DR. MAHESH GOYANI

Associate Professor

Computer Department, Government Engineering College, Modasa

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EDUCATION

M.A. (Gujarati Literature)
Baba Saheb Ambedkar Open University, Modasa

📅 Aug 2021 – july 2023

Ph.D. (Facial Expression Recognition)
Charotar University of Science and Technology, Changa

📅 Jan 2014 – Nov 2017

B.A. (Gujarati Literature)
Gujarat University, Ahmedabad

📅 May 2010 – April 2014

M.E. (Computer Engineering)
Sardar Patel University, V. V. Nagar

📅 July 2007 – Oct 2009

B.E. (Computer Engineering)
Veer Narmad South Gujarat University, Surat

📅 July 2001 – May 2005

EXPERIENCE

Associate Professor
Government Engineering College, Modasa

📅 April 2025 – Ongoing   📍 Aravalli, GJ, India

Assistant Professor
Government Engineering College, Modasa

📅 Jan 2016 – April 2025   📍 Aravalli, GJ, India

Assistant Professor
L D College of Engineering

📅 May 2011 – Jan 2016   📍 Ahmedabad, GJ, India

Assistant Professor
G H Patel College of Engineering and Technology

📅 April 2008 – May 2011   📍 V. V. Nagar, GJ, India

Lecturer
Mahatma Gandhi Institute of Technical Education and Research Center

📅 Nov. 2006 – April 2008   📍 Navsari, GJ, India

PROUD MOMENTS

Reviewer
Appointed as a reviewer in IEEE Transaction on Internet of Things, IEEE Transactions on Consumer Electronics, IEEE Transactions on Geoscience and Remote Sensing, IEEE Sensors and IEEE Acces

Best Researcher National Award
Received Best Researcher National Award from IRDP Group of Journals, Chennai, 2018

Session Chair
Invited as a SESSION CHAIR in International Conference on Computer Science, Engineering and Information Technology, Tirunelveli, Tamilnadu, India, 2011

Competitive Exams: Country
Qualified GATE Exam with 91.18 Percentile and secured All India Rank 1571 in Feb 2008.

SKILLS

Python
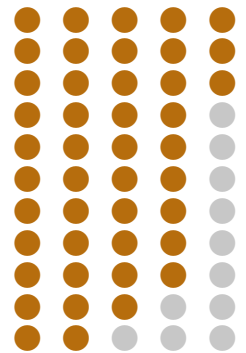C / C++
MATLAB
PHP
Web Development
Latex
R Programming
Java
RapidMiner
OpenGL
Shell Programming

