critical machine and process, generating a continuous stream of invaluable data.

This deluge of data finds its purpose through Artificial Intelligence and machine learning. The true revolution lies in moving from preventive to predictive capabilities. Imagine AI algorithms analyzing vibration and thermal data from a turbine in a power plant, able to predict a microscopic crack's growth and schedule maintenance before it leads to a catastrophic failure. This predictive power, fueled by advanced measurement, is a game-changer for efficiency and safety.

Furthermore, this real-time data is breathing life into Digital Twins—virtual, dynamic replicas of physical assets.

Engineers can now run simulations, test stresses, and optimize performance in a risk-free digital environment using live data from their physical counterparts. This closes the loop from measurement to action, enabling autonomous control systems that self-correct and optimize processes without human intervention, ensuring unparalleled quality and precision. This technological shift is perfectly aligned with national initiatives like Make in India and the SAMARTH Udyog Bharat 4.0 program. Achieving global quality standards and building the smart factories of tomorrow is simply impossible without the foundation of advanced, automated measurement and control systems. These technologies are the key to competing on the world stage.

However, this promising future is not without its challenges. The transition requires bridging a significant skill gap. The industry now demands a new breed of mechanical engineers who are not only masters of mechanics but also fluent in data science, sensor technology, and AI. Furthermore, the initial investment for retrofitting legacy systems and concerns over data security in a hyper-connected environment are hurdles that must be addressed.

Ultimately, the role of the mechanical engineer is being redefined. They are becoming conductors of data, interpreting complex information from sensor networks and managing AI-driven systems. The future of Indian manufacturing is smart, connected, and autonomous, and Mechanical Measurement and Control is the critical enabler. Investing in this domain is an absolute necessity for building the industrial powerhouse of tomorrow.

-Written by Asst. Prof. Mr. Suneet Mehta

MECHANICAL ENGINEERING: THE BACKBONE OF DEVELOPMENT OF ANY COUNTRY IN INDUSTRY 4.0

Introduction

Mechanical engineering has long been considered the mother of all engineering branches. It is one of the oldest and most fundamental disciplines that laid the foundation for industrial revolutions across centuries. From the invention of the steam engine in the 18th century, to the mass production lines of the 20th century, and now to the era of cyber-physical systems and artificial intelligence, mechanical engineering has remained at the core of human progress.

In today's era of Industry 4.0, often described as the fourth industrial revolution, the world is witnessing unprecedented integration of digital technologies with physical systems. Concepts like smart factories, robotics, additive manufacturing, artificial intelligence, machine learning, and the Internet of Things (IoT) are redefining how industries operate. Despite these digital advancements, it is crucial to understand that these innovations rest upon the strong foundation of mechanical engineering. Without machines, energy systems, and material sciences—domains nurtured by mechanical engineers—Industry 4.0 cannot be realized.

This article explores how mechanical engineering acts as the backbone of development for any country, especially in the era of Industry 4.0. It covers its historical significance, current role in smart manufacturing, contribution to economic development, and its future outlook.

The Historical Significance of Mechanical Engineering

To appreciate its present-day role, one must reflect on the historical journey of mechanical engineering:

- First Industrial Revolution (1760–1840)
    - Mechanical engineering gave birth to the steam engine, textile machinery, and mechanized transportation.

- It enabled large-scale production, boosting economies and shifting societies from agrarian to industrial.

- Second Industrial Revolution (1870–1914)
  - Mechanical engineers developed internal combustion engines, electricity-driven machines, and mass production assembly lines.
  - Railways, automobiles, and aircraft industries flourished.
- Third Industrial Revolution (1960s–2000s)
  - Introduction of automation, computers, and electronics merged with mechanical systems.
  - Manufacturing efficiency increased through robotics, CNC machines, and advanced material science.
- Fourth Industrial Revolution (2010 onwards)
  - Mechanical engineering integrates with AI, IoT, robotics, and big data.
  - Smart factories and cyber-physical systems represent a perfect blend of mechanical foundations and digital innovations.

At every stage, mechanical engineering acted as the enabler of societal transformation.

The Role of Mechanical Engineering in Nation Building

Mechanical engineers design, develop, and maintain the physical systems that sustain modern civilization. Their contribution can be seen in almost every sector:

- Infrastructure: Roads, bridges, railways, and airports depend on structural and mechanical design.
- Energy: Power plants (thermal, hydro, nuclear, and renewable) rely on turbines, pumps, and compressors.
- Transportation: Automobiles, aircraft, ships, and trains are the products of mechanical design and manufacturing.

