

# DR. MAHESH GOYANI

Educator, Researcher, Author, Photographer, Poet, Artist, Craftsman

✉ mgoyani@gmail.com  
🌐 www.maheshgoyani.in

✉ Computer Department, GEC, Modasa

📍 Aravalli, GJ, India



## EXPERIENCE

### Assistant Professor

#### Government Engineering College, Modasa

📅 Jan 2016 – Ongoing 📍 Aravalli, GJ, India

- Teaching at UG and PG Level students of Computer Engineering and Information Technology
- Institute level coordinator of MS Team for online teaching learning process
- Serving as department level PG Coordinator
- Institute level placement coordinator
- Supervising four PhD Candidates in GTU and serving as DPC member of 3 students across various universities in Gujarat

### Assistant Professor

#### L D College of Engineering

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

- Involved in Teaching at UG and PG level as well as to MCA students
- Guiding research projects
- Research Scholar at Charotar University of Science and Technology
- Administrating admissions of professional courses
- Departmental coordinator for orientation programs

### Assistant Professor

#### G H Patel College of Engineering and Technology

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

- Web site Coordinator
- Intranet Coordinator
- Coordinator of the event Infinity
- Lab Incharge

### Lecturer

#### Mahatma Gandhi Institute of Technical Education and Research Center

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

- Project coordinator for final year students

### Adhoc Lecturer

#### STBS College of Diploma Engineering

📅 Dec. 2005 – Nov. 2006 📍 Surat, GJ, India

- I/C Head, Department of Computer Engineering
- I/C Computer Center

## LIFE PHILOSOPHY

*"Sincerity always pays off."*

## EDUCATION

### 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

## CODING SKILLS

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

## TECHNICAL SPHERE

Pattern Recognition	Machine Learning
Image Processing	Data Analytics
Computer Graphics	Data Visualization
Data Mining	Algorithms
Data Structures	

## INVITED SPEAKER

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### Unsupervised Machine Learning Algorithms

Ahmedabad Institute of Technology

📅 07-11-2020

📍 Ahmedabad

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### Microsoft Teams

Government Engineering College, Modasa

📅 02-07-2020

📍 Modasa

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### Advanced Algorithms

Government Engineering College, Patan

📅 07-03-2020

📍 Patan

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### Dimension Reduction

Government Engineering College, Modasa

📅 30-11-2019

📍 Modasa

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### Various Machine Learning Techniques

Government Engineering College, Gandhinagar

📅 12-06-2019

📍 Gandhinagar

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### RapidMiner - A Lightning Fast Way to Data Mining

LDRP Institute of Technology and Research

📅 17-12-2018

📍 Gandhinagar

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### Regression Techniques and Model Performance

Birla Vishwakarma Mahavidyalaya

📅 28-11-2018

📍 V. V. Nagar

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### Cluster Analysis

Vishwakarma Government Engineering College

📅 17-10-2018

📍 Chandkheda

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### Informed Search Algorithms

Aditya Silver Oak Institute of Technology

📅 28-07-2018

📍 Ahmedabad

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### Regression techniques in ML and Dimensionality reduction in ML

LDRP Institute of Technology and Research

📅 01-05-2018

📍 Gandhinagar

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### Video Indexing and Auto Highlight Generation

Government Engineering College, Modasa

📅 06-04-2018

📍 Modasa

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## LANGUAGES

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Gujarati



English



Hindi



Urdu



## PHD RESEARCH

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### Video Summarization

Khushali Rawal

📅 2018 – on going

**Objective:** To design a framework to detect key events from the cricket video. Fundamental objective is to develop and efficient algorithm for key frame detection using hybrid features to leverage the accurate identification of the higher level semantics

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### Facial Expression Recognition

Himani Trivedi

📅 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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### Scene Classification

Sagar Chavda

📅 2020 – on going

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

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### Image Fusion

Trusha Gajjar

📅 2020 – on going

**Objective:** To enhance the quality of de-focused images by using image fusion techniques

## Technical Report Writing and Authoring Research Manuscript with LaTeX

Smt. S.R.Patel Engineering College

📅 25-06-2017

📍 Unjha

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## Feature Selection using Dimension Reduction

Shantilal Shah Engineering College

📅 16-02-2017

📍 Bhavnagar

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## Optimal Feature Selection using Dimension Reduction

Government Engineering College, Modasa

📅 07-01-2017

📍 Modasa

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## Various Techniques to Solve Traveling Salesman problem

L D College of Engineering

📅 28-06-2016

📍 Ahmedabad

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## A Closer Look @ Image

Government MCA College, Maninagar

📅 11-03-2015

📍 Ahmedabad

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## Graphics Output Primitives

