DEPARTMENT OF CSM

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ADITYA

Institute of Technology and Management

(An autonomous institution)

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ADITYA

Institute of Technology and Management

(An autonomous institution)

Department of CSM

Vision and Mission of the Institute

Vision

To evolve into a premier engineering institute in the country by continuously enhancing the range of our competencies, expanding the gamut of our activities and extending the frontiers of our operations.

Mission

Synergizing knowledge, technology and human resource, we impart the best quality education in Technology and Management. In the process, we make education more objective so that efficiency for employability increases on a continued basis.

Vision and Mission of the Department

Vision

To develop competent and socially responsible engineers in the domain of ArtificialIntelligence & Machine Learning, Data Science for noteworthy contributions to the society.

Mission

M1. To educate the students in fundamental principles of computing and develop the skills needed to solve practical problems using contemporary computer-based technologies.
M2. To provide State-of-the-art computing laboratory facilities to promote industry-institute interaction to enhance student's practical knowledge.
M3. To inculcate self-learning abilities, team spirit, and professional ethics among the students to serve society.

Chairman's Message



At AITAM, we are committed to excellence in everything we do. We strive to mould the students in balancing intellectual and practical skills to become leaders in all the fields of Technical know-how and Management. We have created the finest facilities for the students to make the most of their scholastic pursuits. We are closely aligned with the corporate world which ensures exchange of ideas and experiences that keep our curricula focused on current developments and challenges in the field of engineering. We are firmly committed to research and consulting activities to contribute to the development of the discipline of engineering. Our vitality lies in our spirit of innovation. Our strength lies in our pragmatic approach. Our success lies in our will to do.

Dr. K. Someswara Rao
CHAIRMAN

Secretary's Message



Aditya Institute of Technology and Management is founded to meet the increasing demand for competent engineering graduates. Within a short span of its inception, AITAM has grown to be a premier engineering college of its kind and has won laurels and kudos from the industry. The faculty and staff in AITAM are dedicated to providing first-class education that instills strong and potent basic knowledge for sound practice in science and engineering for the well-being of the society. The Institute offers curricula that nurtures creative thinking and prepares students for productive and rewarding careers. The Institute offers programmes that deepen learning experiences of our students and prepare them for successful careers as engineers.

Sri L.L. Naidu
SECRETARY

Director's Message



Engineering education at AITAM is indeed a rewarding intellectual experience. The Institute prepares the engineering professionals of tomorrow imbued with insight, imagination and ingenuity to flourish as successful engineers. Our programs are attuned to the needs of the changing times. The classrooms are ultra-modern; the library and labs are cutting-edge; and all the members of the faculty are workaholic professionals and masters in their fields. Not surprisingly, our students are recruited by such renowned organizations as HCL, Satyam, WIPRO, INFOSYS, TCS, Visual Soft, Innova-Solutions and InfoTech. The exceptional dedication of our students, faculty and staff, and our collaborations with Industry and other institutions ensure that the Institute is well-poised to create a unique niche in the horizons of engineering education.

Prof. V.V. Nageswara Rao
DIRECTOR

Principal's Message



It is only through knowledge that man attains immortality. Knowledge has to expand or grow to remain as knowledge. The road to excellence is toughest, roughest and steepest in the Universe. The world requires and honors only excellence. Available information has to be directed by wisdom and intelligence to create new knowledge. Promotion of creativity is the new role of education. It is only through creative thinking that the present and future problems can be addressed to find dynamic solutions. Technology should be used to help remove poverty from the world. In fact forty per cent of the world's poor are in India. Confidence leads to capacity. It is faith in oneself that produces miracles. Education at AITAM helps build character, strengthen the mind, expand the intellect and establish a culture of looking at problems in a new perspective. The student is put through rigorous training so that he can stand on his own feet after leaving the portals of the Institute.

