Nikhil S. Deshmukh

Assistant Professor, Mechanical Engineering
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Objective

Dynamic Assistant Professor in Mechanical Engineering with over 15 years of teaching and research experience in CAD/CAM, automation, and design.

Educational Qualifications

I am currently pursuing a Ph.D. from North Maharashtra University, Jalgaon. I hold a Master of Engineering in Mechanical Engineering with specialization in CAD/CAM from Mumbai University, which I completed in 2010 with First Class. I obtained my Bachelor of Engineering in Mechanical Engineering from North Maharashtra University, Jalgaon, in 2008 with Distinction

Professional Experience

Assistant Professor, Mechanical Engineering
SSVPS B.S. Deore College of Engineering, Dhule
January 2011 – Present

- Teach courses integrating computational tools (e.g., Machine Design, Finite Element Methods, Computer Graphics) with applications in automation and design.
- Supervised 16 undergraduate projects, guiding 64 students in projects involving desiganing , automation, and computational design.
- Serve as in-charge of Machine Design and Drawing Lab, incorporating software like ANSYS and CATIA for computational analysis.

Lecturer, Mechanical Engineering
SSVPS B.S. Deore College of Engineering, Dhule
January 2011 – June 2011

- Delivered foundational courses in mechanical engineering with a focus on computational tools.

University Approval: Assistant Professor, North Maharashtra University

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Key Academic and Administrative Roles

- **Minor Project and Seminar Coordinator** (2014–Present): Oversee T.E. student projects, including IoT and automation-based topics.
- **Machine Design and Drawing Lab In-Charge** (2011–Present): Manage lab activities using CAD/CAM software for simulation and analysis.

- **Website In-Charge, Mechanical Department** (2011–Present): Update digital profiles, integrating data-driven insights for departmental activities.
- **Class Coordinator, T.Y. B.Tech** (2019–2023): Managed academic records and events, leveraging data organization skills.
- **Material Advantage Chapter Faculty Coordinator** (2022–Present): Coordinate activities for ASM International, including workshops on advanced materials and AI applications.
- **Admission Committee Member** (2014–Present): Assist with data management and counseling for admissions.

Research and Publications

Journal Publications
1. **Improved Wear Resistance of Polytetrafluroethane Using Bronze Material Under Dry Condition**
   SCOPE Journal, ISSN: 1177-5653, Vol. 15, No. 01, March 2025, Paper No. 202410941 (Scopus Indexed).
2. **Corrosion Inhibitors and Effect of Various Mechanical Processes on Material Corrosion**
   International Journal of Engineering Technology and Management Sciences, ISSN: 2581-4621, Vol. 8, Issue 3, May–June 2024.
3. **Design and Analysis of Shaft Used in Self-Driven Step Mechanism by Human Weight**
   Imperial Journal of Interdisciplinary Research (IJIR), ISSN: 2454-1362, Vol. 3, Issue 2, 2017, pp. 831–838.
4. **Flexible Coupling - A New Approach**
   IOSR Journal of Mechanical and Civil Engineering, ISSN: 2278-0661, Vol. 6, pp. 1–6.

Conference Papers

1. **Corrosion Inhibitors and Effect of Various Mechanical Processes on Material Corrosion**
   International Conference on Advancement in Science, Technology and Management (ICASTM), St. Xavier's College, Patna, 2024.
2. **Finite Element Analysis of Crankshaft**
   National Conference on Recent Trends in Mechanical Engineering, Datta Meghe College of Engineering, Navi Mumbai, 2011.
3. **Flexible Coupling - A New Approach**
   2nd International Conference on Emerging Trends in Engineering, J.J. Magdum College of Engineering, Jaysingpur, 2012.

Guest Lectures Delivered

1. **Effects of Various Process Parameters in Stir Casting Process**, Jalgaon, 26/05/2025.
2. **Innovations in Solar Thermal Application**, Jalgaon, 20/06/2022.
3. **Industrial Automation**, Dhule, 01/02/2012.
   Relevance: Automation lecture ties to AI and machine learning applications.

Training Programs

- **AI-Driven Pedagogy: Enhancing Teaching and Learning Experiences**, AICTE ATAL FDP, Chanderprahu Jain College, 02–07/12/2024.
- **Industry 4.0 in Energy, Sustainability, and Climate Change**, AICTE ATAL FDP, Nutan Maharashtra Institute of Engineering & Technology, 09–14/12/2024.
- **Artificial Intelligence as an Enabler for Teachers in Implementing NEP 2020**, Bhartiya Shikshan Mandal, 28/08/2021.
- **Applications of Finite Element Analysis (FEA) and Computational Dynamics (CFD) Using ANSYS**, Government College of Engineering, Karad, 13–17/06/2020. *Relevance*: Computational methods critical for AI and data science.
- **Integrated Automation Technologies**, IIT Delhi, 01–06/06/2015.

Additional Training: Over 35 programs attended, focusing on automation, computational tools, and advanced materials, enhancing readiness for AI and data science studies.

Technical Skills

- **Software Proficiency**:
  - AutoCAD 2004 (Advanced): Used for design and modeling, foundational for AI-driven design optimization.
  - CATIA V5 R10 (Intermediate): Applied in CAD/CAM, relevant for simulation in AI applications.
  - ANSYS 11.0 (Intermediate): Employed for finite element analysis, critical for computational modeling in AI.
  - Python 3.1 (Intermediate)

- **Subjects Taught**: Machine Design I & II, Computer Graphics, Finite Element Methods, Elements of Mechanical Engineering.
- **Research Interests**: Automation, computational design, and advance material.

Conferences and Events Organized

- **Coordinator, ARTH 2k23, 2k24, 2k25**, SSVPS B.S. Deore COE, Dhule: National-level technical events with AI and technology themes.
- **Coordinator, NIRMITEE 2k25**, SSVPS B.S. Deore COE, Dhule: Focused on innovative engineering solutions.
- **Coordinator, Impulse 2k14, 2k15, 2018, 2019,2024,2025** SSVPS B.S. Deore COE, Dhule: Promoted computational and automation projects.

Professional Memberships

- Member, ASM International (2023–2024).

Nikhil S. Deshmukh
Dhule, Maharashtra