Government Engineering College, Bhavnagar

📅 26-03-2012

📍 Bhavnagar

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## Video Indexing

G H Patel College of Engineering and Technology

📅 14-03-2011

📍 V. V. Nagar

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## Basics of Advanced Computer Algorithms

LDRP Institute of Technology and Research

📅 12-03-2010

📍 Gandhinagar

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## Real Time Operating System - Concept and Scheduling Algorithms

B & B Institute of Technology

📅 24-02-2009

📍 V.V.Nagar

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## Real Time Operating System

G H Patel College of Engineering and Technology

📅 19-02-2009

📍 V.V.Nagar

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## SELECTED PROJECTS

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For complete list of projects, please visit:  
<https://maheshgoyani.in/Profile.php>

## Movie Recommendation System using Collaborative and Content-Based Filtering

Neha Chaurasiya

📅 2018-2020

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## Content Based Image Retrieval using Hybrid Features

Sagar Chavda

📅 2017-2019

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## Face Recognition using Appearance Based Hybrid Features

Payal Parekh

📅 2017-2019

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## Facial Expression Recognition Using Feature Fusion and Feature Reduction

Nazeerah Sheth

📅 2016-2018

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## Minutiae based Fingerprint Recognition using Machine Learning Techniques

Urmi Soni

📅 2016-2018

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## Blur Detection and Removal using Hybrid Feature

Maria Sada

📅 2016-2018

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## Quality Control for Drug using Machine Learning Algorithm

Tejal Desai

📅 2015-2017

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## Rotation Invariant Approach for Template Matching

Janardan Bharvad

📅 2015-2017

## WEBINARS

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### Data Science - Today and Tomorrow

Swarnim Startup and Innovation University

📅 16-10-2020

📍 Gandhinagar

### Machine Learning - Introduction to Applications

Government Engineering College, Gandhinagar

📅 03-10-2020

📍 Gandhinagar

### Building Machine Learning Application

RNG Patel Institute of Technology, Isroli

📅 29-06-2020

📍 Bardoli

### Image Processing: Pixel to Project

GIDC Degree Engineering College

📅 17-06-2020

📍 Navsari

### Python Programming

S. S. Agrawal College

📅 12-06-2020

📍 Navsari

## WORKSHOPS DELIVERED

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### Introduction to Machine Learning and Implementation of ML - Algorithms through sklearn

V. V. P. Engineering College

📅 17-09-2020

📍 Rajkot

### Advanced Image Processing With Hands on Session

Indus Institute of Technology and Engineering

📅 18-02-2020

📍 Ahmedabad

### Curve Generation and Open GL

Parul Institute of Engineering and Technology

📅 18-03-2019

📍 Vadodara

### MATLAB

Government Engineering College, Modasa

📅 19-01-2019

📍 Modasa

### LATEX - A Document Preparation System

VPMP Polytechnic

📅 25-03-2017

📍 Gandhinagar

### Applications of Image Processing

## PROUD MOMENTS

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### Placement Fair

Successfully coordinated district level placement fair for 12 colleges across entire Aravalli district, 2020



### 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.



### Competitive Exams: State

Secured 4th Rank in GPSC in Gujarat State, 2011

## QUALITIES

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### Multi-tasking

I believe in the balance of life. I love art and technology in equilibrium.



### Punctual

It is essential trait of the teacher. It is foundation, not an embellishment



### Research

Published many research articles in Scopus and SCI indexed journals



### Mentoring

Love to mentor the young research minds

## ROLES

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Educator

MS Team Coordinators

Researcher

Author

PG Coordinator

Placement Coordinator

Mentor

PhD Supervisor

Photographer

Poet

Artist

Cinematographer

Painter

## Shree Swami Atmanand Saraswati Institute of Technology

📅 04-02-2017

📍 Surat

## MATLAB

### LDRP Institute of Technology and Research

📅 15-02-2015

📍 Gandhinagar

## Digital Image Processing – Concepts & Implementation

### Chandubhai S Patel Institute of Technology

📅 10-01-2015

📍 Changa

## Programming To MATLAB

### A D Patel Institute of Technology

📅 09-04-2011

📍 New V. V. Nagar

## MATLAB and Its Application in Image Processing

### LDRP Institute of Technology and Research

📅 31-03-2011

📍 Gandhinagar

## Role of MATLAB in Image Processing

### G H Patel College of Engineering and Technology

📅 14-08-2010

📍 V. V. Nagar

## MATLAB

### G H Patel College of Engineering and Technology

📅 23-01-2010

📍 V. V. Nagar

## TRAINING & FDP

### Mathematical Foundations of Data Sciences and Its Applications

#### Global Academy of Technology, Bengaluru – ATAL FDP (Online Mode)

📅 19-01-2021 to 23-01-2021

📍 1 Weeks

### Comprehensive Online Intellectual Property Rights

#### Directorate of Technical Education (Online Mode)

📅 06-07-2020 to 14-11-2020

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### E-Content Development

#### Directorate of Technical Education (Online Mode)

📅 28-07-2020 to 18-08-2020

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### Machine Learning and Deep Learning for Video Analytics

