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Position	ASSISTANT PROFESSOR
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Extension No	-
Qualifications	Phd(Electronics and Communication
Experience	Teaching – 18 years Industry – 1
Research Areas	- Computer network and Security , AI, ML, Communication
Publications	1. Research on Quantifying Carbon Footprints in Indian Coal Mines and Exploring Pathways to Carbon Neutrality. <i>International Journal for Research in Applied Science & Engineering Technology (IJRASET)</i>, Volume 13, Issue 1, January 2025. ISSN: 2321-9653. 2. A Review of Brain Tumor Detection Techniques Using YOLOv8. <i>International Journal for Research in Applied Science & Engineering Technology (IJRASET)</i>, Volume 12, Issue 3, March 2024. ISSN: 2321-9653. 3. Enhanced Privacy and Security Maintenance to Preserve Big Data Using Cipher Policy. <i>IEEE (I-SMAC Conference Proceedings)</i>, DOI: 10.1109/I-SMAC58438.2023.10290569, 26 October 2023. 4. Optimized Development of Future Wireless Network Using Cognitive Radio Networks. <i>IEEE Transactions on Cognitive Communications and Networking</i>, Volume 9, Issue 2, 2023. 5. Autonomous Vehicle Traffic Recognition Based on Artificial Intelligence. <i>Journal of Pharmaceutical Negative Results</i>, Volume 14, Regular Issue 02, 2023. DOI: 10.47750/pnr.2023.14.02.395. 6. Binary-CNN Based Classifications of Effective Diabetic Eye. <i>Journal of Pharmaceutical Negative Results</i>, Volume 13, Special Issue 7, 2022. 7. Highway Bridge Monitoring System Using a Wireless Sensor Network. <i>GIS Science Journal</i>, Volume 9, Issue 5, 2022. ISSN: 1869-9391. 8. Road Detection & Extraction for Autonomous Vehicles Using Satellite Images. <i>International Journal of Innovative Technology and Exploring</i>

	<i>Engineering (IJITEE)</i>, Volume 8, Issue 10, August 2019, pp. 1046–1050. ISSN: 2278–3075. 9. A Review on Shot Boundary Detection Method. <i>IJREAM</i>, Volume 5, Issue 12, March 2020. 10. Survey on Shot Boundary Detection Method. <i>IJREAM</i>, Volume 6, Issue 1, April 2020. 11. Shot Boundary Detection by Bidirectional Empirical Mode Decomposition. <i>JETIR</i>, Volume 7, Issue 6, June 2020. ISSN: 2349-5162. 12. Deep Learning Approach for Video Shot Boundary Location Decomposition. <i>JETIR</i>, Volume 7, Issue 6, June 2020. ISSN: 2349-5162. 13. Review Paper for Broadband CPW-Fed T-Shaped Slot Antenna. <i>International Journal of Emerging Technology and Advanced Engineering (IJETAE)</i>, November 2014. 14. Air Pollution Monitoring System Using Zigbee & GPS Module. <i>IJETAE</i>, September 2013. 15. Detailed Study of Different Dyeing Process. <i>IJETAE</i>, September 2013. 16. Multi Font/Size Character Recognition. <i>International Journal of Advanced Engineering & Technology (IJAE&T)</i>, May 2012.
Conferences	1. Quantifying Carbon Footprints in Indian Coal Mines. <i>2025 International Conference on ICRAES-2K25: Recent Advances in Engineering and Sciences</i>, IEEE, 2025. 2. An Enhanced Routing Protocol Design to Perform Cost Efficient Data Communication Over Wireless Sensor Networks. <i>2024 3rd International Conference on Applied Artificial Intelligence and Computing (ICAAIC)</i>, IEEE, pp. 1588–1594, 2024. 3. Internet of Things Enabled Gas Leakage Detection Over Industrial Areas Using Powerful MQ Series Sensor and Controller. <i>2024 International Conference on Inventive Computation Technologies (ICICT)</i>, IEEE Xplore, 07 June 2024. DOI: 10.1109/ICICT60155.2024.10544961. 4. Futuristic Authentication: Development of an Artificial Intelligence Based Enhanced Face Detection and Recognition System. <i>2024</i>

