

Futuristic Trends in
Artificial Intelligence

Volume 3, Book 6, 2024, IIP Series



Futuristic Trends in

ARTIFICIAL INTELLIGENCE

Volume 3, Book 6, 2024, IIP Series



Title of the Book: Futuristic Trends in Artificial Intelligence

Edition: Volume 3, Book 6, 2024, IIP Series

Copyright © 2024 Authors

No part of this book may be reproduced or transmitted in any form by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the copyright owners and publisher.

Disclaimer

The authors are solely responsible for the contents published in this book. The publisher or editors do not take any responsibility for the same in any manner. Errors, if any, are purely unintentional and readers are requested to communicate such errors to the editors or publishers to avoid discrepancies in future.

E-ISBN: 978-93-6252-230-6

Publisher, Printed at & Distribution by:

Selfypage Developers Pvt. Ltd.,
Pushpagiri Complex,
Beside SBI Housing Board,
K.M. Road Chikkamagaluru, Karnataka.
Tel.: +91-8861518868
E-mail: info@iipseries.org

IMPRINT: I I P Iterative International Publishers

PREFACE

A major objective of this book series is to drive innovation in every aspect of Artificial Intelligent. It offers researchers, educators and students the opportunity to discuss and share ideas on topics, trends and developments in the fields of artificial intelligence, machine learning, deep learning and more, big data and computer science, computer intelligence and Technology. It aims to bring together experts from various disciplines to emphasize the dissemination of ongoing research in the fields of science and computing, computational intelligence, schema recognition and information retrieval. Articles are requested that describe original work in the below areas and related technologies but not limited to

1. Machine Learning & Deep Learning Applications
2. Robotics including Autonomous Guidance Applications
3. Video Surveillance and Related Applications
4. Image Retrieval and Visual Search
5. Human Computer Interaction and Graphics
6. Image and Video Communications
7. Bio-medical and Medical imaging
8. Remote Sensing
9. Natural Language Processing
10. Fuzzy Systems
11. Block Chain
12. Applications from the Following fields
13. Smart sensors
14. Big Data
15. Visualization
16. Assisted Living for the Aging Population
17. Medical and Biomedical Applications
18. Commercial Development
19. Energy Harvesting
20. Industrial Applications
21. Internet of Things
22. Non-Destructive Evaluation
23. Remote Sensing
24. Smart Agriculture
25. Smart Buildings Smart Cities and Communities
26. Electrical and Electronic Materials and Process
27. Power Systems and Energy Engineering
28. Soft Computing Techniques in Power Systems
29. Transmission and Distribution System and Apparatus
30. Instrumentation & Feedback Control Systems
31. Power Electronics & Energy Efficient Drives
32. Renewable Power Conversion Technologies
33. Power Quality Improvement Techniques
34. Electrical Machines and Industry Applications
35. Bio-medical Engineering
36. Intelligent Systems
37. High Voltage Engineering & Insulation Technology
38. Photo/Opto Electronics
39. Geo-informative Systems
40. Grid Computing
41. Pervasive Computing
42. Data Mining and Cloud Computing
43. Expert Systems
44. Mechanical Engineering
45. Civil Engineering
46. Chemical Engineering
47. Materials Engineering
48. Building Materials
49. Physics
50. Chemistry
51. Mathematics

EDITORIAL BOARD MEMBERS

Jehan Alsafi

Media faculty

University of Thi_Qar

Digital media department

Iraq.

Anju

Assistant professor

Sri eshwar college of engineering

Coimbatore, Tamil Nadu, India.

Rekha. B

Assistant Professor

Department of Horticulture

College of Agriculture

Hassan, Karnataka, India.

Bheema Shankar Maruvada

Senior Software Engineer

International Software Systems Inc

USA.

Dr. Kishore Kumar M

Professor

CMR Technical Campus Kandlakoya

Telangana, India.

