ST. JOSEPH'S COLLEGE

OF ENGINEERING AND TECHNOLOGY

APPROVED BY AICTE NEWDELHIL AFFILIATED TO ANNA UNIVERSITY. CHENNALD

PROCEEDINGS ON

3rd

INTERNATIONAL CONFERENCE ON INTELLECTUAL RESEARCH IN SCIENCE, ENGINEERING AND MANAGEMENT



ICIRSEM 2023

21.04.2023

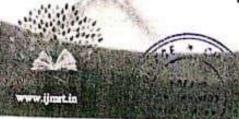
Dr.M.JEYAKUMAR, M.E.Ph.D.

PRINCIPAL

CHRIST THE KING ENCINEERING COLLECT, Clicksommobilityon: Village.

Karymadia, Metraphy by the

Casabanas - mas 14



ISSN (Print): 2663-2381, ISSN (Online): 2663-4007

International Journal of Multidisciplinary Research Transactions 2023

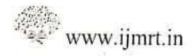
© The Editor(s) (if applicable) and The Author(s), under exclusive license to International Journal of Multidisciplinary Research Transactions. 2023

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Proceeding imprint is published in International Journal of Multidisciplinary Research Transactions. (IJMRT) is an Open Access, International, Monthly, Peer-Reviewed journal.





Dr. M. JEYAK UNIAR, M.E. Ph.D.
PKINCIPAL
CHRIST THE KING ENGINEERING COLLEGE,
Chikkarampatayam Viltage,
Karamani, Mempalayam Talak,
Combaiore - 641 104.

78.	ICIRSEM-2023_paper_7	DDOS CYBER-ATTACK DETECTION SCHEME BASED ON MACHINE LEARNING ALGORITHM IN SDN T. B. Dharmaraj, N. R. Gayathri, K. Sona, R. Pradeepa Parkavi	93
79.	ICIRSEM-2023_paper_79	SEARCHING STRATEGIES ANALYSIS FOR PROBLEM SOLVING IN ARTIFICIAL INTELLIGENCE S. Vasumathi Kannaki and T. B. Dharmaraj	94
80.	ICIRSEM-2023_paper_80	A study on Quantum Neural Networks for Computation N. R. Gayathiri, T. B. Dharmaraj, K. Sona, R. Pradeepa Parkayi	95
81,	ICIRSEM-2023_paper_81	INTELLIGENT HVAC SYSTEMS: ENHANCING PERFORMANCE THROUGH AI S. Prabhu, M. Jeyakumar, T. B. Dharmaraj	96
82.	ICIRSEM-2023_paper_82	ANOMALY ACTIVITY DETECTING BY MACHINE LEARNING TECHNIQUES A. Kingsly Jabakumar, J. Saranraj, T. Arun, M Gayathri, P. Priyanka, S. E. Aravind	97
33.	ICIRSEM-2023_paper_83	REDUCTION OF ACID MIST EMISSION IN AUTOMOTIVE FORMATION PROCESS OF LEAD ACID BATTERY MANUFACTURING INDUSTRY BY MEANS OF AN ELECTROLYTE ADDITIVE S. Logesh Kumar	98
4.	ICIRSEM-2023_paper_84	AN IoT BASED PATIENT MONITORING SYSTEM S. Prabhavathy, L. Pavithra, V. Nithya, C. Kannika	99



International Journal of Multidisciplinary Research Transactions ISSN (Print):2063-2381, ISSN (Online):2663-4007 www.ijmrt.in

D. AND THE VARS TIMEAR, MER. Ph.D.
PKING PART THE KING ERGINGHAM VILLEGE,
Chickerampenayam Villege
Karmanan, Meriopalayam Tahuk,
Colaborore - 641 104.

ICIRSEM-2023 paper 81

INTELLIGENT HVAC SYSTEMS: ENHANCING PERFORMANCE THROUGH AI

S. Prabhu^{1*}, M. Jeyakumar¹, T. B. Dharmaraj²

1,*Department of Mechanical Engineering, Christ the King Engineering College, Karamadai,
Coimbatore – 641 104

²Department of Computer Science and Engineering, Christ the King Engineering College, Karamadai, Coimbatore – 641 104

Abstract

gerwaatur Adiiga

The use of Artificial Intelligence (AI) in Heating, Ventilation, and Air Conditioning (HVAC) systems is rapidly gaining traction in the industry. This work delves deeper into the key applications of AI in HVAC, including energy optimization, predictive maintenance, and the development of intelligent HVAC controllers. AI algorithms can help improve HVAC systems' energy efficiency by analyzing data from various sensors and adjusting the HVAC systems' operations accordingly. Predictive maintenance can be enhanced by using machine learning algorithms to detect and predict system faults before they occur, leading to reduced downtime and improved reliability. Additionally, AI-powered HVAC controllers can learn and adapt to building occupants' preferences and usage patterns, leading to improved indoor air quality and occupant comfort. The potential percentage of performance augmentation that can be achieved through the use of AI in HVAC systems can vary depending on various factors, such as the specific AI algorithms and techniques employed, the complexity of the HVAC system, and the type of building or application. However, this work has shown us that AI can lead to significant improvements in HVAC system performance, with potential energy savings ranging from 10% to 25%.

96

International Journal of Multidisciplinary Research Transactions ISSN (Print) 266 (2381, ISSN (Online):2663-4007

Dr.M. JEYAKUMAR, M.E..Ph.D.
PRINCIPAL
CHRIST THE KING ENGINEERING COLLEGE,
Chikkarampalayam Village.
Karamadai. Mettupalayam Tanuk.
Combatore - 641 104