

# Contents

## Preface — VII

## List of contributors — XIII

María de Lourdes Sánchez, Adrián Will, Andrea Rodríguez,  
Luis O. González-Salcedo

- 1 A review of bone tissue engineering for the application of artificial intelligence in cellular adhesion prediction — 1**

Divya Gaba, Nitin Mittal

- 2 Implementation and classification of machine learning algorithms in healthcare informatics: approaches, challenges, and future scope — 21**

Sandeep Raj, Arvind Choubey

- 3 Cardiac arrhythmia recognition using Stockwell transform and ABC-optimized twin SVM — 35**

Shweta Sinha, Shweta Bansal

- 4 Computational intelligence approach to address the language barrier in healthcare — 53**

Yogesh Kumar, Manish Mahajan

- 5 Recent advancement of machine learning and deep learning in the field of healthcare system — 77**

Prabhsimar Kaur, Vishal Bharti, Srabanti Maji

- 6 Predicting psychological disorders using machine learning — 99**

Sweta Kumari, Sneha Kumari

- 7 Automatic analysis of cardiovascular diseases using EMD and support vector machines — 131**

J Naveenkumar, Dhanashri P. Joshi

- 8 Machine learning approach for exploring computational intelligence — 153**

Simrandeep Singh, Nitin Mittal, Harbinder Singh

- 9 Classification of various image fusion algorithms and their performance evaluation metrics — 179**

Dhrubasish Sarkar, Medha Gupta, Premananda Jana, Dipak K. Koley

**10 Recommender system in healthcare: an overview — 199**

Purva Ekatpure, Shivam

**11 Dense CNN approach for medical diagnosis — 217**

Dhaval Bhoi, Amit Thakkar

**12 Impact of sentiment analysis tools to improve patients' life in critical diseases — 239**

Diksha Thakur, Nitin Mittal, Simrandeep Singh, Rajshree Srivastava

**13 A fuzzy entropy-based multilevel image thresholding using neural network optimization algorithm — 253**

Daiyaan Ahmed Shaik, Vihal Mohanty, Ramani Selvanambi

**14 Machine learning in healthcare — 277**

Vanaja Ramaswamy, Saswati Mukherjee

**15 Computational health informatics using evolutionary-based feature selection — 309**

**Index — 329**