	<i>International Conference on Inventive Computation Technologies (ICICT)</i>, IEEE Xplore, 07 June 2024. DOI: 10.1109/ICICT60155.2024.10544692. 5. Enhanced Privacy and Security Maintenance to Preserve Big Data Using Cipher Policy. <i>7th International Conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud)</i>, Kirtipur, Nepal, 2023. 6. Profound Learning Approach for Shot Boundary Location. <i>Elsevier International Conference ICCIP 2020</i>, NCOER, Pune, 26–27 June 2020. 7. Adaptive Background Subtraction Models. <i>Springer International Conference ICSDP 2019</i>, MIT Academy of Engineering, Alandi, Pune, 15–16 November 2019. 8. Video Segmentation Review Approach. <i>NCAMEIM Conference</i>, Volume 6, Issue 3, March 2019, pp. 131–137. 9. GSM Based E-Care Health Service System. <i>6th International Conference on Recent Trends in Engineering & Technology (ICRTET 2018)</i>, 6–7 March 2018. 10. Design of a T-Shape Slot Antenna Using HFSS. <i>ICAEST</i>, 6–7 February 2016. 11. Multi Font/Size Character Recognition by Using Template Matching. <i>International Conference ICAET</i>, May 2013. 12. Multi Font/Size Character Recognition. <i>ICCTCMECAT</i>, March 2012. 13. Security Enhancement Using IRIS. <i>National Level Conference SABBATICAL</i>. 14. CDMA Technology. <i>National Level Conference, College of Engineering, Osmanabad</i>, 2004. 15. Storyboarder AI: Automated Context-Preserving Storyboard Generation Using Multimodal Diffusion and Language Models. Presented at BRAINCON-2026, Management Development Institute of Singapore (MDIS), 20–22 March 2026. 16. A Systematic Review on Explainable GNN for Credit Card Fraud Detection. Presented at the 6th International Conference on Recent Trends in Engineering, Technology and Management 2026, Suguna College of Engineering, Coimbatore, 10–11 April 2026.
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Workshops	A. Faculty Development Programs (FDPs) 1. NSM Sponsored Faculty Development Program on “High Performance Computing and Artificial Intelligence (HPC & AI)” Sponsored under the National Supercomputing Mission (NSM). 2. Faculty Development Program on Digital Marketing Conducted on 1st & 7th August 2025. 3. Faculty Development Program on Generative AI and Large Language Models Conducted on 15th & 19th December 2025. 4. Faculty Development Program on Modern Agile Principles for Transforming Educational Practices Conducted from 8th to 12th December 2025. 5. Faculty Development Program on Cyber Security and Outcome-Based Learning Conducted from 2nd to 6th December 2025. 6. Faculty Development Program on Internet of Things (IoT) with Artificial Intelligence (AI) and Machine Learning (ML) Conducted from 26th February to 2nd March 2024. 7. Syllabus Orientation Workshops (SPPU) Attended orientation workshops organized by Savitribai Phule Pune University during 2021, 2022, and 2023. 8. Faculty Development Program on Industry 4.0 Conducted by Keystone School of Engineering, Pune. B. Technical Workshops & Skill Development Programs 9. Workshop on Data Science and Big Data Analytics Conducted by ICT Academy at MIT ADT University, Pune. 10. Workshop on Smart Antenna Conducted by Board of Studies (E&TC), SPPU, Pune. 11. Workshop on Cellular Networks Conducted by Board of Studies (E&TC), SPPU, Pune. 12. Workshop on Embedded System Design using MSP430 & IoT Applications Conducted under Texas Instruments Innovation Centre, ICOER, Pune. 13. Workshop on AWS Architecture and Data Analytics Conducted by BMIT, Solapur. 14. Workshop on Virtual Laboratory Organized by VLAB Nodal Center, ICOER, Wagholi, Pune, India.

	15. Workshop on Power Devices and Circuits (PDC) Conducted by Board of Studies (E&TC), SPPU, Pune. 16. Workshop on Mobile App Development Conducted by ICT Academy at JSPM's ICOER, Pune. 17. Workshop on Analog Electronics Conducted by Indian Institute of Technology (IIT), Kharagpur. 18. Workshop on Technical Communication for Scientists and Engineers Conducted by Indian Institute of Technology (IIT), Bombay. C. Industrial Training & Certification 19. Industrial Training at Videocon International Ltd., Aurangabad Duration: 25th May to 13th June 2004. 20. Certified Course in RF Engineering Certification in Radio Frequency Engineering and Communication Systems. TRAININGS & WORKSHOPS CONDUCTED • Workshops on MATLAB and Simulink Conducted ten technical workshops on MATLAB and Simulink applications across various engineering colleges. Focus Areas: Simulation Modeling, Control Systems, Signal Processing, and Engineering Applications. • E-Webinar on COVID-19 Awareness and Technology Interventions Organized and coordinated an online webinar during the COVID-19 pandemic focusing on awareness, digital tools, and technological solutions. • Workshop on Software Testing Conducted a training program on Software Testing methodologies, including manual testing, automation basics, and quality assurance practices.
Reviewer	• Editorial Board Member – Science Publication Group • Editorial Board Member – Deep Science Publishing • Editorial Board Member – American Journal of Computer Science and Technology

