# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name:** Dr. Vinod J. Kadam
**Qualifications:** M.Tech, Ph.D
**Department:** Department of Information Technology

**Research Area:** Deep Learning, Machine Learning, Information Technology, Cyber Security, Machine Learning, Cloud Computing and Virtualization, Blockchain Security, Artificial Intelligence, Data Science, Data Science, Soft Computing, Data Mining, Pattern Recognition

**Experience :** 21 years

**Address:** Dr. Babasaheb Ambedkar Technological University
Lonere, Tal- Mangaon,
Dist – Raigad, Maharashtra (India) – 402103

**Contact Details:**

- **Mobile:** +91 8408855351
- **Email:** vjkadam@dbatu.ac.in
- **Google Scholar:** https://scholar.google.com/citations?user=XQrm9AUAAAAJ&hl=en&oi=ao

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name: Dr. Manjushree D. Laddha**

**Qualifications: PH.D (Dr. Babasaheb Ambedkar Technological University Lonere Raigad)**

**Department: Computer Engineering**

**Research Area: Learning Analytics, Large Language Models, NLP**

**Address: 3, Vainganga, Dr. Babasaheb Ambedkar Technological University Lonere Raigad**

**Cell Phone No & Email ID: 8087864373, mdladdha@dbatu.ac.in**

**Experience : 21 years**

**Publications: International Journals: 06 (SCOPUS INDEXED),**

**International Conferences: 06 (SCOPUS INDEXED)**

**Book Chapter : 02 (Springer Nature Book )**

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name: Dr.Sushilkumar N. Holambe**

**Date of Birth:14/10/1979**

**Qualifications:** PhD in Computer Science & Engineering

**Domain and Department:** Machine Learning, Data Science, Artificial Intelligence, & Image Processing. Department of Computer Science & Engineering

**Research Area:** Machine Learning, Data Science, Artificial Intelligence, and Image Processing

**Organization/Institute:T.P.C.T's COE Osmanabad-Dharashiv Maharashtra**

**Address: Sambhajinagar Tuljapur Highway**

**Cell Phone No & Email ID:9404676487,9881101877 & snholambe2015@gmail.com**

**No of M. Tech & PhD Students Completed & Ongoing:**

**M.Tech Students:54 students completed & 08 students ongoing project**

**Publications in Scopus/SCI Journals only (Attach as hyperlink):**
https://internationalpubls.com/index.php/anvi/article/view/1416

https://ijisae.org/index.php/IJISAE/article/view/3753

https://link.springer.com/chapter/10.1007/978-981-19-9304-6_2

https://ieeexplore.ieee.org/document/5565024

**Summary of Research Domain**

- **Machine Learning (ML):**ML algorithms learn from data to improve their performance over time. This learning can be supervised (using labeled data to predict outcomes), unsupervised (finding patterns in unlabeled data), or reinforcement learning (learning through trial and error).
- **Data Science:**Data science involves collecting, cleaning, analyzing, and interpreting data to extract meaningful insights. It often uses statistical methods, data visualization, and machine learning techniques.
- **Artificial Intelligence (AI):**AI aims to create systems that can perform tasks that typically require human intelligence, such as reasoning, learning, problem-solving, and decision-making.
- **Image Processing:**Image processing involves techniques for analyzing, manipulating, and enhancing digital images. It is closely related to computer vision, which focuses on enabling machines to "see" and understand images.

**Dr.Sushilkumar N. Holambe**

**Name & Sign**

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area


**Dr. Ashwini.S. Gavali**



**Qualifications: M.Tech, Ph.D(CSE)**

**Department: Artificial Intelligence and Data Science**

**Research Area: Artificial Intelligence, Deep Learning, Computer Vision, Machine Learning**

**Address:** R/H D2, Shinde Rockwood Society, Near Swarnim Hospital, Kanchanwadi, Chh. Sambhajinagar

**Cell Phone No & Email ID:**8600900391 **Email:** ashwinigavli22@gmail.com


**Experience :** 12 years

**Publications: 6 Journal papers, 3 patents, 3 conference paper**

https://scholar.google.com/citations?view_op=list_works&hl=en&hl=en&user=ATQ7WnUAAAAJ

| Sr. Number | Title of paper | Journal Indexing | Impact Factor/ Cite Score | Year |
|---|---|---|---|---|
| 1 | Gavali, A.S., Kakarwal, S. Enhancing early action prediction in videos through temporal composition of sub-actions, Multimedia Tools Applications, (2025). https://doi.org/10.1007/s11042-024-18870-0 Link: https://link.springer.com/article/10.1007/s11042-024-18870-0 | SCI and Scopus indexed journal Q1 | 3.6 | 2024 |
| 2 | S. N. Kakarwal and A. S. Gavali, "Context aware human activity prediction in videos using Hand-Centric features and Dynamic programming based prediction algorithm," J. Integr. Sci. Technol., vol. 10, no. 1, pp. 11–17, 2022. | Scopus indexed Q1 | 1.4 | 2022 |
| 3 | Ashwini S. Gavali, S. N. Kakarwal(2025) ," Prediction of Fine Grained Human Activities In Video Using Pose Based and Object Based Features" International Journal of Computational Vision and Robotics,Vol 15, No.5,pp 624-639 | Scopus indexed journal Q3 | 1.8 | 2024 |