Dr. Dhanamma Shankar Jagli

Assistant Professor and Deputy HoD,

V.E.S. Institute of Technology,

Mumbai, Maharashtra, India.

Madhu Singh

PGT and HOD

Department of Computer Science

Delhi Public School

Ghaziabad, India.

Adnaan Arbaaz Ahmed

Security Analyst

University of Central Missouri

US.

N Vivekanandan

Scientist

Hydrometeorology

Division Central Water

and Power Research Station

Maharashtra, India.

Dr. K.Abirami

Assistant professor

Vels institute of Science

Technology and Advanced Studies

Chennai, India.

Dr. Pournima Godge

HOD

Terna Dental College

Mumbai, India.

Sarath Surendran

Communication Associate

HLL Life care Limited

Kerala, India.

Sujatha Kesavan

Professor

Department of EEE

Dr. MGR Educational

and Research Institute

Chennai, India.

Prof. Untung Rahardja

Professor

Faculty of Science and Technology

University of Raharja

Banten, Indonesia

Probhat Pachung

Assistant Professor

Dyal Singh College

University of Delhi

India.

Mr. Alok Mishra

Assistant Professor

Computer Science

Research area Programming

Language & Software Dev BCIIT

Kalkaji, Delhi, India.

Dr Sushma Bahuguna

Sr. Assistant Professor

BCIIT

Kalkaji, Delhi, India.

Javaid Ahmad Shah

Assistant Professor
Jammu and Kashmir Institute
of Mathematical Sciences
Kashmir, India.

Kishorebrbm

Associate Professor
CSE Rose krisha
Sai Prakasam Ongole Prakasam
Andra Pradesh, India.

Stephanie Noronha

Research scholar
Sarvajanik college of
engineering and technology
Surat, India.

Mr. Pawan Makhija

Assistant Professor
Department of Information technology
Acropolis Institute of
Technology and Research
Madhya Pradesh, India.

Vamsikrishna Managalapalli

Professor
Department of IT
Aditya Engineering College (A)
Surampalem, India.

Priyanka Sharma

Assistant Professor

Department of Computer Science and Engineering

Swami Keshvanand Institute of Technology

Management and Gramothan

Jaipur, Rajasthan, India.

Tamil Thendral M

Assistant Professor

Vel Tech Rangarajan

Dr. Sagunthala R&D Institute

of Science and Technology

Chennai, India.

Maria

Professor

Immaculate College for Women

Tamil Nadu, India.

Dr. Ravi Kanth Motupalli

Assitant Professor

Department of Computer Science Engineering

Vnr Vignana Jyothi

Institute of Engineering and Technology

Hyderabad, Telangana, India.

Akhilesh Kumar Yadav

I-PDF, ESED, IIT Bombay

Mumbai, India

Dr. Mahamuda Sultana

Associate Professor
Department of CSE
Guru Nanak Institute of Technology
Sodepur, Kolkata, India.

Naveen Kumar

Assistant Professor
Department of IT
Sona College of Technology
Salem, Tamilnadu, India

Dr. Ekbal Rashid

Associate Professor
RTC Institute of Technology
Jharkhand, India.

Avinash Pokhriyal

Director
Hillman group of institutions Madhavgunj
Agra ,Uttar Pradesh, India.

Sourabh Munnoli

Technical Assistant
University of agricultural sciences
Dharwad, India.

Bhagyashree D. Shendkar

Assistant Professor
MIT Art Design and Technology
Pune, India.

Dr. Anjali Dixit

HoD/Associate Professor
School of Legal Studies & Governance
Career Point University
Kota, Rajasthan, India.

Vijaya Prakash Rajanala

Professor
SR University
Warangal, Telangana, India.

Dr. Mubashir Hassan

Research Associated
SMHS Hospital Shreen bagh
India.

Payel Ray

Assistant Professor
Maulana Abul Kalam Azad
University of Technology
West Bengal, India.