#### Manglore University, Karnataka – ATAL FDP (Online Mode)

📅 02-11-2020 to 07-11-2020

📍 1 Weeks

### Applications of Linear Algebra in Data Science

#### NIT, Andhra Pradesh – ATAL FDP (Online Mode)

## MOOC

### Deep Learning – Part 1

#### IIT – Rapor

📅 Jan 2020 – Apr 2020

📍 12 Week

### Deep Learning

#### IIT – Kharagpur

📅 Jan 2020 – Apr 2020

📍 12 Week

### Introduction To Machine Learning

#### July 2019 – Oct 2019

📅 IIT – Madras

📍 12 Week

### Machine Learning for Engineering and Science Applications

#### IIT – Madras

📅 Jan 2019 – Apr 2019

📍 12 Week

### Programming, Data Structures and Algorithms using Python

#### IIT – Madras

📅 July 2020 – Dec 2020

📍 08 Week

### Data Science for Engineers

#### IIT – Madras

📅 Jan 2019 – Apr 2019

📍 08 Week

## TECHNICAL PROFILES

- + Research Gate
- + Google Scholar
- + Semantic Scholar
- + Publons
- + ORCID

## DESIGN SKILLS

Powerpoint	●	●	●	●	●
Adobe Photoshop	●	●	●	●	●
Adobe Premiere Pro	●	●	●	●	●
Adobe Lightroom	●	●	●	●	●
Camtasia	●	●	●	●	●
Snapseed	●	●	●	●	●
Canva	●	●	●	●	●
Filmora	●	●	●	●	●

📅 07-09-2020 to 11-09-2020 📍 1 Weeks

### Assessment and Evaluation in Higher Education

MMMNMTT, IISER, Bhopal (Online Mode)

📅 27-08-2020 to 04-09-2020 📍 1 Weeks

### Induction: Phase - II

NITTTR, Bhopal

📅 22-10-2018 to 02-11-2018 📍 2 Weeks

### Cyber-Physical Systems - Theory and Applications

DAICT, Gandhinagar

📅 08-04-2017 to 12-04-2017 📍 1 Week

### Application of Optimization Techniques in Engineering for Research

Government Engineering College, Modasa

📅 02-01-2017 to 13-01-2017 📍 2 Week

### Use of Blog in Teaching Learning

NITTTR, Bhopal

📅 06-06-2016 to 10-06-2016 📍 1 Week

### Design and Development of Dynamic Website

NITTTR Extension Center, RCTI, Ahmedabad

📅 12-07-2015 to 18-07-2015 📍 2 Week

### Karmyogi Talim

Swaminarayandham, Gandhinagar

📅 12-12-2013 to 14-12-2013 📍 3 Days

### Induction Training - Phase: I

NITTTR Extension Center, RCTI, Ahmedabad

📅 29-04-2013 to 10-05-2013 📍 2 Week

### Advance Java

Tata Consultancy Service, Gandhinagar

📅 18-06-2012 to 22-06-2012 📍 1 Week

### ANN and Optimization Technique and Applications

NITTTR, Chandigarh

📅 21-11-2011 to 25-11-2011 📍 1 Week

## REFEREES

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### Dr. N. M. Patel

📍 Birla Vishwakarma Mahavidyalaya

✉ nmpatel@bvmengineering.ac.in

Department of Computer Engineering, BVM, V.V.Nagar, India

### Dr. S. M. Shah

📍 L D College of Engineering

✉ sanjay\_shah\_r@yahoo.com

Department of Computer Engineering, LDCE, Ahmedabad, India

# SELECTED PUBLICATIONS

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For complete list of publications, please visit: <https://maheshgoyani.in/Publication.php>

## Books

- Goyani, Mahesh (2020a). *Analysis and Design of Algorithms*. Gujarat Technological University: TechKnowledge Publications. ISBN: In Press.
- – (2020b). *Computer Graphics*. Mumbai University: TechKnowledge Publications. ISBN: 978-93-89889-99-4.
- – (2020c). *Computer Graphics*. Savitribai Phule Pune University: TechKnowledge Publications. ISBN: 978-93-89684-86-5.
- – (2020d). *Computer Graphics*. Savitribai Phule Pune University: TechKnowledge Publications. ISBN: 978-93-89684-86-5.
- – (2020e). *Computer Graphics*. Mumbai University: TechKnowledge Publications. ISBN: 978-93-89828-01-6.
- – (2019a). *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.