- Manufacturing: From small workshops to mega-industrial plants, mechanical systems are at the heart of production.
- Defense and Aerospace: Tanks, aircraft, drones, and rockets are rooted in mechanical principles.

A country with strong mechanical engineering expertise not only strengthens its industrial base but also achieves technological independence and economic growth. Nations like Germany, Japan, and the USA serve as prime examples where mechanical engineering excellence has led to global industrial leadership.

Mechanical Engineering in Industry 4.0

Industry 4.0 refers to the digital transformation of manufacturing and industrial practices using smart technology. However, it is mechanical engineering that transforms these digital concepts into physical reality. Below are key areas where mechanical engineering plays a crucial role in Industry 4.0:

1. Smart Manufacturing and Automation

Smart factories rely on advanced robotics, automated production lines, and real-time data integration. Mechanical engineers design the robots, actuators, conveyors, and precision tools required for automation. By integrating mechatronics, they ensure synergy between mechanics, electronics, and computing.

2. Additive Manufacturing (3D Printing)

Mechanical engineers are at the forefront of 3D printing technologies. Their knowledge of materials, thermodynamics, and design optimization helps industries produce lightweight, complex, and customized components for aerospace, automotive, and healthcare applications.

3. Cyber-Physical Systems

Mechanical systems such as turbines, engines, and robots are increasingly equipped with sensors and controllers. Engineers develop digital twins that replicate the behavior of these physical systems in virtual environments, allowing predictive maintenance and efficiency improvements.

4. Industrial Internet of Things (IIoT)

The IIoT connects machines and devices through sensors. Mechanical engineers ensure that machines are designed to integrate seamlessly into these networks while maintaining durability, safety, and reliability.

5. Sustainable Energy and Green Technologies

Mechanical engineers contribute to designing wind turbines, solar thermal systems, hydrogen fuel cells, and efficient engines. Their work supports the global push toward decarbonization and sustainable development.

Economic Impact of Mechanical Engineering

Mechanical engineering contributes significantly to economic growth through:

1. **Employment Generation**
2. Manufacturing, power, transportation, and construction industries provide millions of jobs globally, many of which are created and sustained by mechanical engineers.
3. **Industrial Productivity**
4. By designing efficient machines, mechanical engineers increase production output, reduce downtime, and lower costs.
5. **Global Competitiveness**
6. Countries with strong mechanical engineering infrastructure can develop indigenous technologies, reducing import dependence and boosting exports.

1. **Innovation and Research**
2. Research in areas like advanced materials, robotics, and clean energy leads to breakthrough technologies, keeping economies globally competitive.

For instance, Germany's reputation as an industrial giant stems from its mechanical engineering excellence, particularly in automotive and precision manufacturing. Similarly, Japan's robotics industry is a product of decades of mechanical innovation.

Case Study: India in Industry 4.0

India provides a practical example of how mechanical engineering supports Industry 4.0:

- The **Make in India** initiative focuses on strengthening domestic manufacturing.
- Mechanical engineers play a key role in automotive hubs like Pune and Chennai, aerospace in Bengaluru, and renewable energy projects nationwide.
- With the rise of **smart manufacturing clusters**, mechanical engineers are working with AI and IoT experts to design cost-effective, scalable solutions.
- The National Education Policy (NEP 2020) emphasizes skill development in core engineering, ensuring a workforce ready for Industry 4.0.

Challenges for Mechanical Engineering in Industry 4.0

Despite its importance, mechanical engineering faces several challenges in adapting to Industry 4.0:

1. **Skill Gap**: Traditional curricula often lack training in AI, data science, and automation, leaving mechanical engineers underprepared.
2. **High Capital Investment**: Smart manufacturing requires costly equipment and infrastructure.
3. **Sustainability Concerns**: Engineers must balance industrial growth with environmental responsibility.
4. **Global Competition**: Emerging economies must catch up with developed nations that already have strong Industry 4.0 ecosystems.

Future Outlook

The future of mechanical engineering is bright but requires adaptation. Mechanical engineers must evolve into **hybrid professionals**—experts not only in thermodynamics and design but also in programming, AI, and data analytics.

1. **Digital Skills**: Training in CAD/CAM, digital twins, and predictive maintenance systems.
2. **Sustainable Practices**: Designing eco-friendly products and adopting circular economy principles.
3. **Global Collaboration**: Engineers must collaborate across disciplines and borders to address complex industrial challenges.
4. **Continuous Learning**: Lifelong learning through upskilling and reskilling will be mandatory.