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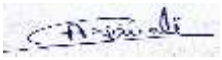
| | | | | |
|---|---|---|---|---|
| 4 | Impact of Ensemble Learning for Indian Ayurvedic Plant Species Classification," National Academy Science Letters, Accepted | SCI and Scopus indexed journal Q2 | 1.2 | 2024 |
| 5 | Ratnadeep.R.Deshmukh Miss Ashwini S Gavali," 3D Face Recognition Robust to Expression Occlusion and Poses", Volume 5, Issue 8, August 2014 | Peer Reviewed Journal | 3.2 | 2014 |
| 6 | AS Gawali, RR Deshmukh," 3d face recognition using geodesic facial curves to handle expression, occlusion and pose variations", Information Technologies, Vol. 5 (3), 2014, 4284-4287 | Peer Reviewed Journal | 1.5 | 2014 |



**Dr. Ashwini Gavali**

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name:** Dharmaraj Rajaram Patil

**Date of Birth:** 29/05/1979

**Qualifications:** Ph.D. (Computer Engineering)

**Domain and Department:** Web Security, Computer Engineering

**Research Area:** Web Security and Machine Learning

**Organization/Institute:** R.C.Patel Institute of Technology, Shirpur

**Address:** R.C.Patel Institute of Technology, Shirpur**,** Nimzari Naka, Shirpur, Dist- Dhule-Maharashtra, 425405

**Cell Phone No & Email ID:** 9420404470, dharmaraj.rcpit@gmail.com

**No of M. Tech & PhD Students Completed & Ongoing:** No. of ME Completed: 16

**Publications in Scopus/SCI Journals only (Attach as hyperlink):**

1. **https://www.worldscientific.com/doi/10.1142/S2196888825500083?srsltid=AfmBOoq5ca7PYYD47aInvo_TlYzhydY-NDscliNyCQfvrJ4M_4zuSYxW**
2. **https://www.informatica.si/index.php/informatica/article/view/5824**
3. **https://publications.eai.eu/index.php/sis/article/view/4264**
4. **https://publications.eai.eu/index.php/sis/article/view/518**
5. **https://publications.eai.eu/index.php/sis/article/view/350**
6. **https://sciendo.com/article/10.2478/cait-2018-0002**
7. **https://journals.sagepub.com/doi/abs/10.1177/18724981251337385**
8. **https://www.isecure-journal.com/article_159689.html**
9. **https://indjst.org/articles/detection-of-malicious-javascript-code-in-web-pages**

**Summary of Research Domain**

Dr. Dharmaraj R. Patil's research domain primarily focuses on web security, intrusion detection, and web mining, with a strong emphasis on the application of machine learning and feature selection techniques for identifying cyber threats. His work includes the development of intelligent models for detecting malicious URLs, domain names, and JavaScript code embedded in web pages, employing ensemble methods such as bagging, boosting, and stacking. He has proposed frameworks that integrate advanced feature engineering with classifiers like decision trees, logistic regression, and neural networks to achieve high accuracy and efficiency in threat detection. His research contributions address key challenges in cybersecurity, including early detection, low false positive rates, and adaptability to evolving attack patterns, thereby enhancing the robustness of web-based systems against modern cyber threats.

(Dharmaraj Rajaram Patil)

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name:** Dr. Manoj Sakharam Ishi

**Qualifications:** M. Tech (RGPV, Bhopal), Ph. D. (KBC NMU, Jalgaon)

**Department:** Computer Engineering

**Research Area:** Artificial Intelligence, Machine Learning, Deep Learning, Neural Network, Image Processing

**Address:** R. C. Patel Institute of Technology, Near Nimzari Naka, Shirpur, Dist- Dhule-425405

**Cell Phone No & Email ID:** 9421333620, manoj.ishi@rcpit.ac.in/ishimanoj41@gmail.com

**Experience:** 15 years

**Publications: International Journals: 07 (SCOPUS INDEXED), 08 (Peer reviewed Journals)**

**International Conferences: 04**

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name: Dr. Devashri Raich (Kodgire)**

**Qualifications:**

- PhD (Computer Science and Engineering,Kalinga University, Naya Raipur)
- M.Tech. (Computer Science and Engineering,RTMNU,Nagpur University)
- B.E (Computer Technology, RTMNU, Nagpur University)

**Department:** Computer Science and Engineering.

**Research Area: Machine Learning, Data Analysis, Artificial Intelligence, Data Mining**

**Address:** Department of CSE- Data Science, Rajiv Gandhi College of Engineering, Research and Technology, Chandrapur-442403

**Cell Phone No & Email ID:** 9860524272, devashriraich@gmail.com

**Experience :** 16 years

**Publications:**
https://docs.google.com/spreadsheets/d/16ANFIyltU_b5HvS_tlR9NAKSRWFxOju5-Aa07b2bUg0/edit?gid=0#gid=0

**Summary of Research Area:**

The research area focuses on the **design and analysis of a generic disease symptom analysis and risk prediction system using data analytics modeling**. It explores the integration of Laboratory Information Systems (LIS), requiring a comprehensive understanding of communication protocols and extensive trial-based testing. The study emphasizes the significance of properly storing and **analyzing lab data** to aid medical researchers in tracking disease patterns across locations, age groups, and genders. The work also outlines key components from physical connectivity to logical configurations for effective **LIS-machine integration**. Furthermore, the research incorporates standardized communication methods and explores the application of **Machine Learning (ML) and Artificial Intelligence (AI)** to predict future disease trends and risk factors.