	• Review Committee Member – International Conference on Artificial Intelligence, Computer, Data Sciences and Applications (ACDSA 2026)
Books Published	1. Applied AI in Telecom and Healthcare: Use Cases, Architectures, and Real-World Practices • Publisher: Vaagai International Publication • ISBN: 978-81-992733-1-3 2. Electric Vehicle Technology: The Road of Electrification • Publisher: Vaagai International Publication • ISBN: 978-81-992733-4-4 3. Video Shot Boundary Detection Using Transform Based Technique • Publisher: LAP LAMBERT Academic Publishing 4. Broad Band Communication System • Publisher: Nirali Publication
Research Projects	A. Artificial Intelligence & Computer Vision Projects 1. Smart CCTV Surveillance Using IoT, Artificial Intelligence and Web Technologies Development of an intelligent surveillance system integrating IoT-enabled cameras, AI-based object detection, and real-time web-based monitoring for proactive security management. 2. AI-Powered Intelligent Surveillance Systems: From Passive Recording to Proactive Monitoring Advanced surveillance framework using deep learning models for anomaly detection, behavioral analysis, and automated alert generation. 3. Brain Tumor Detection Using YOLOv8 Implementation of a deep learning-based medical image analysis system for early detection and classification of brain tumors using YOLOv8 architecture. 4. Video Shot Boundary Detection Using Transform-Based Techniques Research on transform-domain approaches for accurate shot boundary detection in video sequences.

	5. Deep Learning Algorithm for Shot Boundary Detection Design and implementation of CNN-based models for automated video segmentation. 6. Shot Boundary Detection Using Bi-Directional Empirical Mode Decomposition Hybrid signal-processing and machine learning approach for improved video segmentation accuracy. 7. Video Segmentation Techniques Study and implementation of automated video segmentation frameworks for multimedia indexing and retrieval. 8. Vision-Based Framework for Cosmetic Product Identification and Brand Analysis AI-driven system for visual recognition, classification, and brand authentication of cosmetic products using computer vision. 9. Storyboarder AI: Automated Context-Preserving Storyboard Generation Using Multimodal Diffusion and Language Models Development of an AI framework integrating diffusion models and large language models for automated storyboard creation. 10. Multi-Font / Multi-Size Character Recognition Optical character recognition (OCR) system for recognizing varied font styles and sizes using pattern recognition techniques. 11. Character Recognition & Optical Character Recognition (OCR) Implementation of text recognition systems using template matching and machine learning techniques. B. IoT, Smart Systems & Embedded Applications 12. Implementation of Intelligent Smart Home Using Artificial Intelligence and IoT Smart automation framework integrating IoT devices and AI for energy-efficient home management. <i>(Shortlisted for Second Round Evaluation – Research Mentorship Program, SPPU University, Pune)</i> 13. IoT-Based Smart Agriculture: Toward Making Fields Communicate Smart farming solution using IoT sensors for soil monitoring, irrigation control, and yield optimization. 14. Highway Bridge Monitoring System Using Wireless Sensor Networks Real-time structural health monitoring system using distributed sensor networks.
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	15. Intelligent Serve-Lines Mobile Robot Design and implementation of an AI-based autonomous service robot. C. Networking, Communication & Antenna Systems 16. Broadband CPW-Fed T-Shaped Slot Antenna Design Design and simulation of broadband antenna systems for wireless communication applications. 17. Road Detection and Extraction for Autonomous Vehicles Using Satellite Images Computer vision-based framework for road extraction and navigation in autonomous driving systems. D. Sustainability & Environmental Research 18. Quantifying Carbon Footprints in Indian Coal Mines and Exploring Pathways to Carbon Neutrality Research project focused on carbon emission quantification, sustainability modeling, and strategies toward carbon-neutral mining operations. E. Software Engineering & Systems 19. Campus Recruitment Management System Web-based platform for automating recruitment workflows, student profiling, and employer coordination. 20. Systematic Review of CI/CD Pipeline for Cloud-Based Web Application Deployment Comprehensive study on DevOps practices and automated deployment strategies in cloud environments.
Professional Affiliations	Life Membership – Indian Society for Technical Education (ISTE) • Professional Member – International Association of Engineers (IAENG)

Patents	PATENTS PUBLISHED 1. Two-Temperature Magneto-Thermoelectricity for Heat Conductivity 2. Distributed Smart Ledgering Solution for Efficient Contract Systems Based on Blockchain 3. Device for Securing IoT Devices 4. Network Security and Energy Managing Device 5. Blockchain Secured IoT Network Analyzer Device 6. Cognitive Monitoring Helmet 7. Artificial Intelligence Based Traffic Light for Guiding Vehicle Traffic
Awards & Recognitions	Academic Excellence Award (2024–2025) Awarded in recognition of outstanding academic performance, research contributions, and excellence in teaching–learning practices. • Best Faculty Award (2024) Conferred by the <i>Institute of Technical and Scientific Research</i> for exemplary contribution to academics and institutional development. • Best Researcher Award (2023) Awarded by the <i>VDGOOD Professional Association</i> in recognition of significant research output and scholarly contributions. • Star Performance Awards (2017, 2018, 2021) Received for consistent excellence in academic performance, student mentoring, and institutional responsibilities.
h-index (Scopus)	4
RG Score (Research Gate)	-
ORCID	0000-0003-3273-9988
Industry Connect	Global Calibration pvt ltd. , Phonex Electronics pvt Ltd.
Funded Projects	-

Responsibilities @MMIT	Academic Coordinator
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