TECHNICAL SPHERE

Pattern Recognition | Machine Learning

Image Processing | Data Analytics

Computer Graphics | Data Visualization

Data Mining | Operating Systems

Data Structures | Algorithms

Theory of Computation

INVITED SPEAKER

- "Artificial Intelligence and Machine Learning", Tapi Diploma Engineering College, Surat — 17-08-2024
- "Digital Content Creation", BVM Engineering College, V. V. Nagar — 25-06-2024
- "Advanced Data Structures", SDCET, Kim, Surat — 24-05-2024
- "Data Visualization", SDCET, Kim, Surat — 13-05-2024
- "Preparing for Interview & Effective Resume Writing using Latex", GEC, Modasa — 19-08-2023
- "Gujarati Sahitya na Utung Shikharo", L D College of Engineering, Ahmedabad — 21-09-2022
- "Classification and Clustering", LDRP Institute of Technology and Research, Gandhinagar — 10-05-2022
- "Deidable and Undecidable Problems", C S Patel Institute of Technology, Changa — 09-04-2022
- "Weight Optimization Techniques", Gujarat Power Engineering and Research Institute, Mehsana — 28-03-2022
- "MATLAB and Its Applications in Image Segmentation", PICA, Vadodara — 17-08-2021
- "Introduction to Machine Learning", S N Patel Institute of Technology, Umrakh — 07-07-2021
- "Supervised and Unsupervised Machine Learning", Government Polytechnic, Gandhinagar — 06-07-2021
- "Image Processing", Vidush Somany Institute of Technology and Research, Kadi — 18-05-2021
- "Face Recognition", Chandubhai S Patel Institute of Technology, Changa — 02-04-2021
- "Supervised Machine Learning Algorithms", Indus University, Ahmedabad — 06-02-2021
- "Introduction to Machine Learning", Gujarat Power Engineering and Research Institute, Mehsana — 04-02-2021
- "Object Oriented Programming in Python", GPERI, Mehsana — 02-02-2021
- "Generative Models", L J Institute of Technology, Ahmedabad — 02-01-2021
- "Unsupervised Machine Learning Algorithms", Ahmedabad Institute of Technology, Ahmedabad — 07-11-2020
- "Microsoft Teams", Government Engineering College, Modasa — 02-07-2020
- "Advanced Algorithms", Government Engineering College, Patan — 07-03-2020
- "Dimension Reduction", Government Engineering College, Modasa — 30-11-2019
- "Various Machine Learning Techniques", Government Engineering College, Gandhinagar — 12-06-2019
- "RapidMiner – A Lightening Fast Way to Data Mining", LDRP – ITR, Gandhinagar — 17-12-2018
- "Regression Techniques and Model Performance", BCM, V. V. Nagar — 28-11-2018
- "Cluster Analysis", Vishwakarma Government Engineering College, Chandkheda — 17-10-2018
- "Informed Search Algorithms", Aditya Silver Oak Institute of Technology, Ahmedabad — 28-07-2018
- "Regression techniques and Dimensionality Reduction", LDRP-ITR, Gandhinagar — 01-05-2018
- "Video Indexing and Auto Highlight Generation", Government Engineering College, Modasa — 06-04-2018
- "Technical Report Writing & Authoring Research Manuscript with LaTeX", SRPEC, Unjha — 25-06-2017
- "Feature Selection using Dimension Reduction", SSEC, Bhavnagar — 16-02-2017
- "Optimal Feature Selection using Dimension Reduction", GEC, Modasa — 07-01-2017
- "Various Techniques to Solve Traveling Salesman problem", LDCE, Ahmedabad — 28-06-2016
- "A Closer Look @ Image", Government MCA College, Maninagar, Ahmedabad — 11-03-2015
- "Graphics Output Primitives", Government Engineering College, Bhavnagar — 26-03-2012
- "Video Indexing", G H Patel College of Engineering and Technology, V. V. Nagar — 14-03-2011
- "Basics of Advanced Computer Algorithms", LDRP – ITR, Gandhinagar — 12-03-2010
- "Real Time Operating System – Concept and Scheduling Algorithms", BBIT, V.V.Nagar — 24-02-2009
- "Real Time Operating System", G H Patel College of Engineering and Technology, V.V.Nagar — 19-02-2009

WORKSHOPS DELIVERED

- "Introduction to Machine Learning and Implementation of ML", VVPIT, Rajkot — 17-09-2020
- "Advanced Image Processing With Hands on Session", Indus Institute , Ahmedabad — 18-02-2020
- "Curve Generation and Open GL", Parul Institute of Engineering and Technology, Vadodara — 18-03-2019
- "MATLAB", Government Engineering College, Modasa — 19-01-2019
- "LATEX – A Document Preparation System", VPMP Polytechnic, Gandhinagar — 25-03-2017
- "Applications of Image Processing", Swami Atmanand Saraswati Institute of Technology, Surat — 04-02-2017
- "MATLAB", LDRP Institute of Technology and Research, Gandhinagar — 15-02-2015
- "Digital Image Processing – Concepts & Implementation", CSPIT, Changa — 10-01-2015
- "Programming To MATLAB", A D Patel Institute of Technology, New V. V. Nagar — 09-04-2011
- "MATLAB and Its Application in Image Processing", LDRP – ITR, Gandhinagar — 31-03-2011
- "Role of MATLAB in Image Processing", GCET, V. V. Nagar — 14-08-2010
- "MATLAB", GCET, V. V. Nagar — 23-01-2010

WEBINARS

- "Data Science – Today and Tomorrow", Swarnim Startup and Innovation University, Gandhinagar — 16-10-2020
- "Machine Learning – Introduction to Applications", GEC, Gandhinagar — 03-10-2020
- "Building Machine Learning Application", RNG Patel Institute of Technology, Isroli, Bardoli — 29-06-2020
- "Image Processing: Pixel to Project", GIDC Degree Engineering College, Navsari — 17-06-2020
- "Python Programming", S. S. Agrawal College, Navsari — 12-06-2020

PHD SUPERVISION

Parita Patel, "V2X Communication"
📅 2025 – on going

Objective: To present a novel framework for predicting QoS in V2X communications using nested cross validation

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Himani Trivedi, "Facial Expression Recognition"
📅 2020 – on going

Objective: To Create a mode which can be used to efficiently recognize the facial expression in cluttered environment with very limited training samples

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Sagar Chavda, "Scene Classification"
📅 2020 – on going

Objective: To improve the pattern recognition accuracy using deep larning to classify various scences. Make the content based retrieval more robust and reliable.