In addition to utilizing online fact repositories, the research also leverages **real-time patient data collected via the Laboratory Information System (LIS)**. The system is successfully deployed on an **online server**, enabling **remote laboratories** to access and contribute to a **centralized data repository**. This centralized setup supports more accurate **future predictions and analytical studies**. The integration of **pathology reports**, particularly those highlighting abnormal parameter values, along with a **custom ranking system** based on **daily living patterns and habits**, enhances the system's ability to **predict and prevent diseases at early stages**, thereby contributing to proactive healthcare.

**Patent Published:** "Multiprotocol Support Medical Equipment Integration System", Government of India Patent, Application No. 202221036157, dated 23-06-2022.

(Dr. Devashri Raich(Kodgire)

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name:** Dr. Nitin Jagannathrao Janwe

**Qualifications: Ph.D. (RTM Nagpur University, Nagpur)**

**Department:** Computer Science and Engineering

**Research Area:** Machine Learning, Computer Vision, Image and Video Processing

**Address:** Rajiv Gandhi College of Engineering, Research & Technology, Chandrapur- 442403

**Cell Phone No & Email ID:** 9860213797 **Email :** nitin.janwe2015@gmail.com

**Experience :** 30.5 years

**Publications:** https://scholar.google.com/citations?user=9MZURecAAAAJ&hl=en

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name: Dr.Wagh Rajanikant Bhagwan**

**Date of Birth: 12/01/1980**

**Qualifications:** Ph.D. (Computer Engineering)

**Domain and Department: Web Mining Domain, Computer Engg. Dept.**

**Research Area: Web Mining, Recommender Systems, Machine Learning**

**Organization/Institute: R C Patel Institute of Technology Shirpur Dist Dhule Maharashtra**

**Address: Nimzari Naka Shahada Road**

**Cell Phone No & Email ID: 8275007582, rajnikantw@gmail.com**

**No of M. Tech & PhD Students Completed & Ongoing: M. Tech 20 Completed 1 Ongoing**

**Publications in Scopus/SCI Journals only (Attach as hyperlink):**

1. **Serial Fusion based Hybrid Features Extraction Method for Tomato Plant Leaf Disease Detection: Puja Dipak Saraf, Jayantrao Bhaurao Patil, Rajnikant Bhagwan Wagh**
   **URL:** https://doi.org/10.52783/jisem.v10i6s.753

2. **ENHANCING TOMATO LEAF DISEASE DETECTION THROUGH MULTIMODAL FEATURE FUSION : Puja SARAF [0000-0002-2439-4783], Jayantrao PATIL [0000-0002-9545-339X], Rajnikant WAGH [0000-0003-2997-6034]**
   **URL :** https://doi.org/10.35784/acs-2024-38

3. **Learning to Detect Phishing Web Pages Using Lexical and String Complexity Analysis: Dharmaraj Patil1, Tareek Pattewar2,*, Shailendra Pardeshi1, Vipul Punjabi1 and Rajnikant Wagh1**
   **URL :** https://doi.org/10.4108/eai.20-4-2022.173950

**Summary of Research Domain: Web Mining, Recommender Systems, Machine Learning**

**Dr.Wagh Rajanikant Bhagwan**
**Name & Sign**

**Dr. Varsha Kiran Bhosale**

**Research Domain:** Computer Networks, Internet of Things, Artificial Intelligence and Machine learning

**Research Domain Summary:** My research focuses on the intersection of **Computer Networks**, the **Internet of Things (IoT)**, and **Artificial Intelligence (AI)**, including **Machine Learning (ML)**. This domain explores the development of intelligent, scalable, and efficient network architectures to support the growing demands of IoT ecosystems. By integrating AI and ML techniques into network management and IoT systems, my work aims to enhance real-time data processing, predictive analytics, resource optimization, and security. This interdisciplinary approach contributes to the evolution of smart environments and adaptive communication systems that are critical for next-generation technologies such as smart cities, autonomous systems, and industrial automation.