## Journal Articles

- Mahesh Goyani, Neha Chaurasiya (2020). "A Review of Movie Recommendation System: Limitations, Survey and Challenges". In: *Electronic Letters on Computer Vision and Image Analysis* 19 (3), pp. 18–37.
- Payal Parekh, Mahesh Goyani (2020). "A comprehensive study on face recognition - methods and challenges". In: *The Imaging Science Journal* 68 (2), pp. 114–127.
- Sagar Chavda, Mahesh Goyani (2020). "Hybrid approach to Content-Based Image Retrieval using modified multi-scale LBP and color features". In: *SN Computer Science, SPRINGER NATURE* 1 (6), pp. 1–15.
- Goyani, Mahesh (2019b). "Robust Facial Expression Recognition using Gabor and LDP Feature Fusion using CCA". in: *International Journal of Next-Generation Computing* 10 (1), pp. 36–55.
- – (2019c). "Web Enabled Spontaneous Facial Expression Database (WESFED): Challenges and Design". In: *International Journal of Next-Generation Computing* 10 (2), pp. 139–151.
- Sagar Chavda, Mahesh Goyani (2019). "Content-Based Image Retrieval: The State of the Art". In: *International Journal of Next-Generation Computing* 10 (3), pp. 193–212.
- Mahesh Goyani, Narendra Patel (2018a). "Evaluation of Various Classifier for Expression Recognition using Multi Level Haar Features". In: *International Journal of Next-Generation Computing* 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.



- Mahesh Goyani, Narendra Patel (2017a). "Judgmental Feature Based Facial Expression Recognition Systems and FER Datasets - A Comprehensive Study". In: *International Journal of Next-Generation Computing* 8 (1), pp. 62–81.
- – (2017b). "Multi-Level Haar Wavelet based Facial Expression Recognition using Logistic Regression". In: *Indian Journal of Science and Technology* 10 (9), pp. 1–9.
- – (2017c). "Recognition of Facial Expressions using Local Mean Binary Pattern". In: *Electronic Letters on Computer Vision and Image Analysis* 16 (1), pp. 54–67.
- – (2017d). "Template matching and machine learning-based robust facial expression recognition system using multi-level Haar wavelet". In: *International Journal of Computers and Applications*, pp. 1–12.

## 📌 Conference Proceedings

- 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.

## EDITORIAL ACTIVITIES

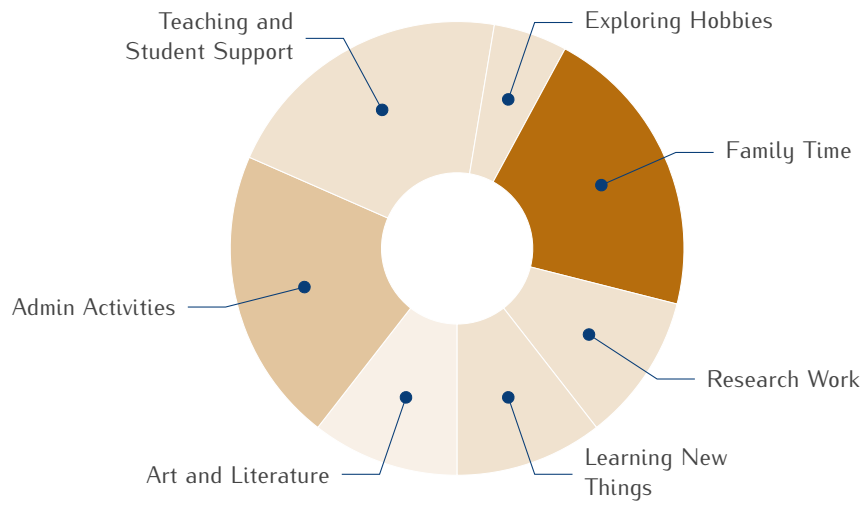
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- Editorial Board Member: *Machine Learning Research* (SciencePG Publication)
- Reviewer: *Soft Computing* (SPRINGER Publication)
- Reviewer: *Signal Processing* (IET Publication)
- Reviewer: *International Journal of Computational Intelligence and Neuroscience* (Hindawi Publication)
- Reviewer: *Journal of Systems and Information Technology* (Hindawi Publication)
- Reviewer: *International Journal of Advanced and Applied Sciences* (IASE Publisher)
- Program Committee Member: *2nd Euro-Asia Conference on Frontiers of Computer Science and Information Technology* (Hongkong)
- 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

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DR. MAHESH GOYANI

 [www.maheshgoyani.in](http://www.maheshgoyani.in)