Trusha Gajjar, "Image Fusion"
📅 2020 – on going

Objective: To enhance the quality of defocused images by using image fusion techniques

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Khushali Rawal, "Video Summarization"
📅 2018 – 2024

Objective: To develop an efficient algorithm for key frame detection using hybrid features to leverage the accurate identification of the higher level semantics

PUBLICATIONS

📄 Articles in SCOPUS / SCI / UGC Care Journals:

- Chavda, Sagar and Mahesh Goyani (2024). "Multi-label remote sensing scene classification using two-level double channel spatial attention residual blocks". In: *Journal of Applied Remote Sensing* 18.3, pp. 036511–036511.

- Trivedi, Himani and Mahesh Goyani (2024). "Adapting face recognition to the masked world: leveraging deep attention networks with a custom dataset". In: *International Journal of Computers and Applications* 46.6, pp. 427–441.

- Chavda, Sagar and Mahesh Goyani (2023). "Scene level image classification: a literature review". In: *Neural Processing Letters* 55.3, pp. 2471–2520.

- – (2022). "Robust content-based image retrieval using ICCV, GLCM, and DWT-MSLBP descriptors". In: *Computer Science* 23.

- Raval, Khushali R and Mahesh M Goyani (2022). "A survey on event detection based video summarization for cricket". In: *Multimedia Tools and Applications* 81.20, pp. 29253–29281.

- Chavda, Sagar and Mahesh Goyani (2020). "Hybrid approach to content-based image retrieval using modified multi-scale LBP and color features". In: *SN Computer Science* 1.6, p. 305.

- Goyani, Mahesh and Neha Chaurasiya (2020). "A review of movie recommendation system: Limitations, Survey and Challenges". In: *ELCVIA. Electronic letters on computer vision and image analysis* 19.3, pp. 0018–37.

- Goyani, Mahesh and Narendra Patel (2020). "Template matching and machine learning-based robust facial expression recognition system using multi-level Haar wavelet". In: *International Journal of Computers and Applications* 42.4, pp. 360–371.

- Payal, Parekh and Mahesh M Goyani (2020). "A comprehensive study on face recognition: methods and challenges". In: *The Imaging Science Journal* 68.2, pp. 114–127.

- Chavda, Sagar and M Goyani (2019). "Content-based image retrieval: The state of the art". In: *International Journal of Next-Generation Computing* 10.3, pp. 193–212.

- Goyani, Mahesh M (2019a). "Robust Facial Expression Recognition using Gabor and LDP Feature Fusion using CCA". in: *Int. J. Next Gener. Comput.* 10.1.

- – (2019b). "Web Enabled Spontaneous Facial Expression Database (WESFED): Challenges and Design." In: *International Journal of Next-Generation Computing (IJNGC)* 10.2, pp. 139–151.

- Goyani, Mahesh M and Narendra M Patel (2018a). "Evaluation of various classifiers for expression recognition using multi level Haar features". In: *Int. J. Next-Gener. Comput.* 9.2, pp. 131–150.

- – (2018b). "Robust Facial Expression Recognition using Local Haar Mean Binary Pattern." In: *Journal of Information Science and Engineering* 34.5, pp. 1237–1249.

🔖 Selected Conference Proceedings

- Pacheco, Sheilla Ann Bangoy, Jheanel Espiritu Estrada, and Mahesh M Goyani (2025). "Robust Face Recognition Under Adversarial Attack Using SARGAN Model and Improved Cross Triple MobileNetV1". In: *Future of Information and Communication Conference*. Springer, pp. 491–510.

- Raval, Khushali R and Mahesh M Goyani (2023). "Shot Segmentation and Replay Detection for Cricket Video Summarization". In: *2023 International Conference on Computational Intelligence and Sustainable Engineering Solutions (CISES)*. IEEE, pp. 933–938.

- Trivedi, Himani and Mahesh Goyani (2023). "A Transition of Face Recognition to Mask Face Recognition Using Improvised Attention DL Model". In: *2023 3rd International Conference on Intelligent Technologies (CONIT)*. IEEE, pp. 1–7.

- Goyani, Mahesh, Rekha Teraiya, et al. (2012). "Euler Number, Symmetry and Histogram Based Hierarchical Approach for English OCR". in: *International Conference on Computer Applications, Pondicherry, India, 2012*. Pondicherry, India, pp. 153–158.

- Gajjar, Trusha et al. (2011). "Top Down Hierarchical Histogram Based Approach for Printed Devanagari Script Character Isolation". In: *International Conference on Digital Image Processing and Pattern Recognition, Tirunelveli, Tamilnadu, India, 23-25 September, 2011*. Tirunelveli, Tamilnadu, India: LNCS Springer, pp. 55–64.