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area


**Name: Dr. Vipul V. Bag**

**Date of Birth: 18/10/1975**

**Qualifications:** M.Tech (Computer) Ph.D. Computer

**Domain and Department: Computer Science and Engg**

**Research Area: Machine Learning, AI, Recommedation system**

**Organization/Institute: N K Orchid college of engineering and Technology, solapur**

**Address: Solpaur- Tuljapur Road, Solapur**

**Cell Phone No & Email ID: 9552529241** vipulbag@orchidengg.ac.in

vipulbag@gmail.com


**No of M. Tech & PhD Students Completed & Ongoing: M. Tech Guided 18**

**Ph. D. guided Nil**

**Publications in Scopus/SCI Journals only (Attach as hyperlink):**

https://www.scopus.com/authid/detail.uri?authorId=57716367700

### Summary of Research Domain

Research domain spans from artificial intelligence, deep learning, and emerging technologies to solve real-world problems. In the field of **agriculture**, *"Kisan Dhan - Crop Price Prediction Using Random Forest"* focuses on using supervised machine learning, specifically the Random Forest algorithm, to forecast crop prices. This empowers farmers with actionable insights, improving financial planning and crop selection. In the domain of **public health and surveillance**, the study on *"Real-Time Detection of Face Mask and Social Distancing"* leverages computer vision techniques for real-time monitoring of COVID-19 safety protocols, contributing to community safety through AI-powered detection systems.

In the **area of human-computer interaction**, the article titled *"Revolutionizing Interaction: Python-Driven Speech Assistant Powered by Long Short-Term Memory (LSTM)"* introduces an intelligent speech assistant that utilizes LSTM networks for understanding and responding to spoken commands, showcasing advancements in natural language processing. Similarly, the **healthcare domain** is addressed through the article *"Frequent CNN-Based Ensembling for MRI Classification for Abnormal Brain Growth Detection"*, where an ensemble of Convolutional Neural Networks (CNNs) is proposed to enhance the accuracy of MRI-based diagnostics, aiding in the early detection of brain abnormalities.

The **fashion and e-commerce** industry benefits from *"Revolutionizing Fashion: Fashion Era's Deep Convolutional Neural Network for Outfit Recommendations"*, which uses deep convolutional neural networks to recommend personalized clothing combinations based on visual and user preference data. Meanwhile, in **smart infrastructure**, the *"Microcontroller-Based Smart Automated Public Garden Maintenance System"* highlights the integration of embedded systems and sensors to automate garden maintenance tasks, showcasing the impact of IoT in environmental management.

In the **financial technology** sector, *"Enhanced Context-Based Stock Recommendation Integrating News Classification and Technical Indicators"* presents a hybrid approach combining sentiment analysis of financial news and traditional stock market indicators to enhance stock recommendation accuracy. Lastly, the cybersecurity and digital forensics domain is represented by *"GenConVit+: Advanced Hybrid Framework for Deepfake Detection for Safeguarding Digital Media Integrity"*, which introduces a powerful hybrid architecture combining CNN and Vision Transformers to detect deepfakes, ensuring trust and integrity in digital content. Together, these studies demonstrate the transformative power of interdisciplinary AI-driven research across various sectors.

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area


**Name: Dr. Vipul V. Bag**

**Date of Birth: 18/10/1975**

**Qualifications:** M.Tech (Computer) Ph.D. Computer

**Domain and Department: Computer Science and Engg**

**Research Area: Machine Learning, AI, Recommedation system**

**Organization/Institute: N K Orchid college of engineering and Technology, solapur**

**Address: Solpaur- Tuljapur Road, Solapur**

**Cell Phone No & Email ID: 9552529241** vipulbag@orchidengg.ac.in

vipulbag@gmail.com


**No of M. Tech & PhD Students Completed & Ongoing: M. Tech Guided 18**

**Ph. D. guided Nil**

**Publications in Scopus/SCI Journals only (Attach as hyperlink):**

https://www.scopus.com/authid/detail.uri?authorId=57716367700

### Summary of Research Domain

Research domain spans from artificial intelligence, deep learning, and emerging technologies to solve real-world problems. In the field of **agriculture**, *"Kisan Dhan - Crop Price Prediction Using Random Forest"* focuses on using supervised machine learning, specifically the Random Forest algorithm, to forecast crop prices. This empowers farmers with actionable insights, improving financial planning and crop selection. In the domain of **public health and surveillance**, the study on *"Real-Time Detection of Face Mask and Social Distancing"* leverages computer vision techniques for real-time monitoring of COVID-19 safety protocols, contributing to community safety through AI-powered detection systems.

In the **area of human-computer interaction**, the article titled *"Revolutionizing Interaction: Python-Driven Speech Assistant Powered by Long Short-Term Memory (LSTM)"* introduces an intelligent speech assistant that utilizes LSTM networks for understanding and responding to spoken commands, showcasing advancements in natural language processing. Similarly, the **healthcare domain** is addressed through the article *"Frequent CNN-Based Ensembling for MRI Classification for Abnormal Brain Growth Detection"*, where an ensemble of Convolutional Neural Networks (CNNs) is proposed to enhance the accuracy of MRI-based diagnostics, aiding in the early detection of brain abnormalities.

The **fashion and e-commerce** industry benefits from *"Revolutionizing Fashion: Fashion Era's Deep Convolutional Neural Network for Outfit Recommendations"*, which uses deep convolutional neural networks to recommend personalized clothing combinations based on visual and user preference data. Meanwhile, in **smart infrastructure**, the *"Microcontroller-Based Smart Automated Public Garden Maintenance System"* highlights the integration of embedded systems and sensors to automate garden maintenance tasks, showcasing the impact of IoT in environmental management.