CONTENTS

	PAGE NO.
PART 1	
Chapter 1 ARTIFICIAL INTELLIGENCE IN THE FOOD AND AGRICULTURE SECTORS.....	1-7
Chapter 2 MULCHING: A SUSTAINABLE TECHNIQUE TO IMPROVE THE CROP PRODUCTION.....	8-16
Chapter 3 RECENT ADVANCES IN FOOD ANALYSIS.....	17-24
PART 2	
Chapter 1 A COMPARATIVE ANALYSIS OF NOMINAL ENCODING TECHNIQUES FOR BINARY CLASSIFICATION TASKS	25-37
Chapter 2 ARTIFICIAL INTELLIGENCE (AI) APPLICATION FOR YOUTH MENTAL HEALTH.....	38-47
Chapter 3 THE FUTURE OF THE WEB: A LOOK AT WEB 3.0.....	48-56
PART 3	
Chapter 1 DIFFERENT AI TOOLS FOR STUDENTS.....	57-62
PART 4	
Chapter 1 AUTONOMOUS ROBOTICS: ADVANCEMENTS CHALLENGES, AND FUTURE DIRECTIONS	63-69
Chapter 2 AN OVERVIEW OF SPEECH EMOTION RECOGNITION USING MACHINE LEARNING TECHNIQUES	70-76

PART 5

Chapter 1 IMAGE AND VIDEO COMMUNICATION: ENHANCING VISUAL EXPERIENCES IN THE DIGITAL AGE.....	77-84
--	--------------

PART 6

Chapter 1 A REVIEW OF SEGMENTATION TECHNIQUES ON MEDICAL IMAGES.....	85-111
---	---------------

Chapter 2 ANALYSIS AND DEVELOPMENT OF A FEATURE SELECTION & DEEP LEARNING METHOD FOR DETECTING AND LOCATING PERSONAL THINGS USING AUDIO SIGNALS & IMAGE PROCESSION.....	112-130
--	----------------

PART 7

Chapter 1 FISH SPECIES IDENTIFICATION AND CLASSIFICATION: A DEEP LEARNING APPROACH.....	131-136
--	----------------

PART 8

Chapter 1 PHISHING ATTACKS DETECTION USING MACHINE LEARNING APPROACH.....	137-140
--	----------------

Chapter 2 TRANSFORMING EDUCATION WITH CONVERSATIONAL AI: ENHANCING LEARNING EXPERIENCES AND STUDENT ENGAGEMENT.....	141-150
---	----------------

Chapter 3 ARTIFICIAL INTELLIGENCE IN MEDICAL SCIENCE: EARLY LUNG CANCER CELL DETECTION USING DEEP LEARNING.....	151-159
---	----------------

Chapter 4 CROP GURU: PRECISE AND RAPID PLANT DISEASE DIAGNOSIS USING DEEP LEARNING.....	160-168
--	----------------

Chapter 5 OBJECT DETECTION FOR TRAFFIC ANALYSIS.....	169-176
---	----------------

PART 9

Chapter 1 ARTIFICIAL INTELLIGENCE (AI) AND CLIMATE ACTION (SDG- 13) PROFOUND IMPACT ON HUMANITY: IMPACTS, ADAPTATION AND VULNERABILITY LENSING LEGAL PROVISIONS.....	177-186
---	----------------



IIP Series is online, open access, peer-reviewed, interdisciplinary Journal. IIP Series provides a comprehensive solution for conferences and edited books that covers research topics across various scientific, technical, and medical disciplines. It aims at disseminating high-level research results and developments to researchers and research groups. It mainly focuses on presenting practical solutions for the current problems in Applied Sciences and Applied Social Sciences. It features original research work, reviews, case reports, tutorial papers, and accounts of practical developments.

Futuristic Trends in Artificial Intelligence

Volume 3 Book 6, 2024, IIP Series

ISBN : 978-93-6252-230-6



9 789362 522306