

TABLE OF CONTENTS

Artificial Intelligence in Medicine

PART 1. Foundations of AI in healthcare

1. Exploring deep learning approaches for cardiac arrhythmia diagnosis

M S SUPRIYA, L YASHASWINI, AND K S ARVIND

2. Neural networks and LDA-based machine learning framework for the early detection of breast cancer

SAANJHI SARAOGI, SAKSHI SARAOGI, ASNATH VICTY PHAMILA Y, AND KALAIVANI KATHIRVELU

3. Advanced deep learning algorithms for early ocular disease detection using fundus images

SHUBHASHREE A, DIVYA B S, AND THOMPSON STEPHAN

PART 2. Disease detection and diagnosis

4. A vision transformer-based approach for brain tumor detection

PIYUSH KUMAR, RADHIKA GOYAL, SHUBHAM GARG, SHUCHI MALA, RONIT BALI, AND ANUKANSHA SHARMA

5. Early detection of skin cancer through human-computer collaboration

PIYUSH KUMAR, RISHI CHAUHAN, ACHYUT SHANKAR, AND THOMPSON STEPHAN

6. Improved mass detection in mammogram images with Dual Tree Complex Wavelet Transform and Fourier Descriptors

M KANCHANA, R NARESH, C N S VINOTH KUMAR, AND P PANDIARAJA

7. A deep learning-based model for early detection of COVID-19 using chest X-ray images

S PUNITHA, VAISHALI R KULKARNI, AND THOMPSON STEPHAN

8. Detection of seizure activity in fMRI images using deep learning techniques

ABHISHEK SAIGIRIDHARI, ABHISHEK MISHRA, ADITI MAHADWARE, AARYA TUPE, AND DHANALEKSHMI YEDURKAR

PART 3. Disease prediction and public health

9. Improving prediction accuracy for neo-adjuvant chemotherapy response in breast cancer through 3D image segmentation and deep learning techniques

K V RANJITHA AND T P PUSHPHAVATHI

10. A machine learning predictive framework for diabetes management using blood parameters

A POONGUZHALI, P RAMKUMAR, REJI THOMAS, S TAMIL SELVAN, AND ANGEL LATHA MARY

11. A combined neuro-fuzzy and Naive Bayes approach for swine flu disease prediction

P SANTHI, M SATHYA SUNDARAM, AND P PANDIARAJA

12. Enhancing decision-making in maternal public healthcare using a knowledge discovery-based predictive analytics framework

SHELLY GUPTA, JYOTI AGARWAL, AND DISHA MOHINI PATHAK

PART 4. Patient care and enhancements

13. Enhancing patient care and treatment through explainable AI: A gap analysis

SHYNI CARMEL MARY S, DHYANA SHARON ROSS, ANBUMANI BALA, AND JOE ARUN

14. Improved medical image captioning for chest X-rays using a hybrid VGG-ELECTRA model

J LIMSA JOSHI, J CHRISTINA, L REMEGIUS PRAVEEN SAHAYARAJ, V J SHARMILA, AND ASHWIN BALASUBRAMANIAN

15. Diagnosing Parkinson's disease using a deep learning model based on electromyography sensors

P PADMA PRIYA DHARISHINI, B R KARTHIKEYAN, SURYA TEJAS V, JASH SINGH, SUMUKHA BHAT, AND G KARTHIK

16. Enhancing heart disease prediction with Hybridized KNN-MOPSO algorithm

R MANORANJITHAM, S PUNITHA, AND THOMPSON STEPHAN

Index.