In the **financial technology** sector, *"Enhanced Context-Based Stock Recommendation Integrating News Classification and Technical Indicators"* presents a hybrid approach combining sentiment analysis of financial news and traditional stock market indicators to enhance stock recommendation accuracy. Lastly, the cybersecurity and digital forensics domain is represented by *"GenConVit+: Advanced Hybrid Framework for Deepfake Detection for Safeguarding Digital Media Integrity"*, which introduces a powerful hybrid architecture combining CNN and Vision Transformers to detect deepfakes, ensuring trust and integrity in digital content. Together, these studies demonstrate the transformative power of interdisciplinary AI-driven research across various sectors.

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name: Dr Mithun B Patil**

**Date of Birth:02/05/1988**

**Qualifications: Ph.D. (CSE), Postdoc in AI***

**Domain and Department: Computer Science and Engineering**

**Research Area**: *Artificial Intelligence and Its Applications in Security, Agriculture, Healthcare, and Data Science, Wireless Network*

**Organization/Institute: N K Orchid college of Engineering and Technology, Solapur**

**Address: 87/B62 Om Sai residence 5th Floor Bhavanipeth Solapur**

**Cell Phone No & Email ID: ID:8983683360**

**No of M. Tech & PhD Students Completed & Ongoing: M.tech completed: 05 ongoing:02**

**Ph.D.=01 (ongoing)**

**Publications in Scopus/SCI Journals only (Attach as hyperlink):**
**https://www.scopus.com/authid/detail.uri?authorId=56367561000**

**Summary of Research Domain**

My research focuses on the development and application of **Artificial Intelligence (AI)**, **Machine Learning (ML)**, and **Computational Intelligence** to solve complex problems across diverse domains such as **healthcare**, **cybersecurity**, **bioinformatics**, **wireless networks**, and **agriculture**.

I have authored **43 Scopus-indexed articles** in reputed journals and conferences, published **3 books**, and filed **18 patents**, out of which **5 are granted** and **13 are published**. My work is centred around building intelligent systems that are both impactful and practical in real-world applications.

**Key Areas of Interest:**

1. **Artificial Intelligence & Machine Learning**
   I work extensively with both supervised and unsupervised learning models, including deep learning architectures such as **CNNs** and **RNNs**, to address classification and prediction problems.
2. **Cybersecurity & Data Protection**
   I develop intelligent techniques for **intrusion detection**, **biometric authentication**, and **secure communication protocols**, with a focus on data privacy and protection.

3. **Medical Imaging & Diagnosis**
   I design AI-driven diagnostic tools for critical health issues like **cancer detection** and **heart disease prediction**, leveraging medical imaging and pattern recognition.
4. **Optimization Techniques**
   I employ swarm intelligence and evolutionary algorithms such as **Particle Swarm Optimization (PSO)**, **Ant Colony Optimization (ACO)**, and **Genetic Algorithms (GA)** to optimize ML model parameters and system performance.

**Future Outlook:**

Moving forward, I aim to deepen my research in areas like **explainable AI**, **multi-modal data integration**, and **AI at the edge** for smart and sustainable applications, especially in healthcare and agriculture. My goal is to ensure that AI solutions are both technically robust and socially responsible.

**(Dr.Mithun B Patil)**

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name:** Dr. Nitin Namdeo Patil

**Date of Birth:** 01/10/1978

**Qualifications:** Ph.D. (Computer Engineering)

**Domain and Department:** Computer Engineering

**Research Area:** Information Security, Machine Learning

**Organization/Institute:** SVKM's College of Engineering Shirpur

**Address:** 42-A, Sandipani Colony, Shirpur

**Cell Phone No & Email ID:** 9423488175, er.nitinpatil@gmail.com

**No of M. Tech & PhD Students Completed & Ongoing:**

**M. tech students Guided/Completed: 31**

**Ph.D. students Completed: 02**

**Ongoing: 02**

**Publications in Scopus/SCI Journals only (Attach as hyperlink):**
**https://www.scopus.com/authid/detail.uri?authorId=57202971911**

**Summary of Research Domain**

**Information Security:** The Modern structure of the Internet and other communication channels has encouraged various authors to share and publish their ideas and knowledge in a digital format. The text in various languages is extensively used medium of communication in various ways. At the same time, the adversaries may use this data for reproduction and redistribution illegally. The protection of intellectual property rights of the text appearing globally is crucial and needs proper attention. In our research, we have introduced text watermarking techniques for Devanagari (Marathi and Hindi) languages fulfill the basic requirements of a text watermarking scheme with sufficient robustness, imperceptibility, security and capacity.

Machine Learning:

The amount of textual data that is neither structured nor organized is constantly growing. Thus, techniques for automated text summarization are essentially required. In this research abstractive text summarization for the English language with a modified preprocessing technique was introduced. The developed techniques are robust and effective with high ROUGE score. Further these techniques accomplish all basic requirements of output generation. These techniques fulfill the basic requirements of an abstractive text summarization with sufficient semantics, size, and coherence.