- Goyani, Mahesh, Shreyash Dutta, and Payal Raj (2011). "Key Frame Detection Based Semantic Event Detection and Classification Using Hierarchical Approach for Cricket Sport Video Indexing". In: *International Conference on Computer Science and Information Technology, Bangalore, India, 2, 3, 4-January-2011*. Bangalore, India: LNCS Springer, pp. 388–397.

- Goyani, Mahesh and Gunvantsinh Gohil (2011a). "Performance Analysis of Block and Non Block Based Approach of Invisible Image Watermarking Using SVD in DCT Domain". In: *International Conference on Computer Science and Information Technology, Bangalore, India, 2, 3, 4-January-2011*. Bangalore, India: LNCS Springer, pp. 348–357.

- – (2011b). "Robust Face Recognition in Low Dimensional Subspace Using Reconstructive and Discriminative Features". In: *IEEE International Conference on Communication Systems and Network Technologies, Katra, India, 3-5-June-2011*. Katra, India: IEEE Xplore, pp. 355–359.

- Goyani, Mahesh, Gitam Sikkenawis, and Brijesh Joshi (2011). "Geometry and Skin Color Based Hybrid Approach for Face Tracking in Color Environment". In: *International Conference on Computer Science and Information Technology, Bangalore, India, 2-4-January-2011*. Bangalore, India: LNCS Springer, pp. 339–347.
- Sheth, Ravi, Narendra Chauhan, and Mahesh Goyani (2011). "Chain Code Based Hand Written Character Recognition System Using Neural Network and Support Vector Machine". In: *International Conference on Recent Trends in Information Technology and Computer Science, Mumbai, India, 2011*. Mumbai, India, pp. 62–67.
- Goyani, Mahesh, Namrata Dave, and Narendra Patel (2010). "Performance Analysis of Lip Synchronization using LPC, MFCC and PLP Speech Parameters". In: *IEEE International Conference on Computational Intelligence and Communication Networks, Bhopal, India, 26-28-November-2010*. Bhopal, India: IEEE Xplore, pp. 582–587.

📕 Books

- Goyani, Mahesh (2020a). *Computer Graphics*. Mumbai University: TechKnowledge Publications. ISBN: 978-93-89889-99-4.
- – (2020b). *Computer Graphics*. Savitribai Phule Pune University: TechKnowledge Publications. ISBN: 978-93-89684-86-5.
- – (2020c). *Computer Graphics*. Savitribai Phule Pune University: TechKnowledge Publications. ISBN: 978-93-89684-86-5.
- – (2020d). *Computer Graphics*. Mumbai University: TechKnowledge Publications. ISBN: 978-93-89828-01-6.
- – (2019). *Computer Graphics*. Maharashtra State Board of Technical Education: TechKnowledge Publications. ISBN: 978-93-89233-96-4.
- – (2018a). *Design and Analysis of Algorithm*. Savitribai Phule Pune University: TechMax Publications. ISBN: 978-93-87523-35-7.
- – (2018b). *Design and Analysis of Algorithm*. Savitribai Phule Pune University: TechMax Publications. ISBN: 978-93-87523-36-4.
- – (2017). *Design and Analysis of Algorithm*. Punjab Technical University: TechMax Publications. ISBN: 978-93-5224-380-1.
- – (2016a). *Computer Graphics*. Punjab Technical University: TechMax Publications. ISBN: 978-93-5224-381-5.
- – (2016b). *Computer Graphics*. Gujarat Technological University: TechMax Publications. ISBN: 978-81-8492-629-3.
- – (2016c). *Design and Analysis of Algorithms*. Savitribai Phule Pune University: TechMax Publications. ISBN: 978-93-5224-371-6.
- – (2016d). *Design and Analysis of Algorithms*. Savitribai Phule Pune University: TechMax Publications. ISBN: 978-93-5224-297-9.
- – (2015a). *Analysis and Design of Algorithms*. Gujarat Technological University: TechMax Publications. ISBN: 978-93-5224-139-2.
- – (2015b). *Computer Graphics*. Shivaji University, Maharashtra: TechMax Publications. ISBN: 978-93-5224-166-8.
- – (2015c). *Computer Graphics*. Gujarat Technological University: TechMax Publications. ISBN: 978-93-5224-067-8.
- – (2015d). *Computer Graphics and Virtual Reality*. Mumbai University: TechMax Publications. ISBN: 978-93-5224-179-8.
- – (2015e). *Design and Analysis of Algorithms*. Savitribai Phule Pune University: TechMax Publications. ISBN: 978-93-5077-403-8.
- – (2015f). *Design and Analysis of Algorithms*. Uttar Pradesh Technical University: TechMax Publications. ISBN: 978-93-5224-192-7.