The synergy between mechanical engineering and digital technologies will determine the pace of industrial transformation in the 21st century.

Conclusion

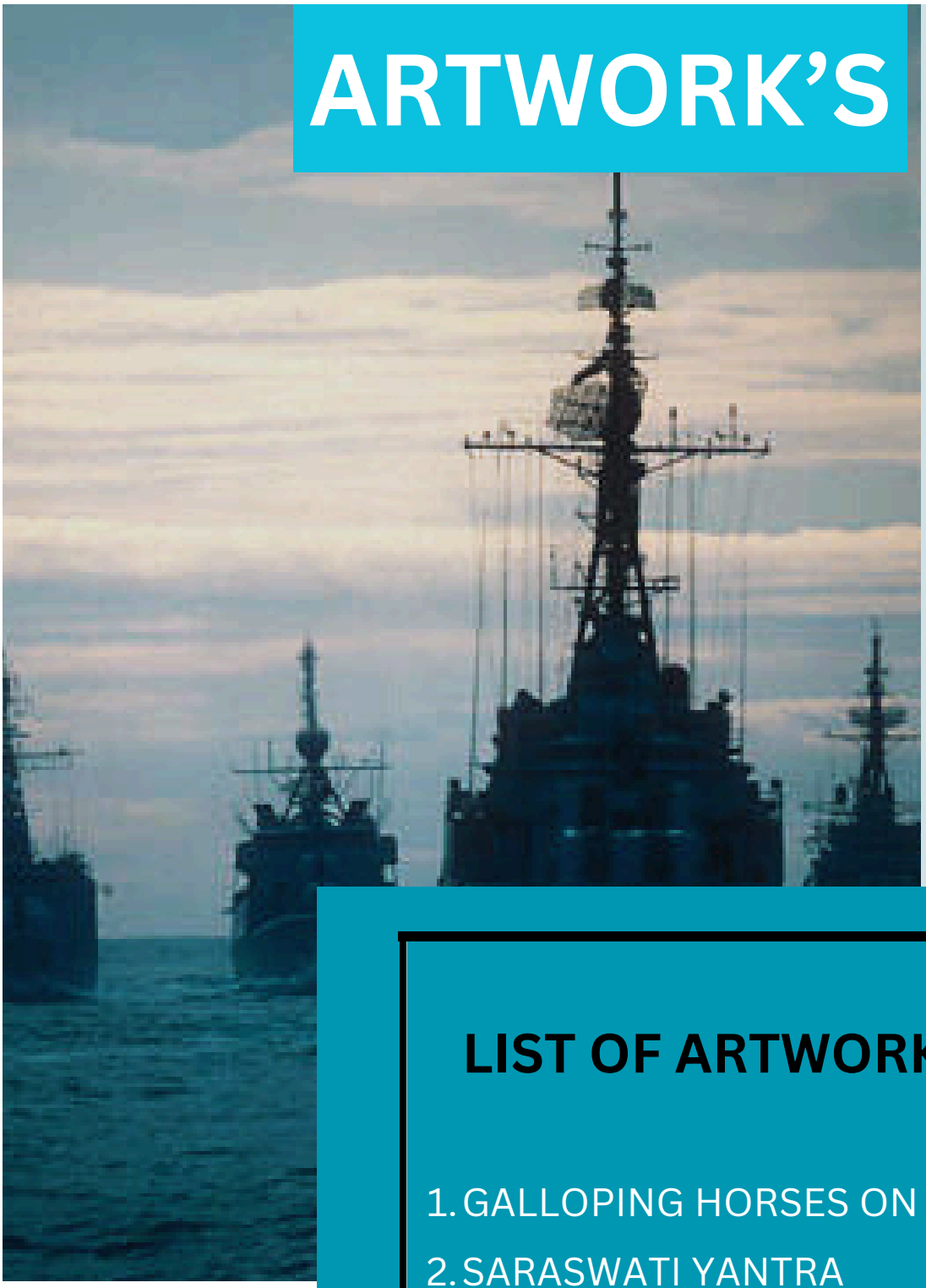
Mechanical engineering has always been and continues to be the **backbone of development** for any country. In the age of Industry 4.0, while new technologies like AI, IoT, and machine learning dominate discussions, they cannot function without the robust foundation provided by mechanical engineering.

From designing machines and infrastructure to enabling smart factories and sustainable energy solutions, mechanical engineers ensure the smooth functioning of economies. Countries that prioritize mechanical engineering education, research, and innovation will secure not just industrial growth but also global competitiveness.