**Nitin Namdeo Patil**

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name:** Dr.Tanaji Anandrao Dhaigude

**Date of Birth:** 19th Jan 1987

**Qualifications:** Ph.D, M.E, B.E

**Domain and Department:** ML, AI, WSN and Computer Science and Engineering

**Research Area:** Wireless sensor network, Machine Learning, AI

**Organization/Institute:** Fabtech Technical Campus College of Engineering & Research, Sangola

**Address:** Gate No. 565/1, Pandharpur Road, Sangola, Dist - Solapur - 413307

**Cell Phone No & Email ID:** 9975497130 & tanajidhaigude@gmail.com

**No of M. Tech & PhD Students Completed & Ongoing:** M.Tech-10 & Ph.D- 02

**Publications in Scopus/SCI Journals only(Attach as hyperlink):**

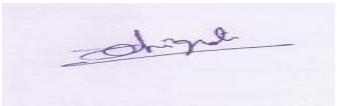
https://www.scopus.com/authid/detail.uri?authorId=58527636500

https://www.scopus.com/authid/detail.uri?authorId=57203662621

**Summary of Research Domain**

Dr. Tanaji Andrao Dhaigude has made significant contributions in the domains of Wireless Sensor Networks (WSN), Machine Learning (ML), and Artificial Intelligence (AI), with over 12 research papers published in Scopus-indexed journals. His work in WSN focuses on energy-efficient routing, data aggregation, and real-time environmental monitoring systems. In the ML and AI domains, she has explored intelligent algorithms for predictive analytics, pattern recognition, and optimization, particularly in the context of smart healthcare, smart cities, and sustainable technologies. His interdisciplinary approach often combines WSN and AI to build adaptive, context-aware systems that enhance decision-making and resource efficiency. Her research emphasizes both theoretical advancement and real-world applicability, reflecting a commitment to leveraging technology for sustainable development and societal benefit. He actively collaborates across disciplines to address complex challenges, with a strong focus on innovation, data-driven solutions, and scalable architectures. His contributions continue to influence both academic and applied domains in emerging intelligent systems.

**Name & Sign**



**Dr. Tanaij A. Dhaigude**

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name: Dr. Sandeep Prabhakarrao Abhang**

**Date of Birth: 24/06/1980**

**Qualifications:** BE, M.Tech, PhD

**Domain and Department: Computer Science and Engineering**

**Research Area: Computer Network Management system, Machine Learning, Deep Learning, Image processing**

**Organization/Institute: CSMSS Chh. Shahu College of Engineering**

**Address: Paithan road , Kanchanwadi, Chhatrapati Sambhajinagar, Maharashtra**

**Cell Phone No & Email ID: 9130114535 & spabhang.india@gmail.com**

**No of M. Tech & PhD Students Completed & Ongoing: M.Tech-24 completed, ongoing: 04**

### Summary of Research Domain:

**Research domain includes Advance Network management system, sustainable development of intelligent NMS, development of the complex systems or applications like image processing and other applications using advances in Machine Learning or Deep Learning. Design and development of Solutions to complex engineering problem using Artificial Intelligence techniques.**

**Name & Signature**

**Dr. Sandeep Prabhakarrao Abhang**

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name:** Dr. Yogesh H. Bhosale

**Date of Birth:** 04-July-1987

**Qualifications:** Ph.D(CS&E), M.Tech(CS&E), MBA(HRM),

**Domain and Department:** Computer Engineering and Allied

**Research Area:** Quantum Computing, Hyper spectral /Aerial Imaging, Blockchain, pattern Recognition, Deep Learning, Machine Learning, AI, Explainable AI, Federated Learning

**Organization/Institute:** CSMSS Chh. Shahu College of Engineering, Chhatrapati Sambhajinagar (Aurangabad), MH, India - 431011

**Address:** Dr. Yogesh H. Bhosale, Department of Computer Science & Engineering , CSMSS Chh. Shahu College of Engineering, Kanchanwadi, Chhatrapati Sambhajinagar (Aurangabad), MH, India - 431011

**Cell Phone No & Email ID:** 9421931500, yogeshbhosale988@gmail.com

**No of M. Tech & PhD Students Completed & Ongoing:** Completed : 1, Ongoing : 02

**Publications in Scopus/SCI Journals only (Attach as hyperlink):**
**https://link.springer.com/article/10.1007/S11063-022-11023-0**

**https://www.sciencedirect.com/science/article/pii/S1746809422008990**

**https://link.springer.com/article/10.1007/s11042-023-15029-1**

**https://link.springer.com/article/10.1007/s40031-023-00917-9**

**https://link.springer.com/article/10.1007/s11042-024-20327-3**

**Summary of Research Domain :**

**Quantum Computing:** Quantum computing harnesses the principles of quantum mechanics—such as superposition and entanglement—to perform computations that are infeasible for classical computers. It is poised to revolutionize fields like cryptography, optimization, and materials science by solving complex problems much faster than traditional methods.