Dr.A.S.Srinivasarao
PRINCIPAL

HOD's Message



The Department of **CSM** strongly committed to impart innovative and quality technical education with high standards. The field of Artificial Intelligence & Machine Learning is a diverse field which has a significant role in the development of cutting edge technology. The faculty of the department is committed to prepare our students by providing the expertise and proficiency in Artificial Intelligence and its related fields needed to thrive in modern society. ML has become a fundamental tool for augmenting the human knowledge, which is an essential part of creation, discovery and innovation. The main goal of the Department is to provide experimental learning opportunities such as hands-on training, project-based courses, research projects and internships which provide a solid foundation to work in interdisciplinary teams that invent the future. The curriculum at the Department of AI&ML at is meticulously planned and continuously updated in way to incorporate the various demands of the IT industry trends. An exposure to real world problems in this era of technology is a must and the every candidate is provided with the right environment to shape into a confident individual having the necessary skill set to fit in any role at the industrial market.

Dr.M.V.B ChandraSekhar

HOD of CSM

JOURNALS/CONFERENCES ABSTRACTS

(STUDENTS AND FACULTY)

"Brightness PreservingMedical Image Contrast Enhancement Using Entropy-Based Thresholding and Adaptive Gamma Correction with Weighted Distribution"

Abstract:

The contrast enhancement has a significant role to play in improving the visibility and interpretation during analysis by medical experts and machines. The enhancement of image must preserve the original image characteristics such as restoring the orginal brightness. The main aim of proposed method is to improve the visual quality while retaining image details such as entropy and brightness of image. We proposed a technique for contrast enhancement that uses entropy Otsu thersholding as the base method for binarization,and then one of the sub-images is equalized using adaptive gamma correction with weighted distribution while the other part is equalized with contrast limited adaptive histogram equalization(CLAHE) technique. The results are compared with benchmark contrast enhancing techniques Such as MMBEBHE,BBHE, and with Otsu thersholding binarization technique. The results are evaluated on several quantitative parameters such as structural similarity index measurement (SSIM), average mean brightness error (AMBE), FSIM and entropy.

"Contrast Enhancement of Medical Images Using Otsu Thresholding"

Abstract:

Low variation between medical pictures does not produce accurate interpretations during analysis or by medical professionals or by machines in an automated diagnostic system. Contrast enhancement technique outcomes in high contrast images to increase the visibility and interpretability. We proposed a hybrid method for contrast enhancement that uses a thresholding by Otsu as the fundamental procedure for binarization and one of the sub-image histograms is histogram equalized while using CLAHE to equalize the other portion. The results are compared with state-of-the-art contrast enhancement techniques such as MMBEBHE and BBHE and evaluation based on various quantitative image quality assessment metrics such as structural similarity index measurement (SSIM), average mean brightness error (AMBE), and mean absolute error (MAE), FSIM and entropy.

“An in-depth and contrasting survey of meta-heuristic approaches with classical feature selection techniques specific to cervical cancer”

Abstract:

Data mining and machine learning algorithms’ performance is degraded by data of high-dimensional nature due to an issue called “curse of dimensionality”. Feature selection is a hot research topic where a subset of features are selected to reduce the dimensionality and thereby increasing the accuracy of learning algorithms. Redundant and irrelevant features are eliminated. Cervical cancer is most commonly occurring disease and driving reasons for untimely mortality among ladies worldwide especially in emerging low income nations like India. However, literature shows that the early identification and exact conclusion of cervical malignant growth can increase the survival chances. The disease does not show signs of its presence in the early stages of its growth. Automated classification and diagnosis of cervical cancer using machine learning and deep learning techniques is in high demand as it allows timely, accurate and regular study of the patient’s health progress. Meta-heuristics algorithms provide a global problem independent optimal solution and applied on feature selection problem since decades. In spite of having a good number of literature, there is no survey on feature selection techniques applied to cervical cancer dataset. This paper presents a brief survey on meta-heuristic, its variants, hybrid meta-heuristic and hyper-heuristic techniques. This survey summarizes the feature selection techniques applied to the cervical cancer data to identify the research gap thereby guiding the researchers in the future research direction. The summary of categorization of the techniques such as nature-inspired or non-nature inspired and trajectory or population based is also highlighted. The survey provides a comparative literature review involving classical feature selection techniques and feature selection using metaheuristic algorithms for cervical cancer classification application.

Editorial Board

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