Thus, even in this digital age, mechanical engineering remains the **bridge between imagination and reality**, between digital designs and physical execution, and between national aspirations and industrial success.

--Written by Asst. Prof. Mr. Pratik Raut

ARTWORK'S



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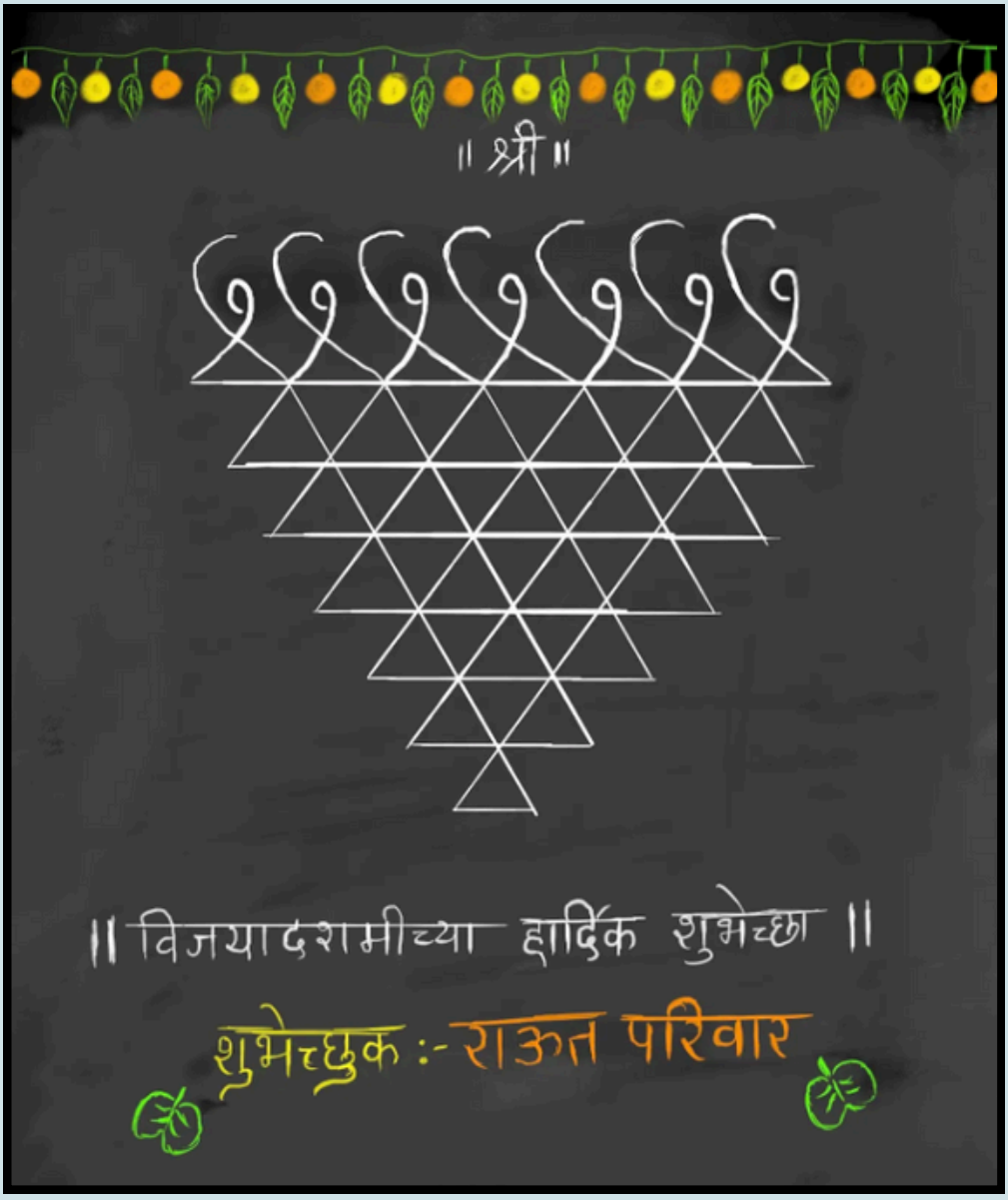
1. GALLOPING HORSES ON THE BEACH
2. SARASWATI YANTRA

GALLOPING HORSES ON THE BEACH

-Artwork by **Mr. Ashray Shinde (Alumni)**

SARASWATI YANTRA



-Artwork by Asst. Prof. Swapnil Raut

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