**Hyperspectral / Aerial Imaging:** This domain involves capturing and analyzing images across hundreds of spectral bands, far beyond the visible spectrum, to extract detailed information about objects or landscapes. Applications include agriculture, environmental monitoring, defense, and resource exploration, often using aerial platforms like drones and satellites.

**Deep Learning:** A subset of machine learning, deep learning utilizes neural networks with many layers (deep architectures) to model complex patterns in data. It has driven advances in computer vision, natural language processing, and speech recognition, enabling breakthroughs in tasks such as image classification and language translation.

**Machine Learning:** Machine learning focuses on developing algorithms that enable computers to learn patterns and make decisions based on data, without being explicitly programmed. It spans supervised, unsupervised, and reinforcement learning, with applications in fields from healthcare to finance.

**Artificial Intelligence (AI):** AI is a broad field dedicated to creating systems capable of performing tasks that typically require human intelligence, such as reasoning, learning, and problem-solving. It encompasses machine learning, robotics, expert systems, and more.

**Explainable AI (XAI):**XAI aims to make AI models transparent, interpretable, and understandable to humans. This is critical for trust, accountability, and compliance in sensitive applications like healthcare, finance, and law, where decisions must be explainable to stakeholders.

**Federated Learning:** Federated learning is a decentralized machine learning approach where models are trained across multiple devices or servers holding local data samples, without exchanging the data itself. This enhances privacy and security, making it ideal for applications like personalized mobile services and healthcare**.**

**Blockchain:** Blockchain is a distributed ledger technology that records transactions in a secure, transparent, and immutable way across a decentralized network. It underpins cryptocurrencies like Bitcoin and Ethereum but also has broad applications in supply chain management, finance, healthcare, and digital identity by enabling trust less, tamper-resistant record-keeping.

**Name & Sign**
**Dr. Yogesh H. Bhsoale**

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area

**Name:** Dr. Dinesh  Dattatray  Patil

**Date of Birth:** 31/03/1976

**Qualifications:** PhD Computer Science and Engineering

**Domain and Department:** Computer Science and Engineering

**Research Area:** Soft computing, Artificial Intelligence and Data Science

**Organization/Institute**:  HSM"s Shri Sant Gadge Baba College of Engineering and Technology, Bhusawal

**Address:** Department of Computer Science and Engineering ,HSM"s Shri Sant Gadge Baba College of Engineering and Technology, ZRTC,Bhusawal 425203

**Cell Phone No&Email ID: 9561294444 & dineshonly@gmail.com**

**No of M. Tech & PhD Students Completed & Ongoing:** 04(M. Tech),00 (PhD)

**Publications in Scopus/SCI Journalsonly(Attach as hyperlink):**
**https://www.scopus.com/authid/detail.uri?authorId=56702027700**

**Summary of Research Domain**

Since the electrocardiogram signal (ECG) is a non-stationary random signal, the detection in the domain of time does not turn out to be sufficiently sensitive to the distortions of the wave forms ECG However, these methods do not always present all the data that is possible to extract from the electrocardiogram signals, with which, information about the frequency is lost, which shows more information about the signal. The noise reduction in the ECG has been focused for research in recent years, since desired reduction allows a better signal pre-processing, and allows extracting from it the maximum amount of efficient and meaningful information. A method for ECG noise reduction using DWT based adaptive threshold technique. The performance evaluation parameters SNR and MSE are calculated based experiment on MIT-BIH database. Further this filtered signal is processed for calculation of characteristics of the heartbeat: complex QRS, P, S and T waves, as well as heart rate with classification of ECG beats with Wavelet network model is proposed with satisfactory outcome. Morphological segmentation is used for heart beat classification with SVM classifier, a dimension reduction is perform using HMM. To improve more accuracy for heart beat classification a hybrid methods HHT + DWT + PCA, Morphological feature + PCA + ICA for feature extraction are proposed and cuckoo search based NN classifier are proposed for higher  classification accuracy.

**Name & Sign**

Dr.Dinesh Dattatray Patil

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad

## One Page Summary of Research Area


**Name: Dr.Sushilkumar N. Holambe**

**Date of Birth:14/10/1979**

**Qualifications:** PhD in Computer Science & Engineering

**Domain and Department:** Quantum Computing, Data Science, Artificial Intelligence, Image Processing, Machine Learning, Department of Computer Science & Engineering