To see the complete list of publications, please visit:

- Books: https://maheshgoyani.in/Books.php
- Research Papers: https://maheshgoyani.in/Publication.php
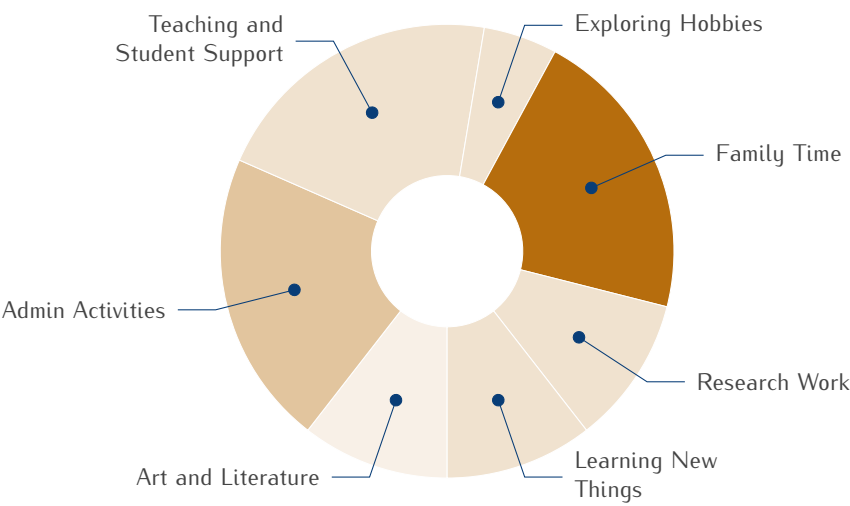
EDITORIAL ACTIVITIES

📘 Journals:

- Reviewer in IEEE Journals:
  - *IEEE Transactions on Automation Science and Engineering*
  - *IEEE Transactions on Consumer Electronics*
  - *IEEE Transaction on Internet of Things*
  - *IEEE Transactions on Geoscience and Remote Sensing*
  - *IEEE Sensors*
  - *IEEE Access*

- Reviewer in Springer Journals:
  - *Cluster Computing*
  - *International Journal of Multimedia Information Retrieval*
  - *Signal, Image and Video Processing*
  - *Soft Computing*

- Reviewer in Elsevier Journals:
  - *Computer Vision and Image Understanding*
  - *Engineering Science and Technology*

- Reviewer in Taylor & Francis Journals:
  - The Imaging Science Journal

- Reviewer in MDPI Journals:
  - *Symmetry*
  - *Applied Sciences*
  - *Agriculture*
  - *Sustainability*
  - *Mathematics*
  - *Remote Sensing*

- Reviewer in Hindawi Journals:
  - *International Journal of Computational Intelligence and Neuroscience*
  - *Journal of Systems and Information Technology*

- Member of Editorial Board:
  - *Machine Learning Research* (SciencePG Publication)
  - *International Journal of Computational Science and Information Technology*

- Reviewer: *Signal Processing (IET Publication)*
- Reviewer: *Electronic Letters on Computer Vision and Image Analysis*(Autonomous University of Barcelona)
- Reviewer: *Electronics and Telecommunication Research Institute*(Korea)
- Reviewer: *International Journal of Advanced and Applied Sciences* (IASE Publisher)
- Reviewer: *International Journal of Computer Science Issues, Mauritius*(International Association of Engineers)
- Reviewer: *International Journal of Engineering and Technology*(Singapore)
- Reviewer: *International Journal of Computer Science and Information Security*(Pittsburgh, USA)

📘 Conferences:

- Program Committee Member: *2nd Euro-Asia Conference on Frontiers of Computer Science and Information Technology* (Hongkong)
- Program Committee Member: *European Conference on Frontiers of Computer Science and Information Technology*(Amsterdam, Netherlands)
- Technical Program Committee Member & Reviewer: *First International Conference on Machine Intelligence and Research Advancement* (Katra, J & K)
- Program Committee Member: *International Conference of Advanced Computer Science & Information Technology* (Chennai – 2012)
- Member of Editorial Board: *International Journal of Computational Science and Information Technology*
- Advisory Committee Member: *International Conference on Recent Advancements in Engineering and Technology (2020)*

A DAY OF MY LIFE

Teaching and Student Support

Exploring Hobbies

Family Time

Admin Activities

Research Work

Art and Literature

Learning New Things

DR. MAHESH GOYANI

Last Updated on April 29, 2025