**Research Area:** Quantum Computing, Data Science, Artificial Intelligence, Image Processing, Machine Learning

**Organization/Institute:T.P.C.T's COE Osmanabad-Dharashiv Maharashtra**

**Address: Sambhajinagar Tuljapur Highway**

**Cell Phone No & Email ID: 9404676487,9881101877 & snholambe2015@gmail.com**


**Experience : 19 years**

**No. of M. Tech & PhD Students Completed & Ongoing:**

**M.Tech Students:70 students completed & 08 students on-going project**

**PhD Students:01 student completed**

**Publications in Scopus/SCI Journals only (Attach as hyperlink):**

https://internationalpubls.com/index.php/anvi/article/view/1416

https://ijisae.org/index.php/IJISAE/article/view/3753

https://link.springer.com/chapter/10.1007/978-981-19-9304-6_2

https://ieeexplore.ieee.org/document/5565024

## Summary of Research Domain

- **Quantum computing (QC):**Quantum computing is a modern way of computing that is based on the science of quantum mechancs and its unbelievable phenomena. It is a beautiful combination of physics, mathematics, computer science and information theory. It provides high computational power, less energy consumption and exponential speed over classical computers by controlling the behavior of small physical objects i.e. microscopic particles like atoms, electrons, photons, etc.
- **Data Science:** Data science involves collecting, cleaning, analyzing, and interpreting data to extract meaningful insights. It often uses statistical methods, data visualization, and machine learning techniques.
- **Artificial Intelligence (AI):**AI aims to create systems that can perform tasks that typically require human intelligence, such as reasoning, learning, problem-solving, and decision-making.
- **Image Processing:**Image processing involves techniques for analyzing, manipulating, and enhancing digital images. It is closely related to computer vision, which focuses on enabling machines to "see" and understand images.
- **Machine Learning (ML):**ML algorithms learn from data to improve their performance over time. This learning can be supervised (using labeled data to predict outcomes), unsupervised (finding patterns in unlabeled data), or reinforcement learning (learning through trial and error).

**Dr.Sushilkumar N. Holambe**
**Name & Sign**

# Dr. Babasaheb Ambedkar Technological University Lonere Raigad
## One Page Summary of Research Area

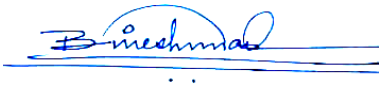
**Name:** Dr. Bireshwar Ganguly, Assistant Professor
**Date of Birth:** 20/08/1984
**Qualifications:** Ph.D (CSE); M.Tech(CSE), B.E(C.Tech)
**Domain and Department:** Computer Science & Engineering
**Research Area:** Artificial Intelligence & Machine Learning
**Address:** Rajiv Gandhi College of Engineering, Research and Technology, Babupeth Chandrapur-442403, Maharashtra
**Cell Phone No & Email ID:**9970033707,bireshwar.ganguly@gmail.com
**No of M. Tech & PhD Students Completed & Ongoing:** --03
**Publications in Scopus/SCI Journals:** 08

**One-Page Research Summary**

**Overview:**

I am actively engaged in impactful research in the field of **Artificial Intelligence (AI)** and **Machine Learning (ML)**, with a focus on developing intelligent solutions for **predictive analytics**, **pattern recognition**, **consumer behavior analysis**, and **real-time decision-making systems**. My work is both theoretical and application-oriented, aiming to address real-world challenges across multiple domains including **education**, **healthcare and e-commerce**.

1. **Consumer Behaviour Analysis:**
   My research includes the analysis of consumer buying patterns using clustering and classification techniques. The goal is to segment users based on behavior and predict future purchasing trends to enhance personalized marketing strategies and user engagement.
2. **E-Commerce Optimization:**
   In the area of e-commerce, I have worked on recommendation systems, inventory forecasting, and customer churn prediction. My work contributes to improving operational efficiency and user experience in digital commerce environments.
3. **Intelligent Real-Time Systems:**
   I have developed frameworks for real-time monitoring and decision-making using AI-driven models. These systems are designed to respond dynamically to changing inputs and are being explored for use in smart education systems and industrial automation.
4. **Cross-Domain Applications:**
   In future my plan is to focus on interdisciplinary approach which allows the integration of AI/ML models into various sectors.



Dr. Bireshwar Ganguly

I, Dr. Archana M. Rajurkar, currently working as Professor and Head of the Department of Computer Science and Engineering at MGM's College of Engineering, Nanded. My core research area includes Content-based Image and Video Retrieval (CBIR/CBVR), Digital Watermarking, Image Processing combined with IoT, and Medical Image Analysis. My doctoral work at **IIT Roorkee** focused on spatial and temporal relations in multimedia retrieval, which formed the basis for several research initiatives I have undertaken. Over the years, I have received **Research Funding of Rs.59.5 lakhs**, including research projects supported by **AICTE, BRNS-BARC, and AMUPMDC**, covering areas such as automated musculoskeletal image analysis & interpretation, liver tumor diagnosis systems, and lung infection detection. I have also explored applications of image processing in agriculture through the early detection of grapevine diseases using IoT-based solutions, for which I hold a **patent**. I have published extensively in reputed journals and international conferences, guided several Ph.D. and postgraduate students, and regularly contribute as a reviewer, session chair, and keynote speaker. Considering my research work, I have been honoured with Distinguished Women Researcher in Image & Video Processing by VIVA 2024, **IRSD Prominent Researcher Award** 2023, **Platinum Award** from the Confederation of Indian Industry (CII) in 2022 for my work on IoT and image processing-based grape disease detection, **Best Faculty of the Year Award (Funded Research Category)** at the CSI TechNext India Conference held at IIT Bombay in 2018. My research area aims to bridge the gap between academic innovation and practical societal impact, particularly in the fields of healthcare, multimedia, and smart agriculture.